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Davis Klaila, Senior Manager

Davis Klaila has over fifteen years of experience as a consultant and an executive bringing together people and ideas to produce results. Davis developed a unique set of tools to measure and manage intangible assets. He has worked directly with national research groups to resolve various intellectual property (IP) issues and has completed strategic IP work for Fortune 500 firms and not for profit organizations. As an executive with consulting firms such as Celemi, Mercer, and Wyatt, he implemented intangible asset programs that significantly improved performance for these organizations. Davis has over 50 publications on the subject of intangible asset management.

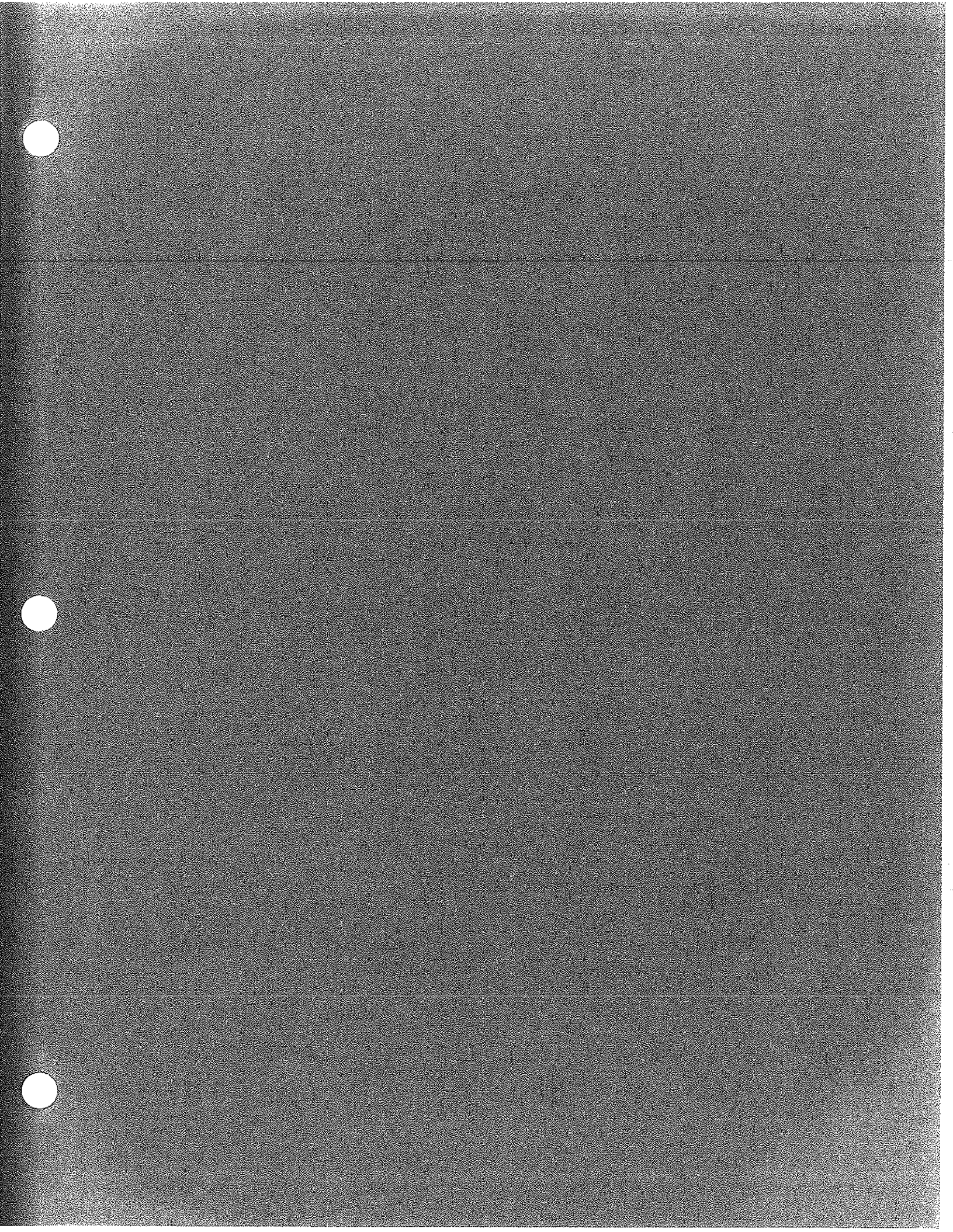
Davis holds a Doctorate in Clinical Psychology, and is candidate for adjunct Doctoral degree in Organization Psychology from Claremont Graduate School. He is a member of the American Psychological Association.

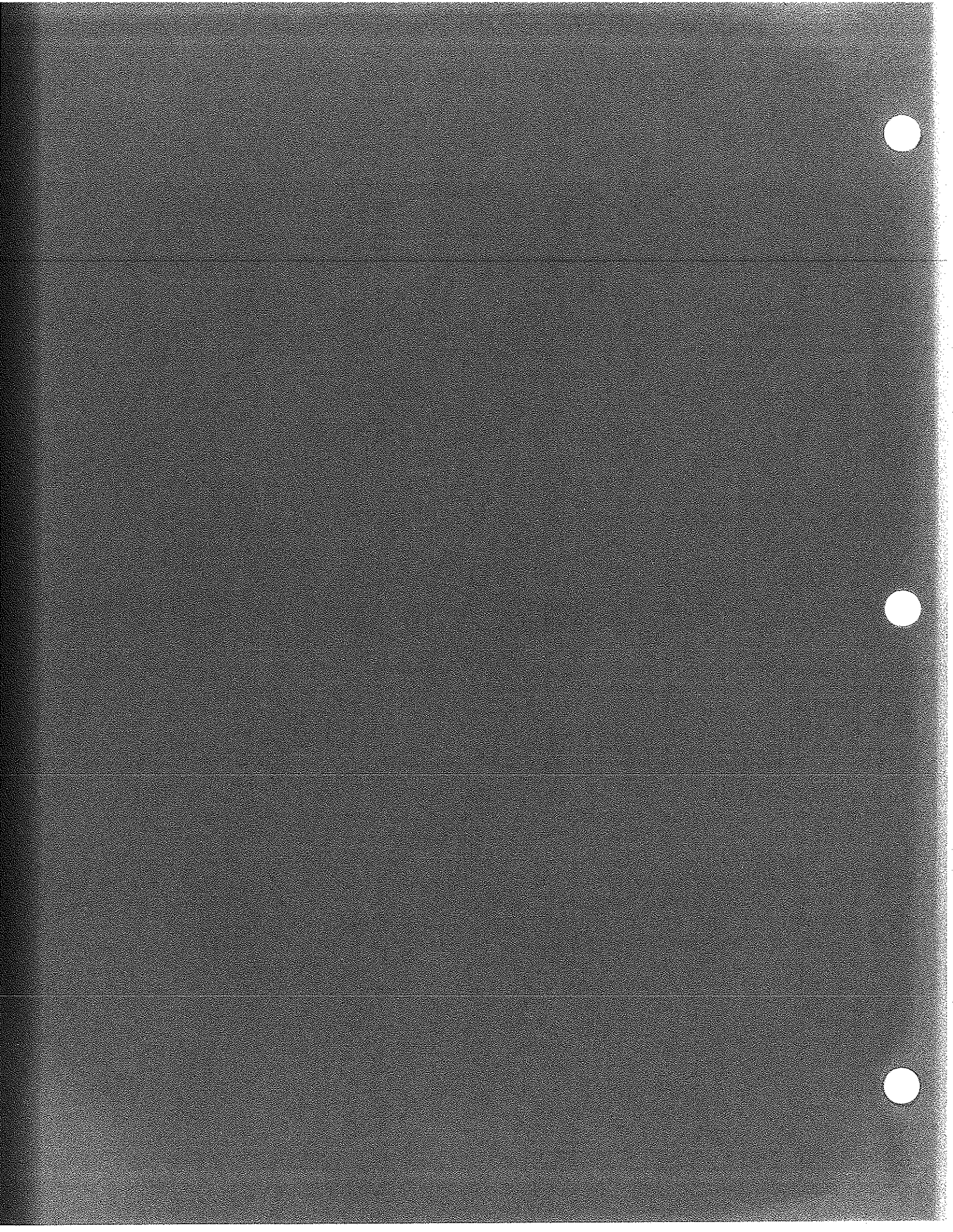
THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
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CHICAGO, ILLINOIS 60637
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WWW.CHEM.UCHICAGO.EDU

RECEIVED

Dear Sirs,
I am pleased to inform you that your application for a position as a postdoctoral fellow in the Department of Chemistry at the University of Chicago has been reviewed and we are pleased to offer you a position as a postdoctoral fellow in the Department of Chemistry at the University of Chicago for the period of 12 months, beginning on 09/01/2000 and ending on 08/31/2001. The position is full-time and will be held in the laboratory of Professor [Name]. The salary for this position is \$40,000 per year. We are pleased to offer you a position as a postdoctoral fellow in the Department of Chemistry at the University of Chicago for the period of 12 months, beginning on 09/01/2000 and ending on 08/31/2001. The position is full-time and will be held in the laboratory of Professor [Name]. The salary for this position is \$40,000 per year.

Very truly yours,
[Name]
Department of Chemistry
University of Chicago







ipCapital Group, Inc.

Intellectual Property Strategies: Product Development

Prepared for



**400 Cornerstone Drive, Suite 325
Williston, VT 05495
802.872.3200**

ipCapital Group (ipCG): Who We Are

- **An intellectual property (IP) consulting firm that assists companies in the development and execution of IP strategies**
- **Founded in August 1998 by John Cronin, based on his experience leading IBM's effort to drive production and manage the development of IP**
- **30+ professionals, who come from business strategy, legal, and R&D backgrounds, ipCG is the world's largest IP strategy consulting group.**

For more information: www.ipcg.com



ipCapital Group (ipCG): What We Do

- **Proprietary, “best of class” IP strategies, methodologies and processes that enable clients to use IP to:**
 - **Create sustainable competitive advantages through improved margins and lower costs**
 - **Perform enhanced due diligence and competitive intelligence**
 - **Capture and manage IP and protect it from competitors**
 - **Build, utilize, and convert IP into profit**
 - **Apply systematic “intelligence” processes to accelerate innovation and invention**

For more information: www.ipcg.com



ipCapital Group (ipCG): What We Do

● Invent new technology in line with business objectives

- Review patents to ensure paths around valuable IP are identified and blocked
- Package IP advantage and increase IP commercialization opportunities

For more information: www.ipcg.com



**“Invent new technology in line with
business objectives”**

Hmmmm!



What We Will Cover

- **What is Intellectual Property? IP101**
 - **IP Management Challenges**
 - **IP Management Process**
- **Using IP to Drive Product Development**
 - **Value Chain Analysis**
 - **Purchase Chain Analysis**
- **Acme Example**
- **Next Steps:**
 - **A Model for Valuing your IP**
 - **A Process for Finding Partners/Customers**



What is IP? It is an Asset.

● Asset:

- Anything owned, whether in possession or by right to take possession, by a person or a group acting together, e.g. a company, the value of which can be expressed in monetary terms.

● Intellectual property:

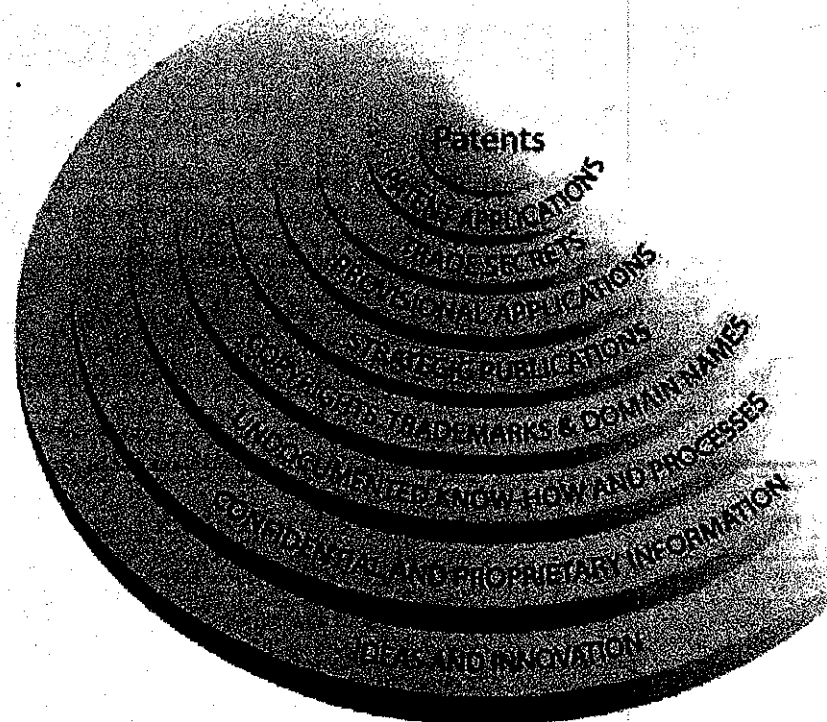
- Property from original thought protected by law: original creative work manifested in a tangible form that can be legally protected, for example, by a patent, trademark, or copyright.

Every business has some form of IP



What does IP look like?

- IP may take a single or multiple form(s)
- IP “forms” may be used for identification of your work and to protect your work
- IP may be used to identify your work through copyrights, trademark and domain names, etc.
- IP may be used to protect your work through patents, trade secrets, etc.

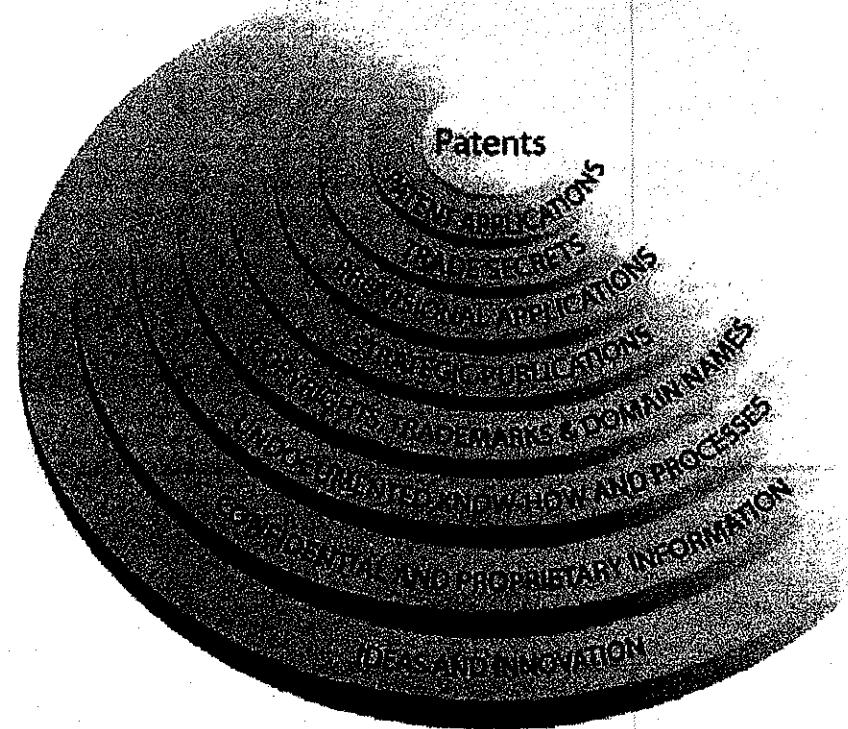


The methods used to identify and protect IP assets are driven by the business strategy and asset management objectives.

Which IP form(s) do you use?

Breakthrough Areas Require more “Exclusive” Protection

- **Breakthrough areas tend to warrant more patents and fewer publications**
- **File Provisionals on less important business areas**
 - “Hedge your bet”
- **Always protect some Trade Secrets**
 - Alliance / Vendor Use
 - Employee Contracts

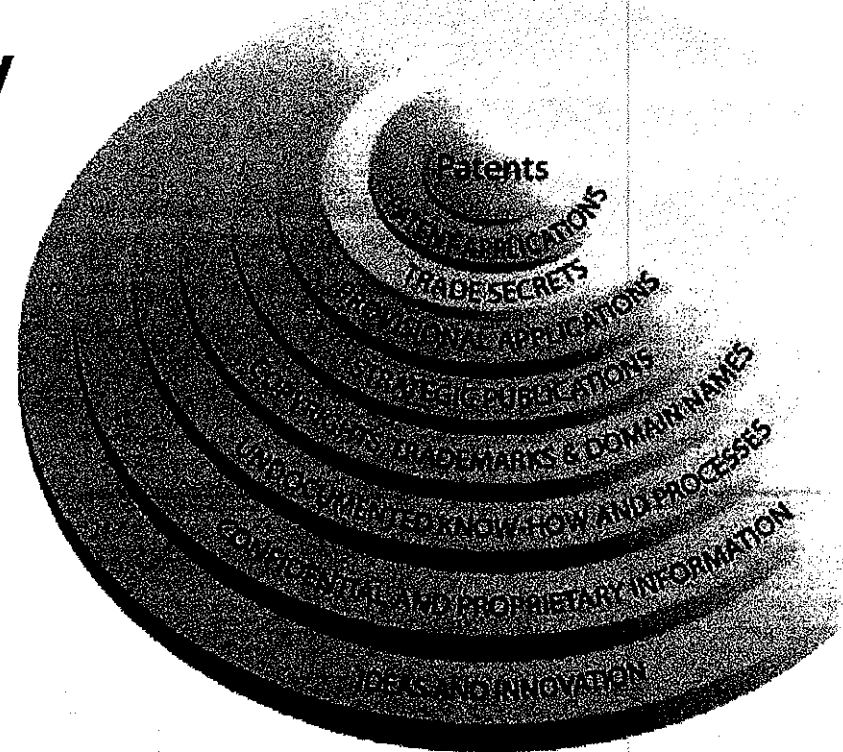


A unique product or service may benefit from this approach!

Which IP form(s) do you use?

Improvement Areas Require more “Controlled Information”

- Unique knowledge that creates an advantage may be “locked-up” as trade secrets
- Controlled Information = Strategic Publications
 - Ensure freedom of Action
- Use trademarks and copyrights for additional protection
 - Make products hard to copy

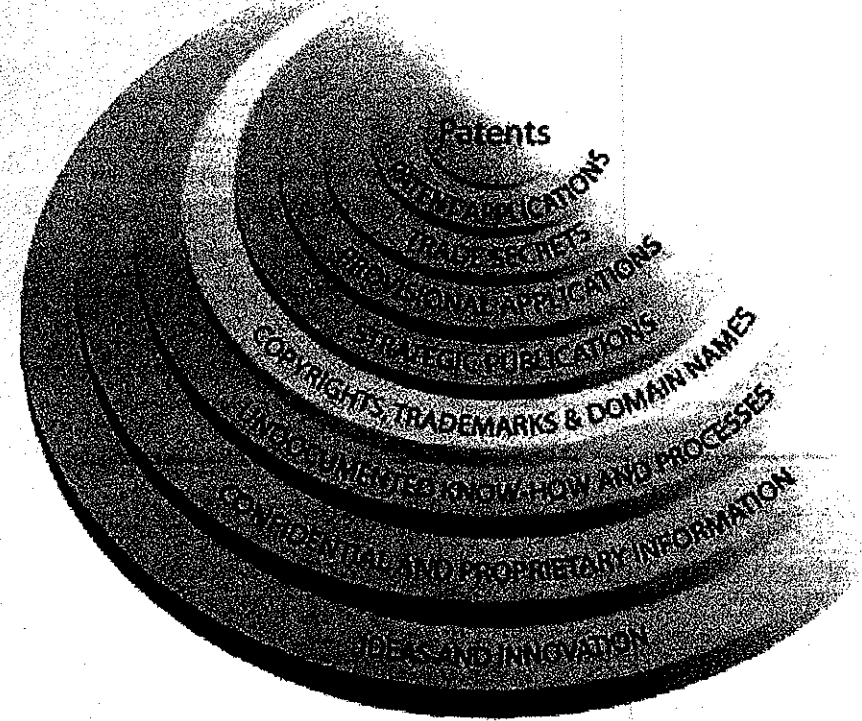


An unconventional, high risk opportunity may benefit from this approach!

Which IP form(s) do you use?

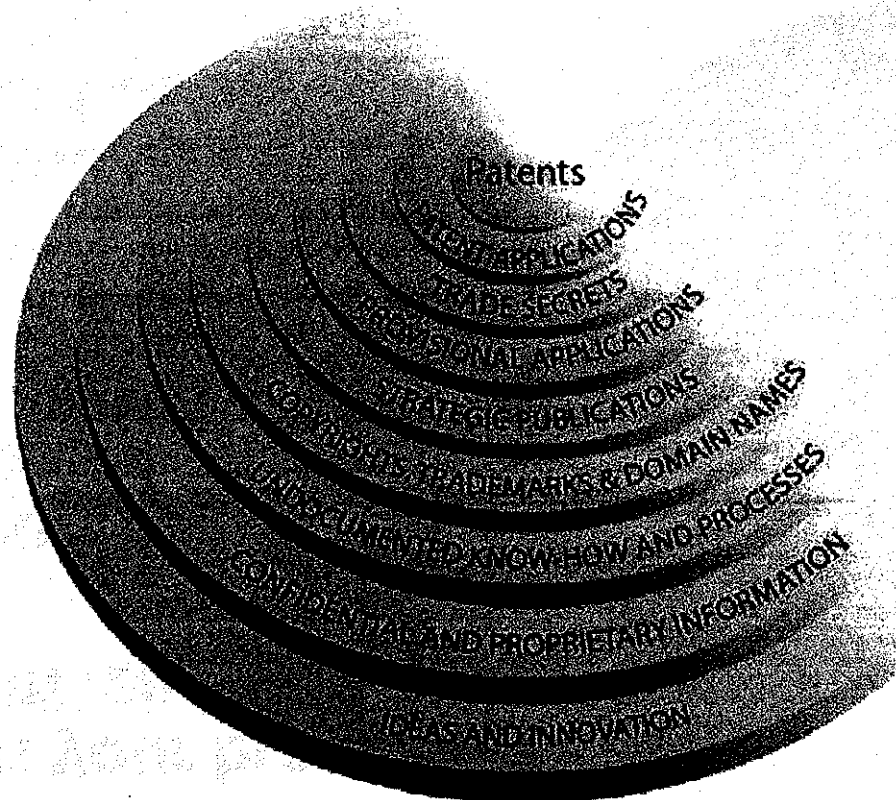
Identification solutions may be appropriate

- Strengthen your brand and thought leadership position
- Identify your work through copyrights, trademark and domain names
- Use IP protected in this way with other IP to create IP portfolios



The consistent use of trademarks and copyrights will strengthen your brand, document your work and provide an additional layer of protection.

Create an IP Portfolio for Effective Asset Management!



An IP portfolio is a valuable asset when it is designed and built to support business goals and strategy

IP Management Challenges Knowledge, Time & Execution



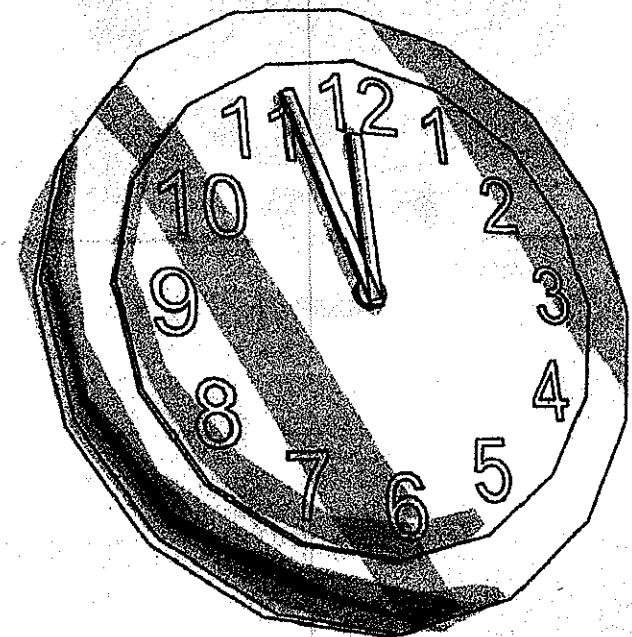
The Knowledge Challenge...

- IP Management seen as an administrative task
- Many see invention as an “art”
- Most do not know what IP they have
- Abstract concepts
 - Leverage Human Capital
 - IP Landscape
 - Value Chain
 - Directed Invention
 - ROI on Ideas?????



The Time Challenge

- Loss of human = loss of intellectual capital
- Protection at high speed!
 - IP savvy firms
- Corporate process – Integrate IP
 - Change management
 - Lack of trust
 - Running before walking
- Patent process
 - 2 years to issue



The Execution Challenge

- Changes to IP laws and issues
 - Business Process Inventions
 - IP for the “Process of Innovation”
- Integration into production
- Economic downturn
 - IP Costs
- Measures and metrics
- Extracting value from an existing portfolio
 - \$\$ From IP – Licensing



IP Management Process



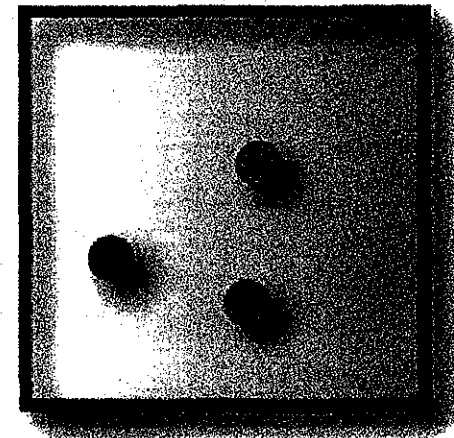
IP Management Process

- **Capture what you have**
 - **Inventory and evaluate**
 - **Create a map of the IP space (landscape)**
 - **Analyze your IP position within the landscape**
- **Identify IP opportunities through value chain analysis**
- **Develop an IP Strategy**

Capture What You Have Inventory ALL Inventions and Related Ideas

- *Inventories* (we call this an ipScan®) may find inventions not previously identified
 - **Most valuable inventions are overlooked or dismissed**
- Make informed business decisions in line with the overall business, market, and value strategy for the company
- Understand all Intellectual Property (IP) and Intellectual Capital (IC) to make the best decisions
- *Tailor your Innovations by capturing existing IP and IC in a comprehensive and organized manner to*

Know what you have



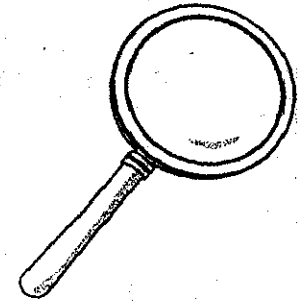
What is an Inventory?

- Systematic evaluation to find inventions already invented
 - All stages of work
 - Research
 - Design or Development
 - Integration of manufacturing process
 - New project definitions
 - Key technology problems
 - Other...
- Systematic identification of current work (IC) that could be an invention if modified

A scan is much more than a list of patents!

Why Inventory?

- Most don't know what invention is!
- Most don't know that powerful inventions are simple, non-breakthrough ideas
- Most judge their own work as obviousness
- Most reject their own personal novelty
 - 95% reaction to novelty = negative
- Most don't consider non "worked through" (useful) ideas as important
 - Remember patents are novel, useful, non-obvious



Many valuable inventions are overlooked or dismissed!

Benefits of an Inventory

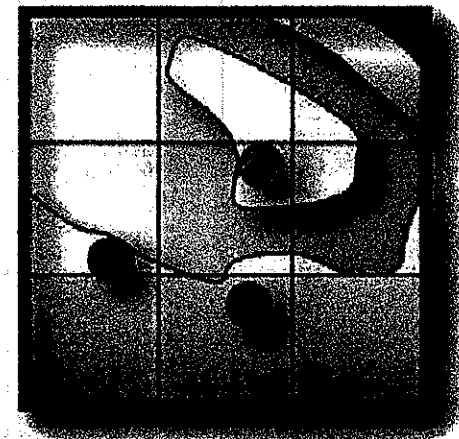
- Captures your IP and IC in a comprehensive and organized manner that allows you to view, discuss, analyze and enhance your IAM potential
- Creates the means for you to make informed business decisions in line with the overall business, market, and value strategy of the company
- Comprehensively identifies and captures your potentially patent-able, publishable or trade secret inventions
- Catalogs all of your existing IP and IC
- Provides a high level analysis of the characteristics of your invention space
- Provides fact-based recommendations to strengthen your IP position
- Improves communication between your technical, business and legal teams to better align IP and business objectives
- Provides inputs resulting in higher quality patents



Create a Map of the IP Space (ipLandscape[®])

- Visualize the technologies and products/services within your business areas
- Build the foundation to determine if your IP/IC supports the business strategy
- *Tailor your Innovation* by demonstrating the technologies, products/services and IP/IC that support your innovation process

Select the Path to Claim
Your Territory

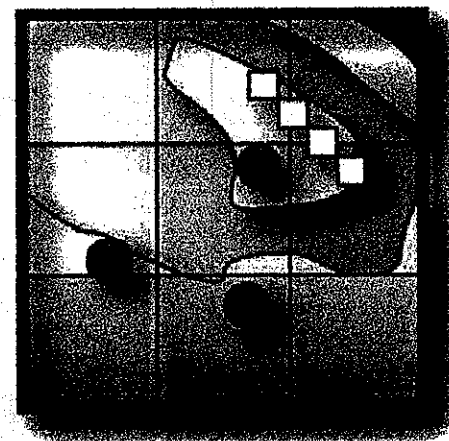


Analyze your position within the ipLandscape[®]

Use ipAnalyticsSM as the Intelligence

- Identify your competitors IP in the context of your *map*
- Assess competitors', customers', and/or suppliers' relevant IP
- *Focus your Innovation* to avoid landing on competitors' IP

Avoid Reinvention or Suits
Identify areas of Opportunity



ipLandscape[®] and ipAnalyticsSM

Benefits

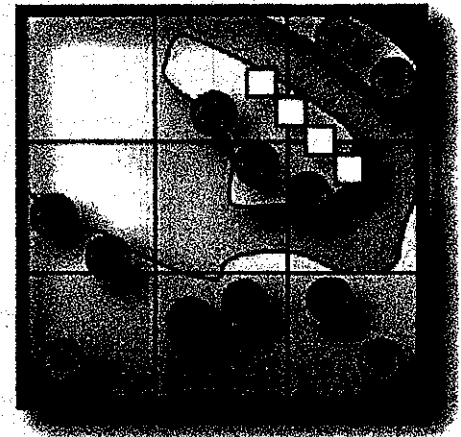
- Allows you to visualize the technologies and products/services within your business topic areas and begin to understand whether or not your current IP truly supports your future business strategy
- Provides a framework for conducting competitive analysis and developing an IP Strategy
- Provides a product/technology matrix that defines your market space
- When overlaid with inventory data, becomes a powerful tool to quickly understand the competitive landscape vis-à-vis your current and potential IP
- Ensures that the business leadership and the technologist have worked through all of the potential technologies used to produce your products/services



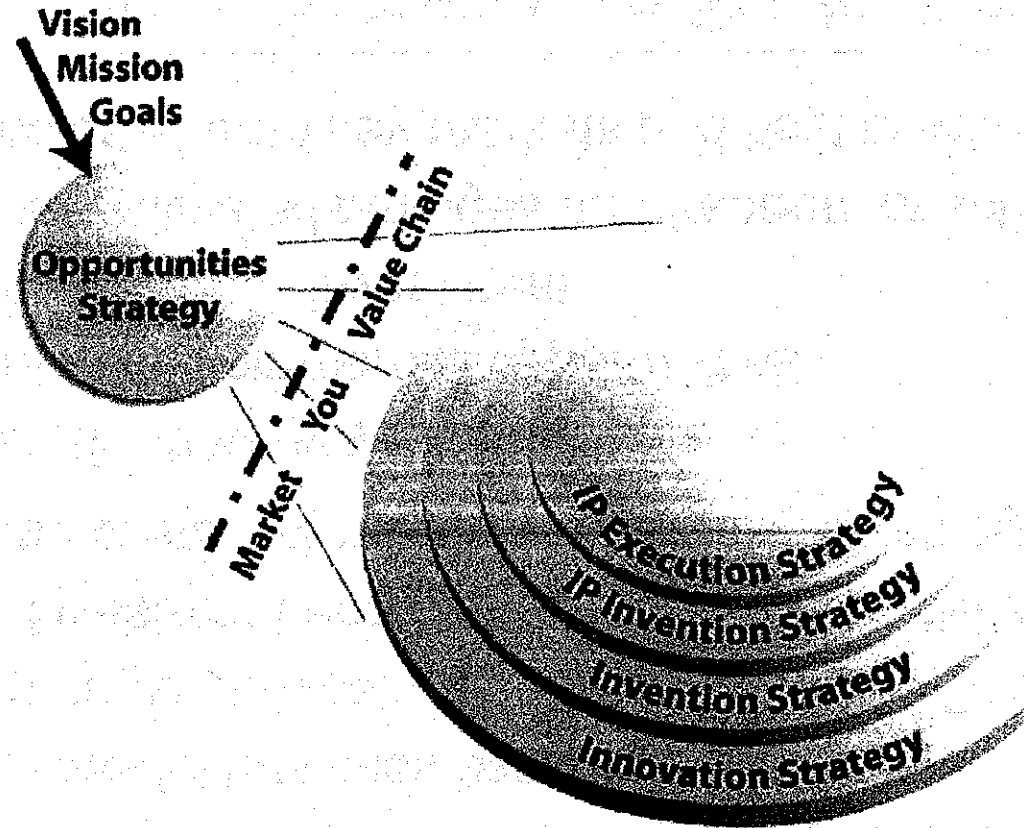
An ipStrategySM

- Helps you understand and strengthen your IP position vis-à-vis the competition
- Affords the opportunity to align your IP strategy with the business strategy
- *Utilize IP to gain a sustainable competitive advantage*

Map Your Territory with IP as
the Compass



IP and the Business Environment



Vision + Connection = IP Execution

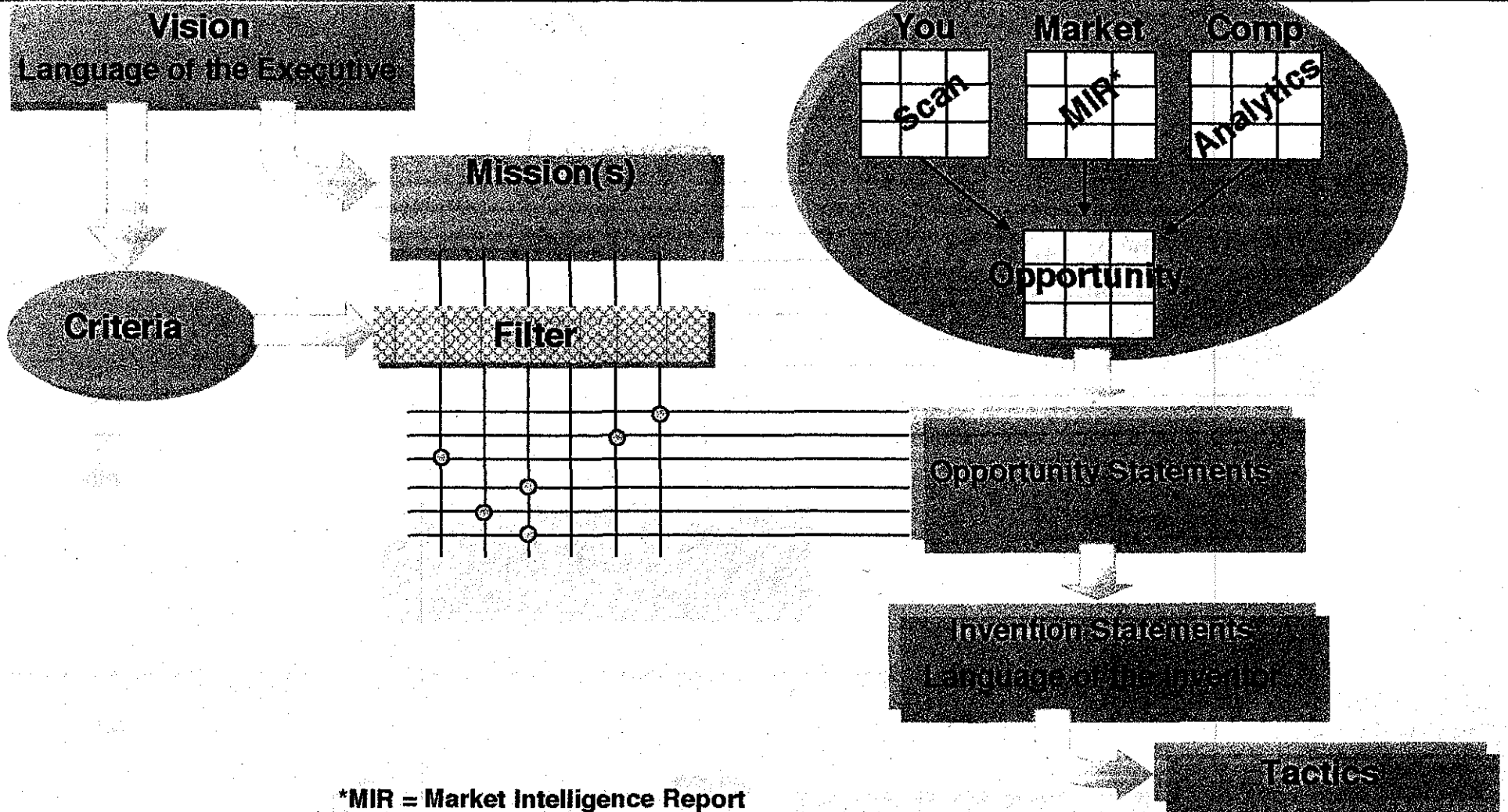
Why Develop an IP Strategy?

- IP can be a powerful business asset to:
 - Capitalize on your investment in Research and Development
 - Guide IP investment and commercialization activities
 - Protect and sustain competitive business advantages
- But without an IP strategy you risk:
 - Losing potential commercial opportunities
 - Squandering your IP investment
 - Losing competitive advantages and freedom of action
 - Being precluded from key markets and best practices

If you have no strategy, investing in IP makes little business sense and may actually weaken your competitive position



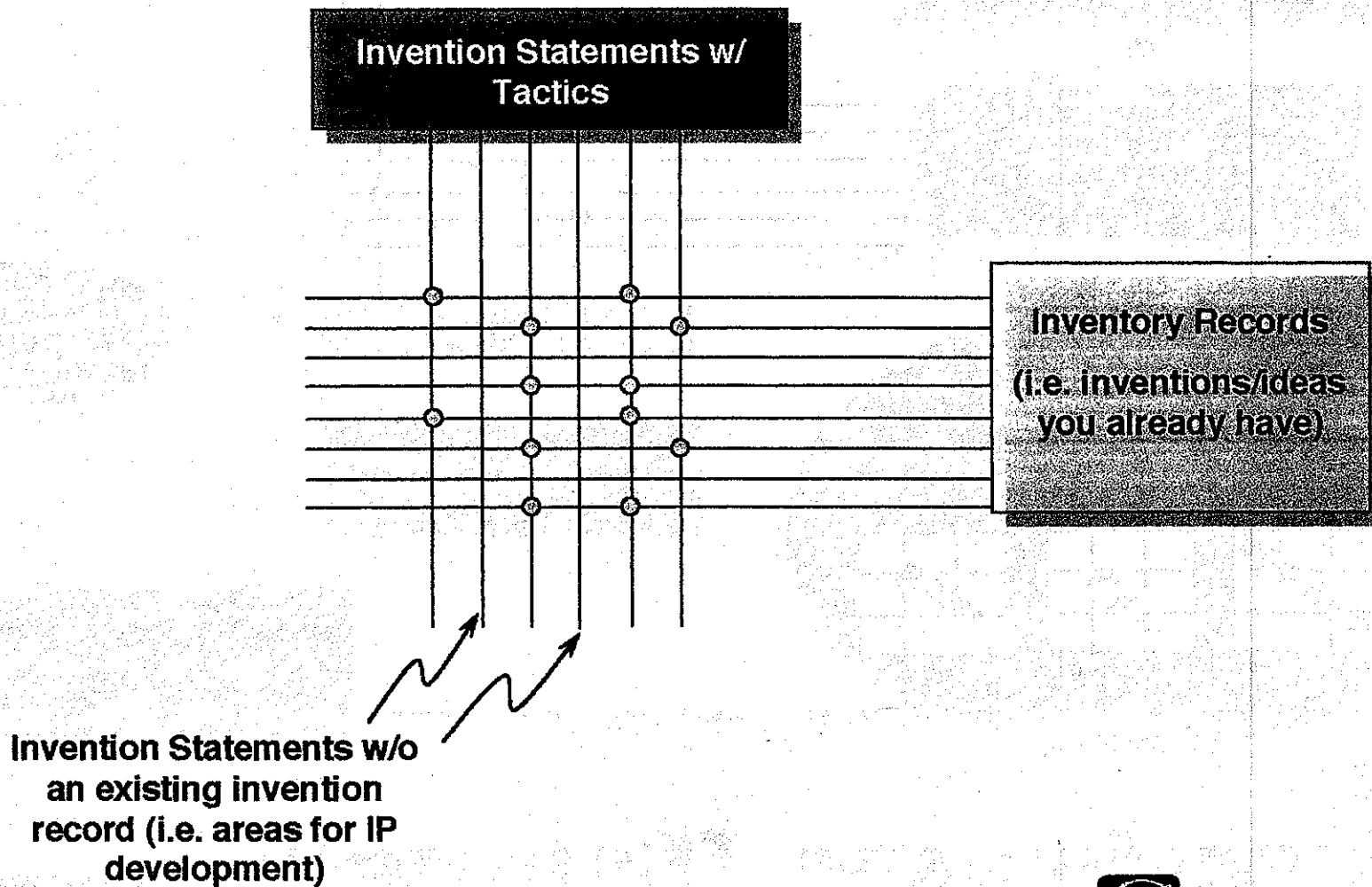
ipStrategy Development



*MIR = Market Intelligence Report



ipStrategy Development



ipStrategy Value

- Becomes IP Demand Statement = Execution List
- Organized Document – Updated Quarterly
- Measurable – Check-Lists, Owners
- Directs where to get, fit inventions
- Each Invention has a home
- Each Invention has an Action
 - Patent, Publish, Trade Secret
- Defines use for Actions
 - Enforce, Document, Story value etc
- Accounts for Use of Existing IP
 - License, Donate



IP Management Process Summary

- **Capture IP**
 - **Inventory, Map and Position IP**
- **Identify IP opportunities through value chain analysis**
- **Create IP strategy that is aligned with business objectives and capabilities**



Using IP to Drive Product Development



The Value & Purchase Chains

● Value Chain

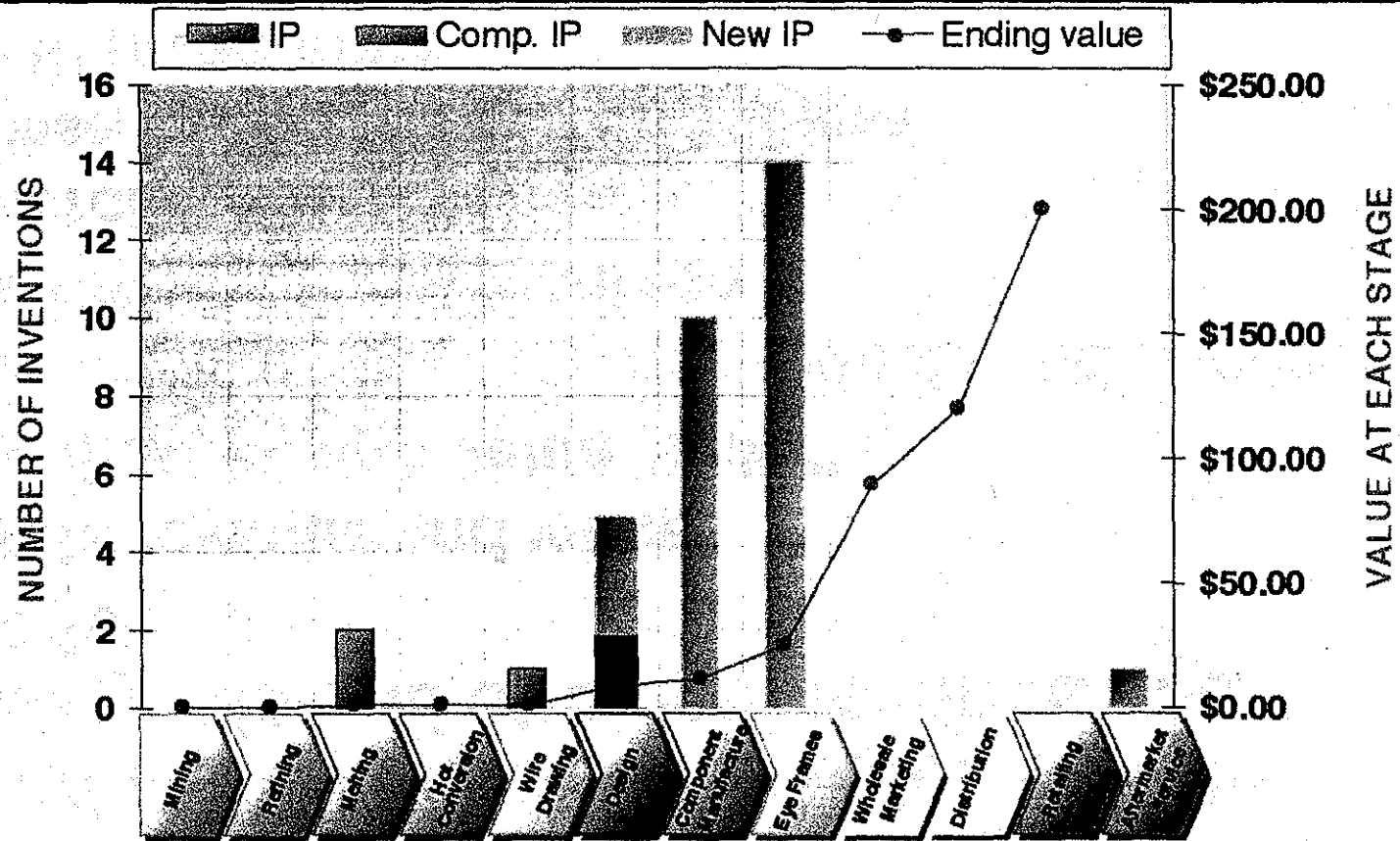
- A high-level model of how businesses receive raw materials as input, add value to the raw materials through various processes, and sell finished products to customers. *The goal is to deliver maximum value for the least possible total cost.*

● Purchase Chain

- A high level model of how individuals and commercial customers purchase, retain, recommend and repurchase products or services. *The goal is to identify and address all aspect of the purchase process to ensure customer needs and requirements are met, as well your retention objectives.*

Value & purchase chains are effective tools for looking at your
IP opportunities

Value Chain Analysis



Alpha
Beta
Delta
Competitors

Titanium Wire



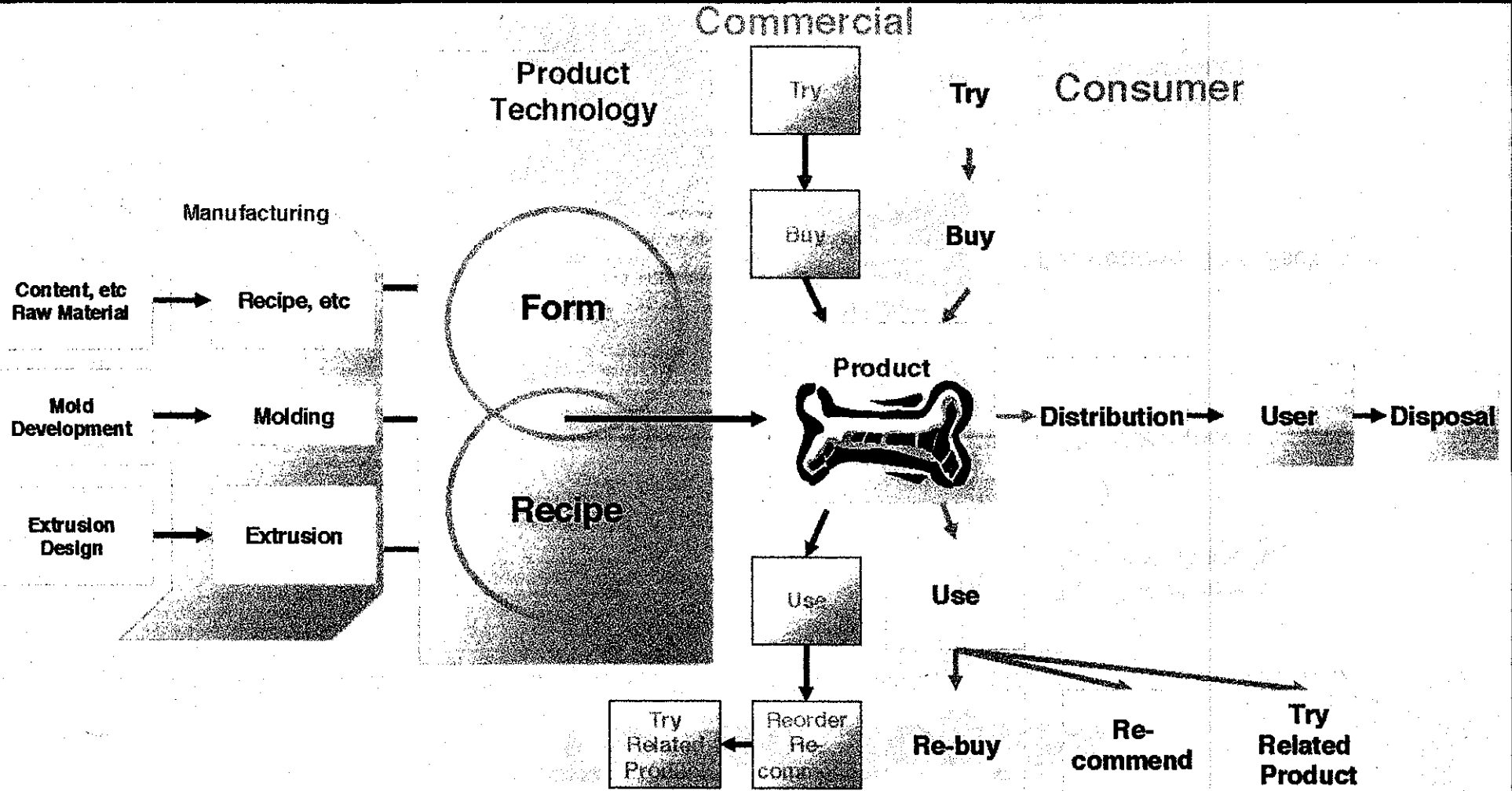
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Value Chain Analysis Benefits

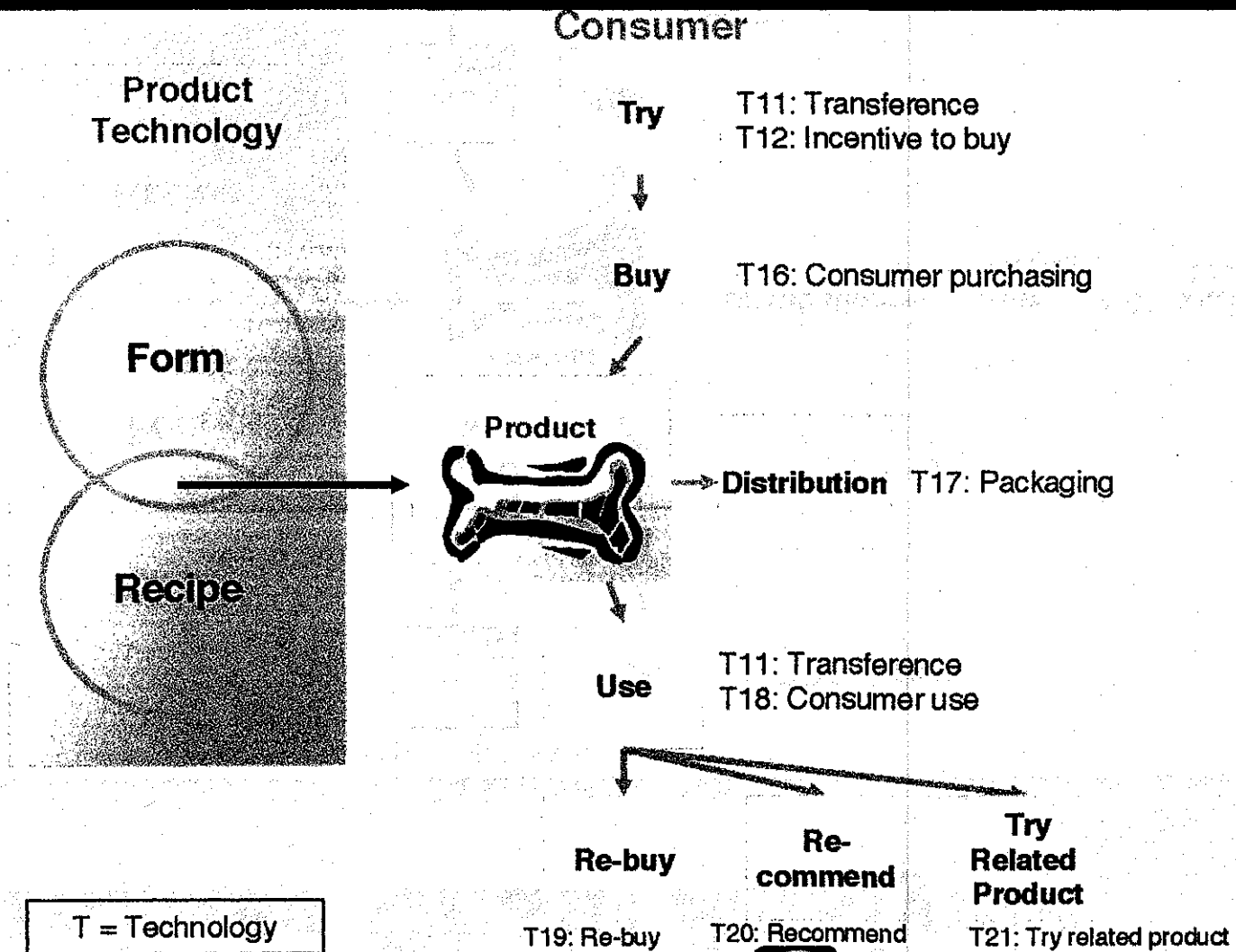
- **Links and communicates the value of IP to business goals and strategy, revenue and markets to:**
 - **Generate revenue and value**
 - **Focus effort in high value “links”**
 - **Id application space for new products and services**
 - **Create competitive advantage**
 - **Commercialize IP**
 - **License, JV, Partnership, Cross license**
 - **Guide IP investment**
 - **Establish IP metrics**



Purchase Chain Analysis

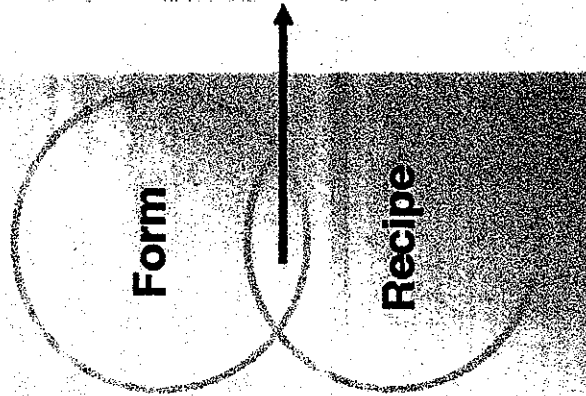


Consumer Purchase Chain: Technologies



Products and Technologies

Product
Technology



Product



- P01: Nutrition
- P02: Package
- P03: Form
- P04: Recipe
- P05: Composition
- P06: Consumer lifestyle
- P07: Satisfaction

- T15: Extrusion
- T14: Die plate
- T13: Textures
- T09: Water Activity
- T08: Ingredients
- T07: Molds
- T06: Aesthetics
- T05: Moisture management
- T04: Configuration
- T03: Preparation



Purchase Chain Analysis Benefits

- Links and communicates the relationship of your IP to the consumer
- Integrates multiple environments
 - Form,
 - Function
 - Psychological factors
 - Overt/covert incentives to buy
 - Lifestyle
 - Appeal
 - Consumer issues
 - Quality
 - Appearance
 - Cost
 - Use
- Focus effort in high value “links”
 - Id application space for new products and services
- Create competitive advantage



An Example



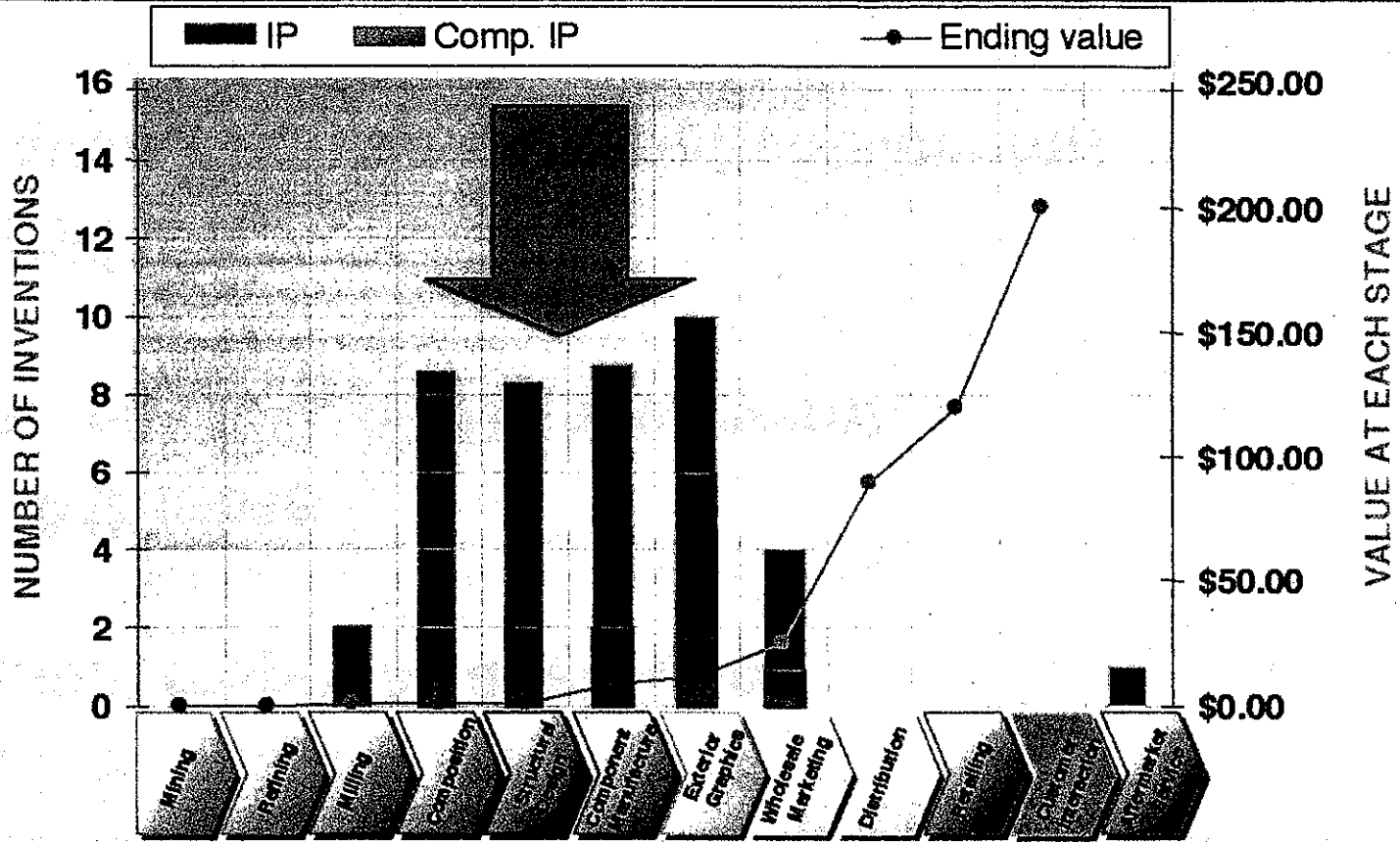
Our Company: Acme Outside

- **Outdoor athletic equipment**
 - **Skis, snowboards and skateboards**
- **Self perception - seen as a market leader for innovation and commitment to the sport**
- **Primary focus has been on composition and design of skis & “boards”**
- **Desires both a broader and more direct relationship with consumers**



Acme's Value Chain

Note:
Acme's strength, composition, is low – med value and an IP crowded space.



Competitors
Gamma
Beta
Delta



Consumers and Key Issues

- **Olympic & Professionals**
 - Maximum response at all times

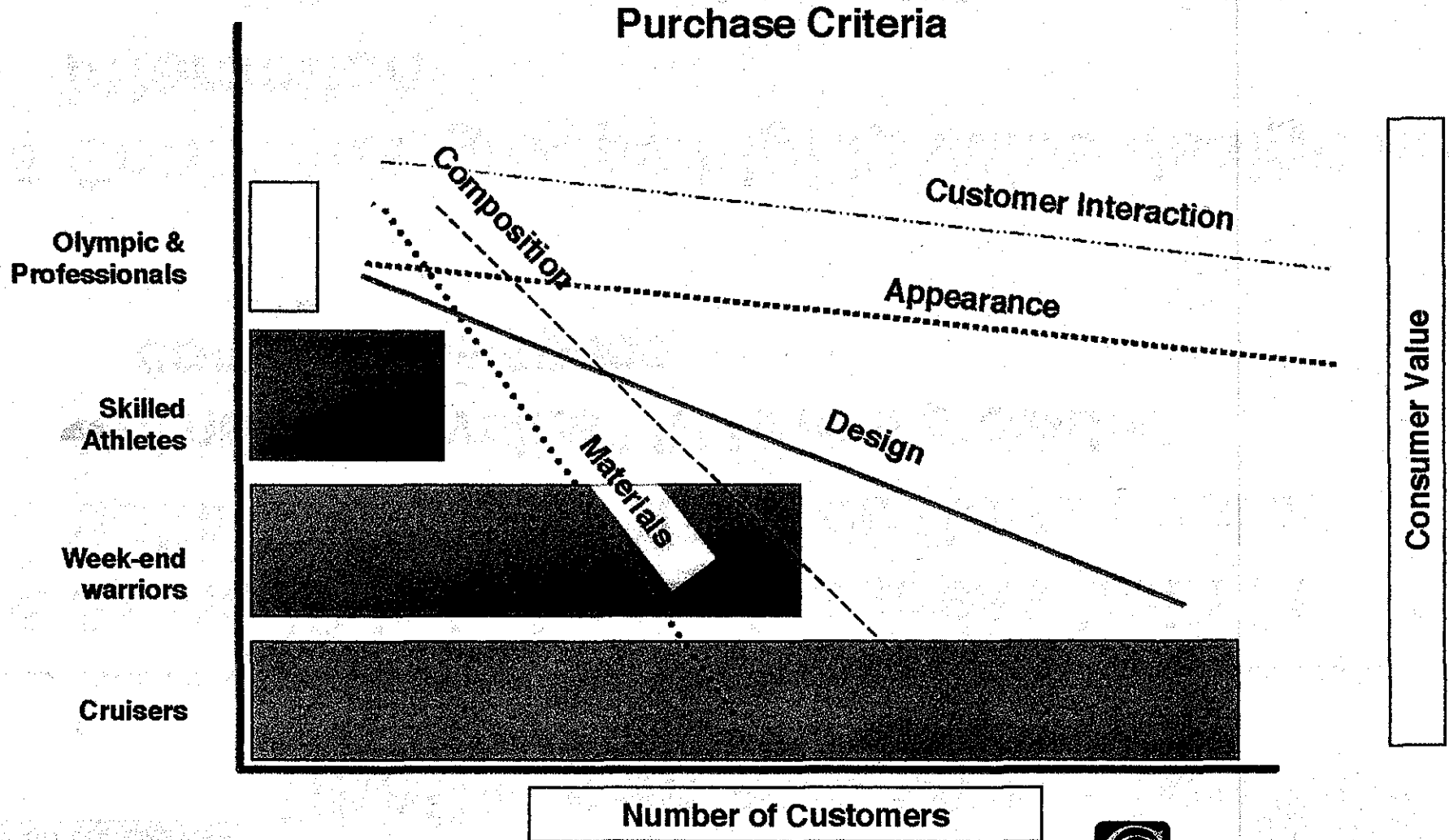
- **Skilled Athletes**
 - Closer interaction with equipment

- **Week-end warriors**
 - High quality, high profile and challenging

- **Cruisers**
 - Quality, appearance and ease of use



Market Research Results



Challenges and Opportunities

- Acme IP is in low value areas both in dollars and perceived customer value
 - And, low “value” IP is in a crowded competitive space

- Consumer groups highly value design and interaction
 - And, there appears to be little or no IP in this high value space

Innovation Challenge

- Improve customer interaction/relationship with the product
- Do not sacrifice appearance, design or degraded the composition
- Enhance market leader brand

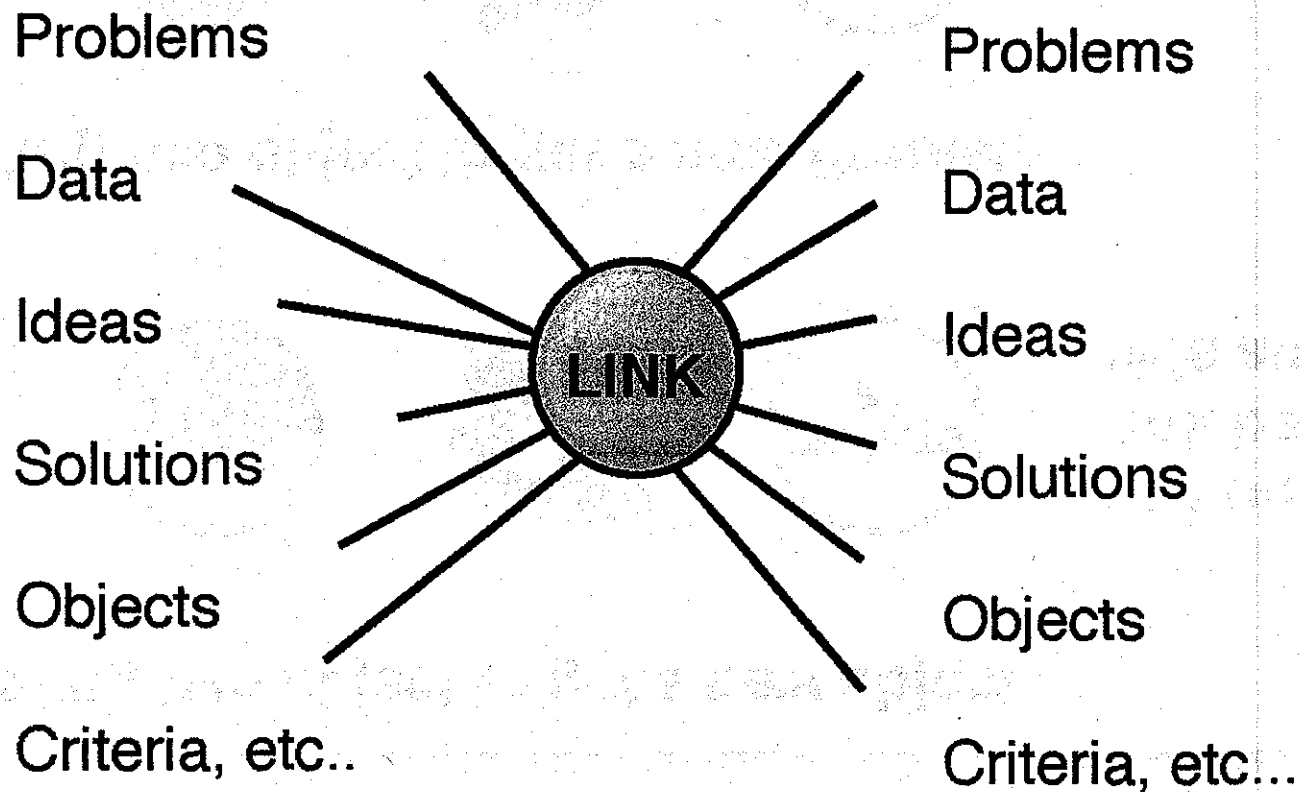
Hmmm, how to associate composition and interaction?

Associative Thinking

- **Combining Two or More elements together to produce a new element**
- **Basis for all new ideas**
- **Basis of all Creative Thinking**
 - **Novelty is increased by combining more diverse “Domains”**

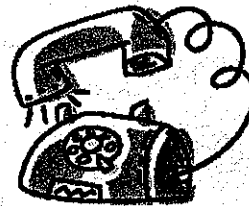
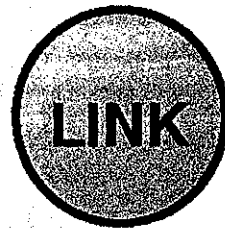


Associative Thinking Linkages



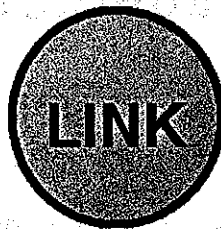
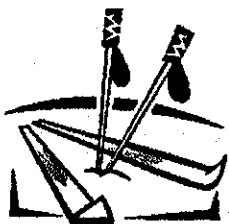
Associative Thinking for Acme

Associating two object to get a new object



A communication link between skis and skier

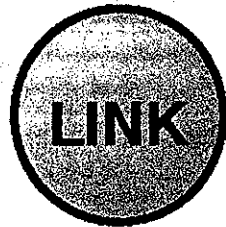
Associating two object to get a new Problem



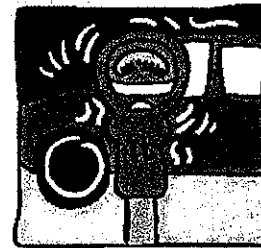
How make the link wireless?

Associative Thinking For Acme

Associating an object and data define the problem



The info may
be complex?



● An Outcome

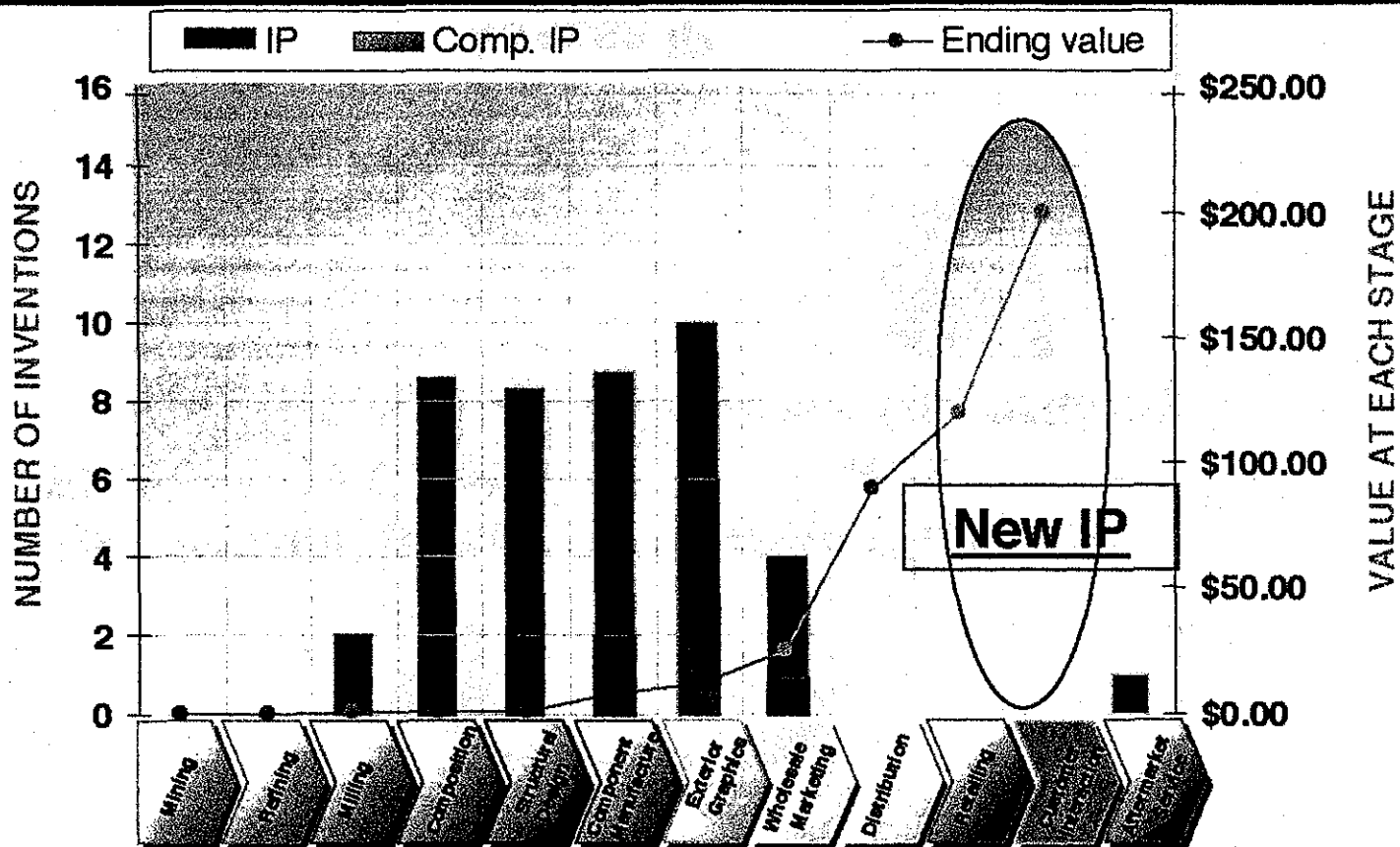
- Skis/boards with sensors that report on conditions relative to composition, stress etc.
- A simplified reporting system that is projected onto goggles or displayed on an armband with complex data storage on palm pilot

What if Your Gear Could Talk?

- It may tell you, based on the product design and composition, how well you interact with the product.
- It may help you improve no matter what skill level you are at.
- It could provide feedback to the manufacturer.
- It could communicate through interesting design features that integrate “soft” and “hard” goods.
- It could provide you with a strong set of IP at the top of the value chain



Acme's Value Chain



Competitors
 Gamma
 Beta
 Delta



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Process Summary

**Use Problems and
Elements to Create
the How**

**Define Challenge
as a
Business Opportunity**

**Assess IP
and
Consumer Value**



Next steps!

- Assigning a Value to your IP
- Finding Partners/Customers



IP Cost/Pricing Model Assumptions

- Assumptions are used to develop an Estimated Net Present Value (eNPV)
 - *eNPV compares the value of a dollar today versus the value of that same dollar in the future, after taking inflation and return into account.*
 - *If the eNPV of an ipPortfolioSM is high and aligned with other business factors then it should be accepted for internal development. However, if it is low and/or non-aligned the ipPortfolio probably should be rejected for internal development because cash flows may be marginal or negative.*
 - IP not considered for internal development may be licensed out
- eNPV assumptions include market size and growth trends and other factors
- eNPV is “discounted” based on invention status, market conditions and the breadth of the IP
- eNPV is one component of a value setting decision process
- eNPV is not a formal valuation of IP



eNPV Assumptions

- **The eNPV assumptions include:**
 - **Assessment of the market size and growth trends**
 - **Cost to enter the market**
 - **Analysis of credit factors**
 - **Licensing potential**
 - **Development phase**
 - **Breakthrough or incremental IP “value”**
 - **Analysis of discount factors**
 - **Mature market and/or crowded space**
 - **Invention status (e.g., Patent or provisional)**
 - **Ability to invent around**
 - **Time horizon**
 - **Determination of strength of innovation**
 - **Breadth of IP**
 - **Relative value-add to potential licensees**
 - **Understanding of financials for similar IP and technology space**

This forum is not appropriate for a detailed discussion on value setting.
Please see me for more information.

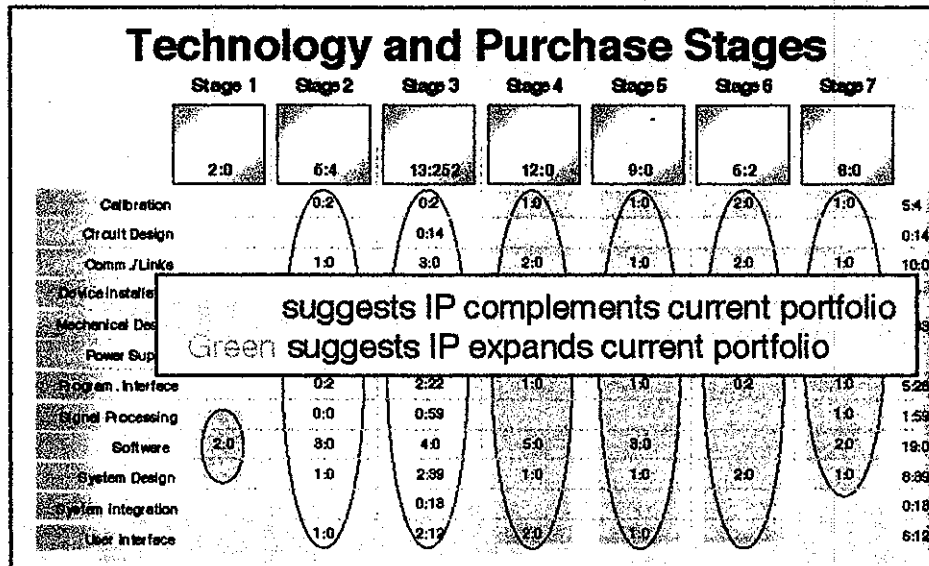


Finding Customers

- **Review firms based on their ability to adopt your IP portfolio**
 - **Review may focus on firms who may accept entire portfolio**
 - **Investigate firms to whom you may parse out IP Portfolio**
- **Segment “targets” into desirability tiers based on the evaluation criteria**
 - **Compatibility with, and enhancement of, the target’s IP**
 - **Rating criteria* based on the target’s “deal” profile**
 - **Qualitative summary of the target’s position**



Tier 1 Target: Beta



Scorecard

Criteria	Strong 1 - 5	Weak Relative Score
1. Synergies between Beta and Acme IP	2	
2. Financial Strength & Market Share	1	
3. Distribution Strategy	1	
4. Experience In-Licensing and/or Out-Licensing	1	
5. Years in the Market	1	
6. Manufacturing Capabilities	1	
7. IT Capabilities	1	

- **Why would they value the IP?**
 - **Complements their professional and consumer equipment & services**
 - **Addresses a critical need the company already recognizes**
- **What IP would they be interested in?**
 - **IP related to sensors and training user on the product**
 - **IP that would take advantage of their significant market penetration - with the largest market share, Beta is the most likely company to take advantage of the user/product interface**
 - **IP that would complement their relationship with racing teams and related sponsors (e.g., communicate product response on TV screens during race)**

Potential data sources: Corporate website, financials & Mergerstat M&A Database



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Defining Value and Finding Customers

- **Value: Driven by the strength of your IP and its impact on the market.**
- **Customers: Found by matching IP, market, and business objectives then defining the synergies**

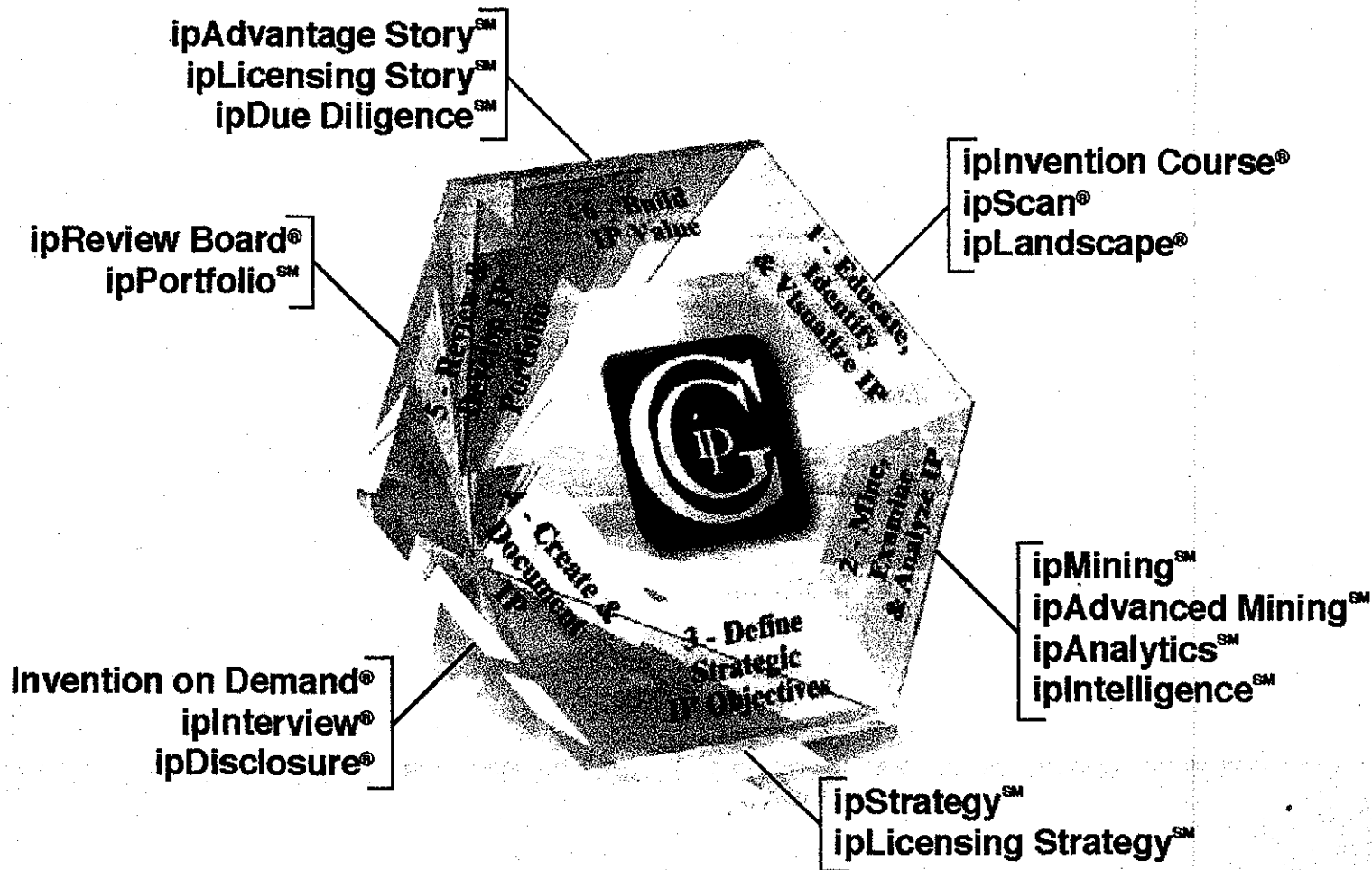
IP provides the irrefutable, tangible proof of the deal value



Questions?



The ipCapital System® Methodology



Thank you!



1994

