

Establishment of Intellectual Asset Management Systems for University and Industry

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*The views expressed are mine and in no way represent AUTM policies or positions

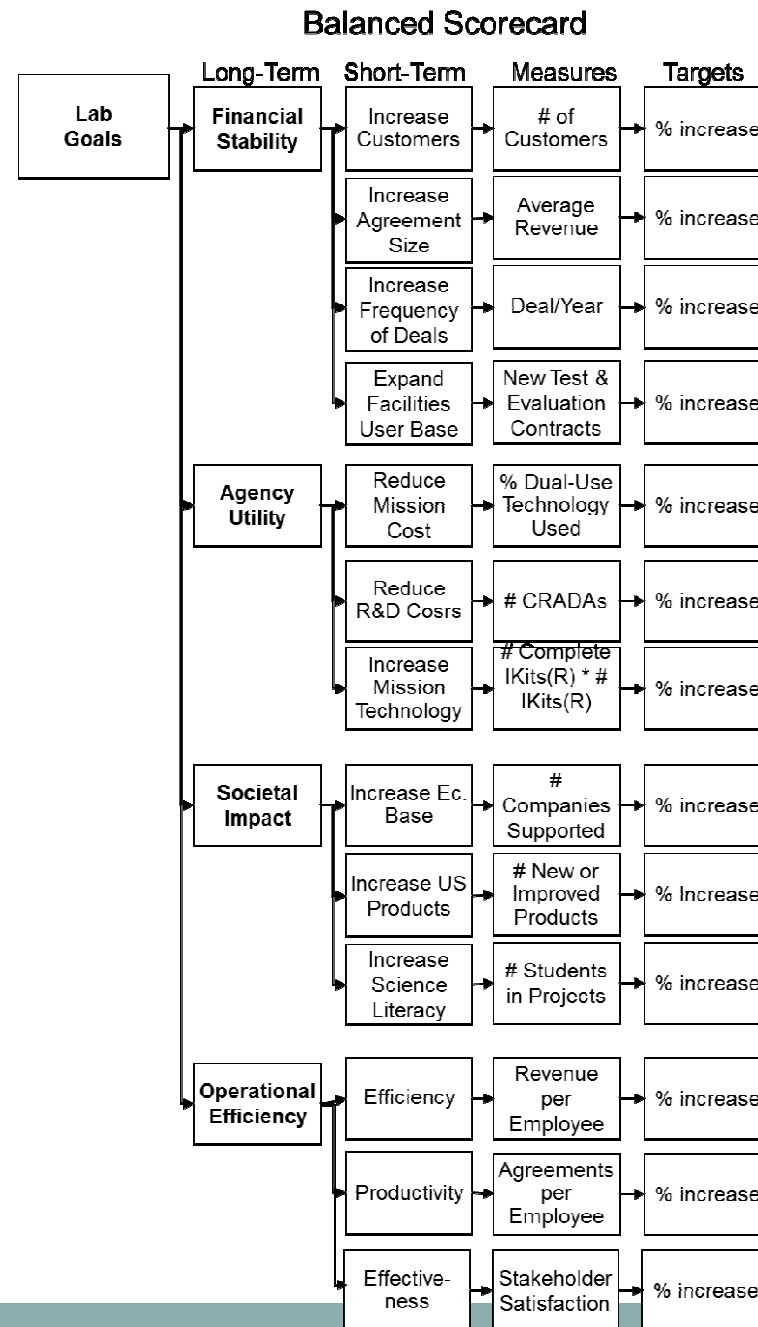
Why Manage Intellectual Assets?

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ASSET – USEFUL FOR GENERATING REVENUE

Being a Revenue Center Does not Mean the Only Goal is Cash Today

It Does Mean the Job is to Generate Cash for the Research, Education, and other Missions of the Institution



Intellectual Asset Management only Makes Sense if the TTO is a Revenue Center

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Income Statement: Free Cash Flow Today

- **Income**
 - License fees and royalties
 - Dividends
 - Bid & Proposal
- **Expenses**
 - Labor
 - Contractors and Consultants
 - Data
 - IT
 - Rent and Utilities
 - Professional Memberships (AUTM)
 - Travel

Balance Sheet: Free Cash Flow Tomorrow

- **Assets**
 - IA/IP
 - Depreciated Asset Management Software
 - Undepreciated Knowledge and Know-How Portal
 - Goodwill/Brand Name Recognition
 - Accounts Receivable (accrued)
- **Liabilities**
 - Patent/Copyright Maintenance Fees
 - Litigation Reserve
 - Accounts Payable (accrued)

How Do Intellectual Assets Generate Revenue?

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How Does a University Use IA: Primary Reasons

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Direct

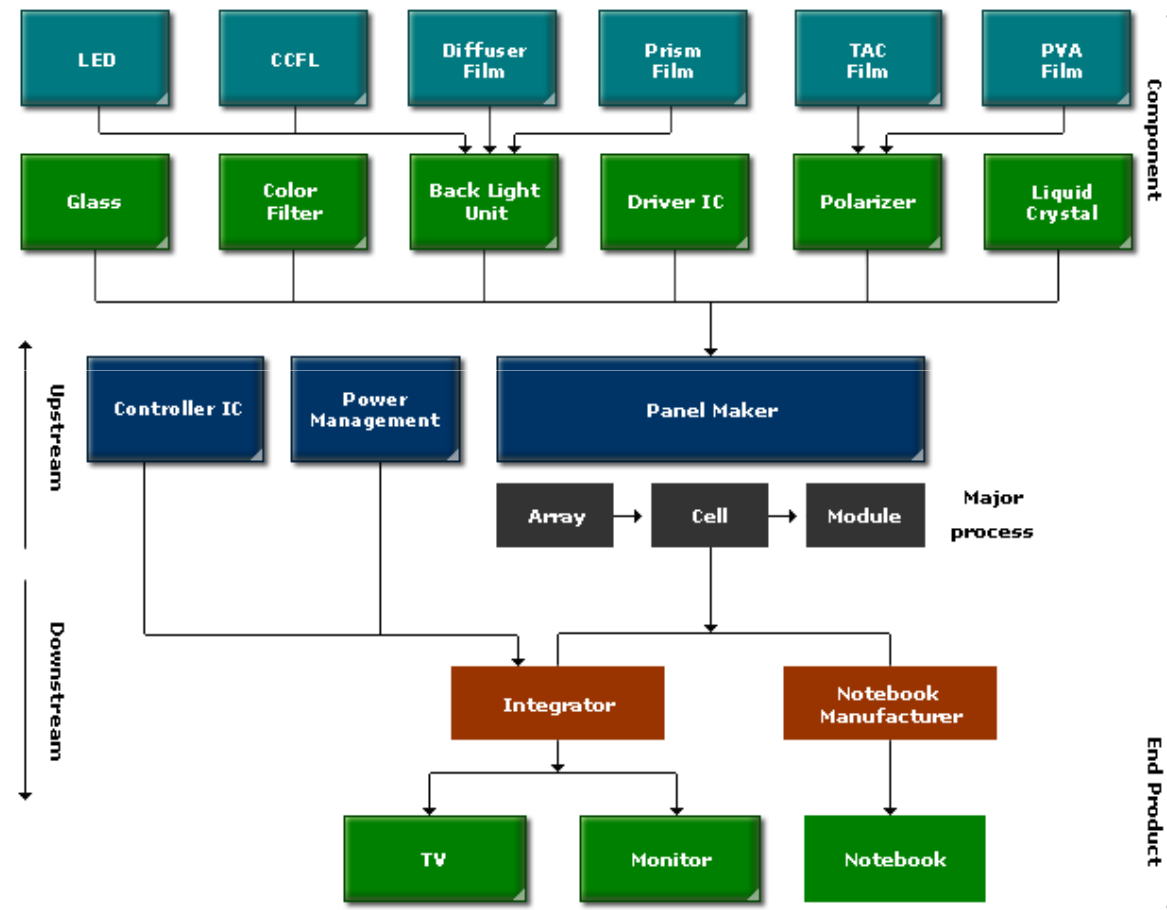
- **Attract and Educate Students - Tuition**
 - Cutting Edge Global Leadership
 - Jobs in Industry or as Entrepreneurs
 - Practicums in Industry Opportunities
- **Knowledge Sharing/Dissemination – Sponsored Research & Centers**
 - Papers, Symposia, and Meetings
 - Virtual Hub in Global Network
 - Consulting (Paid or Unpaid)

Indirect

- **Staff Evaluation**
 - Productivity
 - Impact of Work
- **Economic Development**
 - Jobs
 - Products
 - New Companies
 - Tax Revenues

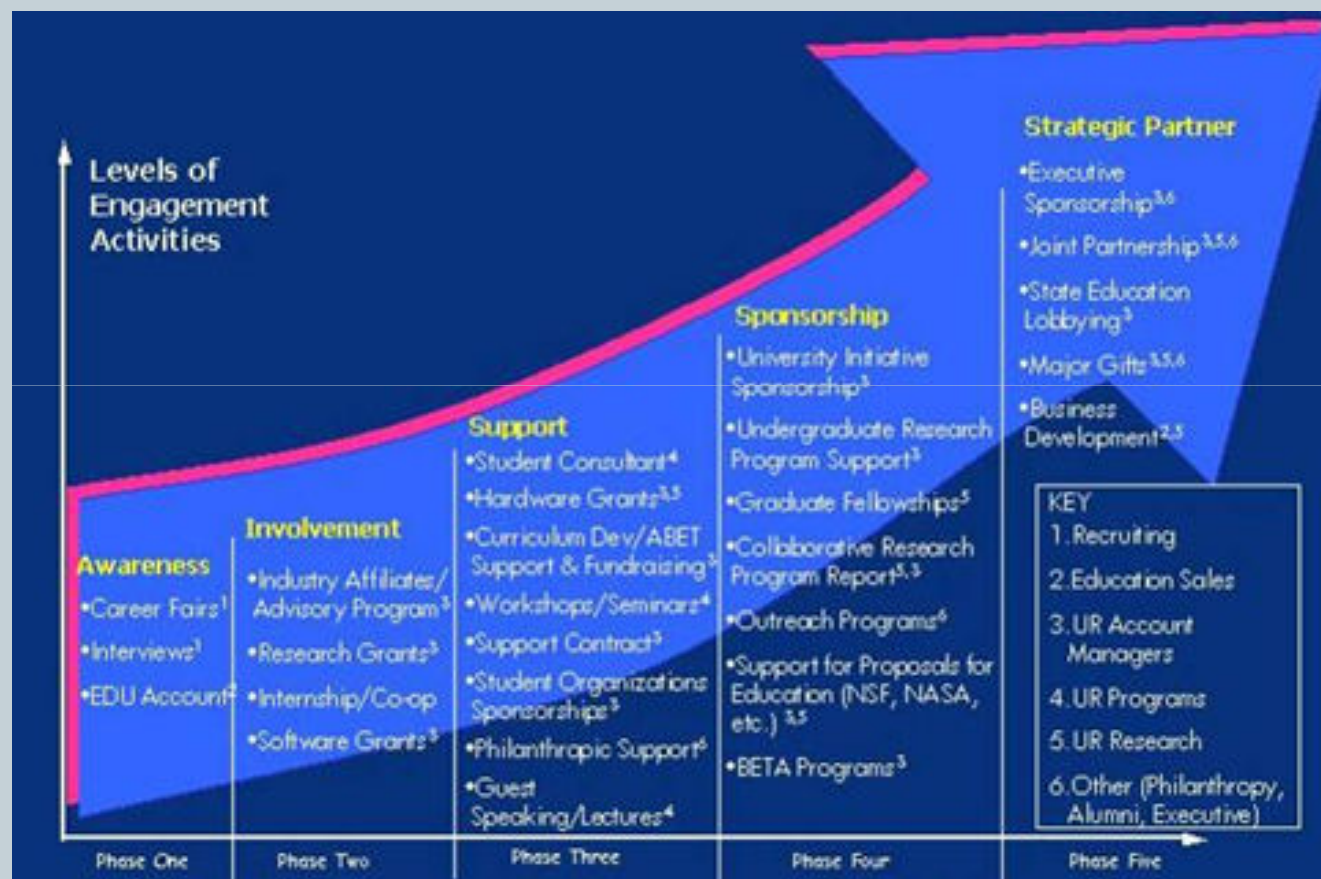
How Does a Company Use Intellectual Assets

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Industrial Partnerships and Revenues

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Wayne Johnson, formerly VP HP University Relations Worldwide , January 10, 2008,
<http://www.slideshare.net/marketingfacts/universityindustry-cooperative-research>

Mish-Mash Model

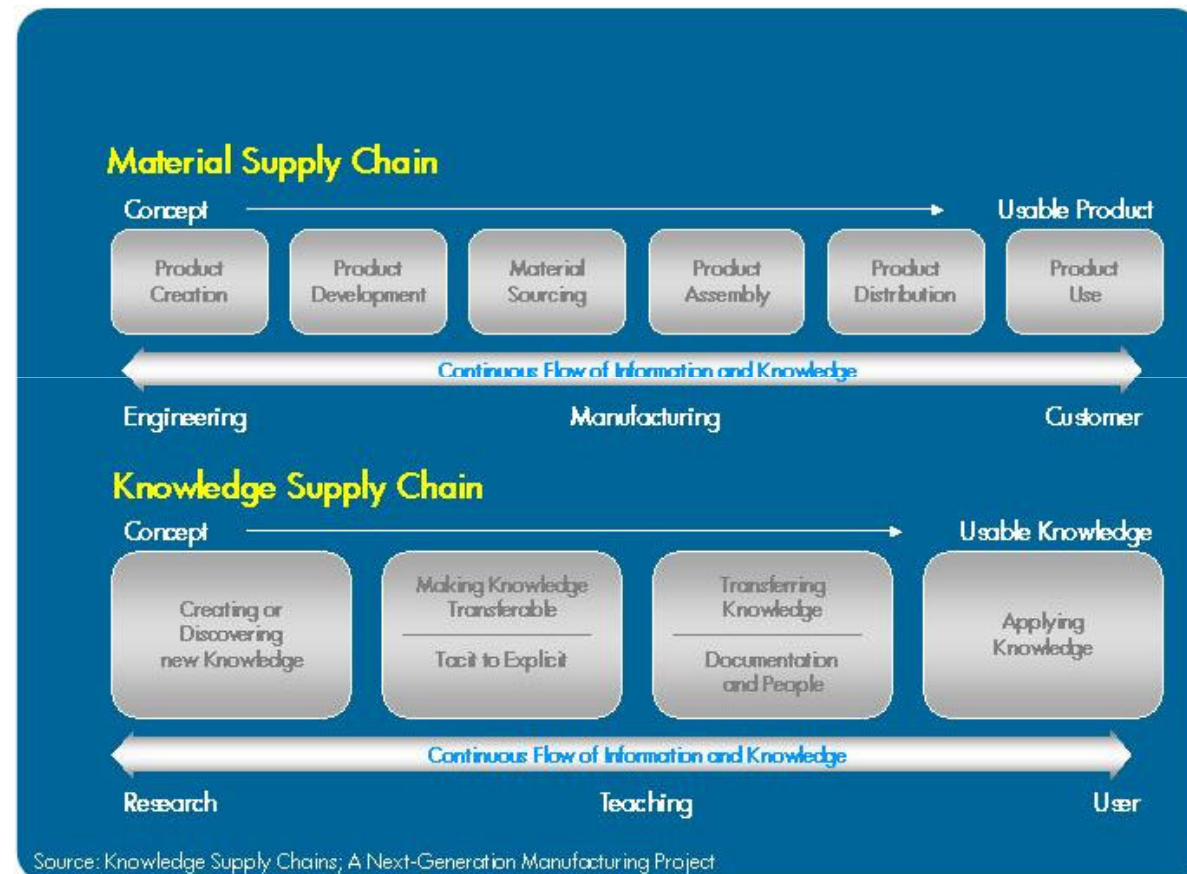
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Range of Development Models Elements, Attributes, Characteristics of the Current & Emerging Paradigms...

	Linear Patent/License Model	Various Hybrid Models	"Open" Innovation
Focus	<ul style="list-style-type: none"> - Invention-centric - IP & Patents - "Things" 		<ul style="list-style-type: none"> - Innovation-centric - Flow of ideas - "People", "creativity"
Characteristics	<ul style="list-style-type: none"> - Serial - Single outcome - Transfer at end of the process - Go it alone - Retarget after creation - "Home run" idea - Idea drives invention - Invent then apply/seek applications - "Technology on the shelf" - Slow, inefficient 		<ul style="list-style-type: none"> - Parallel - Multiple outcomes - Collaborate from beginning - Multiple participants - Utilize during creation - Feedback throughout process - Course correct along the way - Multiple ideas & contributions - Application drives innovation - Flow of contributions - "Invention that matters" - Rapid, multiple parties working on it
Accelerators	<ul style="list-style-type: none"> - IP Protection - Exclusivity - Single solution control points - Secrecy, protection of ideas/information 		<ul style="list-style-type: none"> - Network model - Communities - Open models, "commons" - Flow of information

Intellectual Assets are Inputs to Production

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Source: Wayne Johnson, Vice President, HP University Relations, "Globalization: Implications for ERCs," Worldwide, November 17, 2005

Intellectual Assets are Inputs to Other Activities

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Value of IA/IP

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- Economic Value of IP as Embodied in Product or Services
 - Economic Value = % Revenue of Products or Services
- Strategic Value of IP as an Intangible Asset on the Balance Sheet
 - Strategic Value = Option value of stock with IP versus without
← impact on volatility used to calculate option value of stock
- Value of IP \approx Economic Value + Strategic Value

The Value for Industry is From Managing Risk

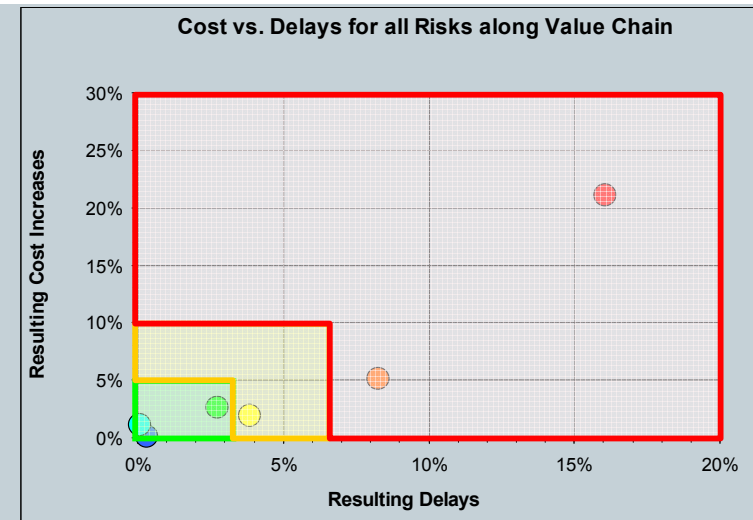
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○ IPKit® - Product Portfolio

- ✦ All the assets need to make a product or product(s)
- ✦ Puts market share in play
- ✦ Creates Revenue by Reducing Discount Rate

○ Field of Use Portfolio

- ✦ Strategic
- ✦ Creates Value by Increasing Stock Value



● Step Function

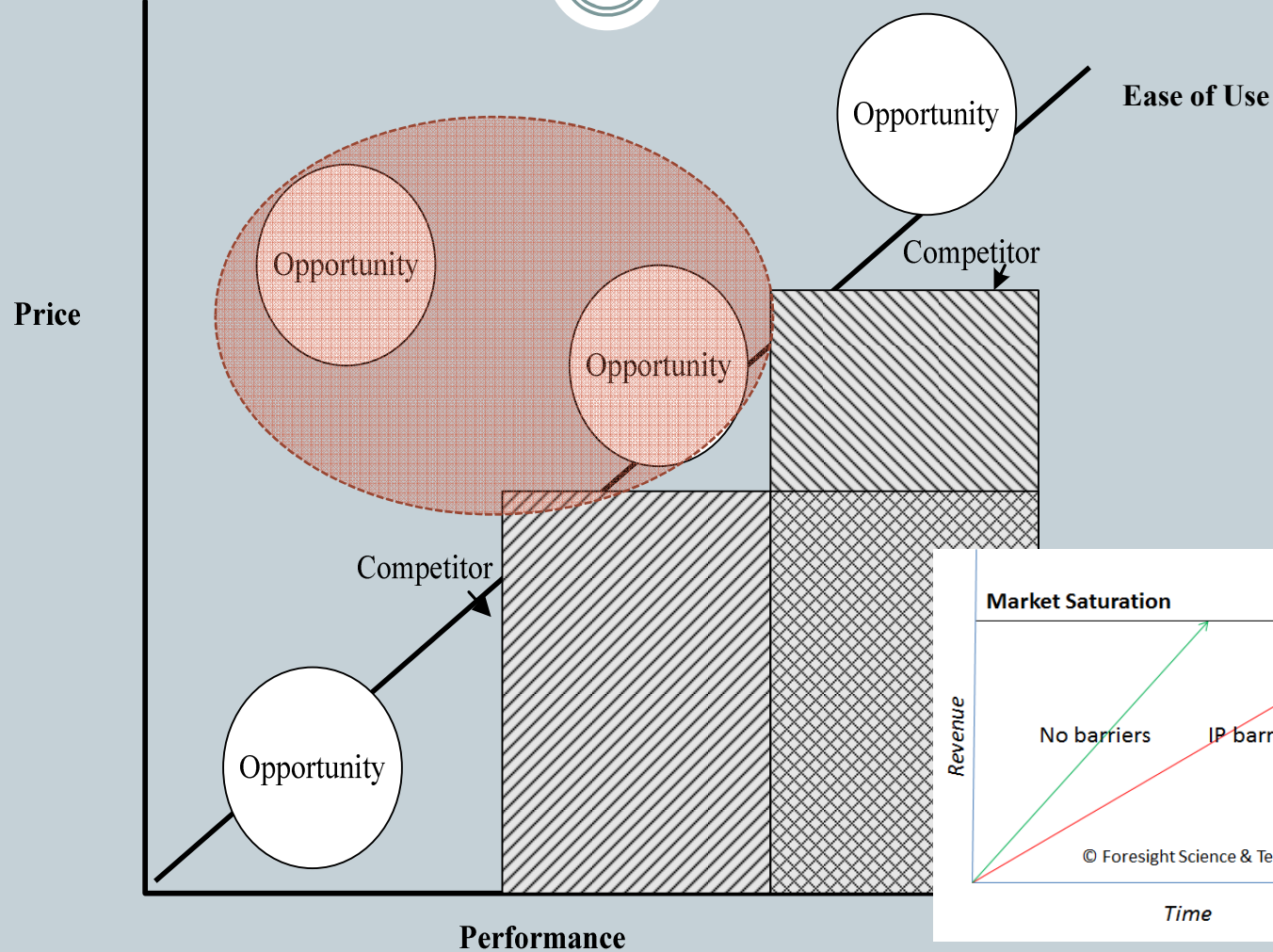
- Technical Risk
- Firm Specific Risk

● Probability Distribution

- Market risk
- IP Risk

IP Reduces a Probabilistic Risk

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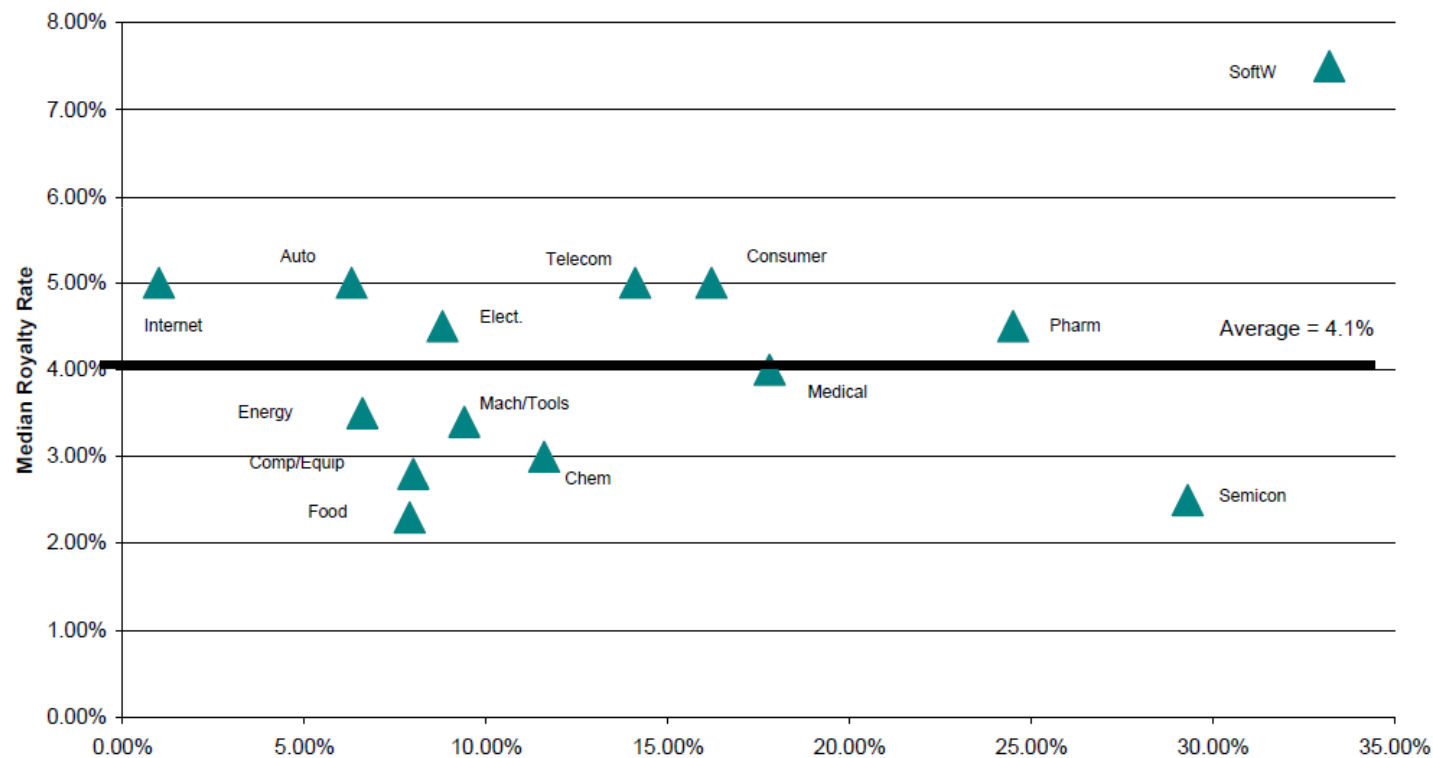


Intellectual Property is Significant but Minor

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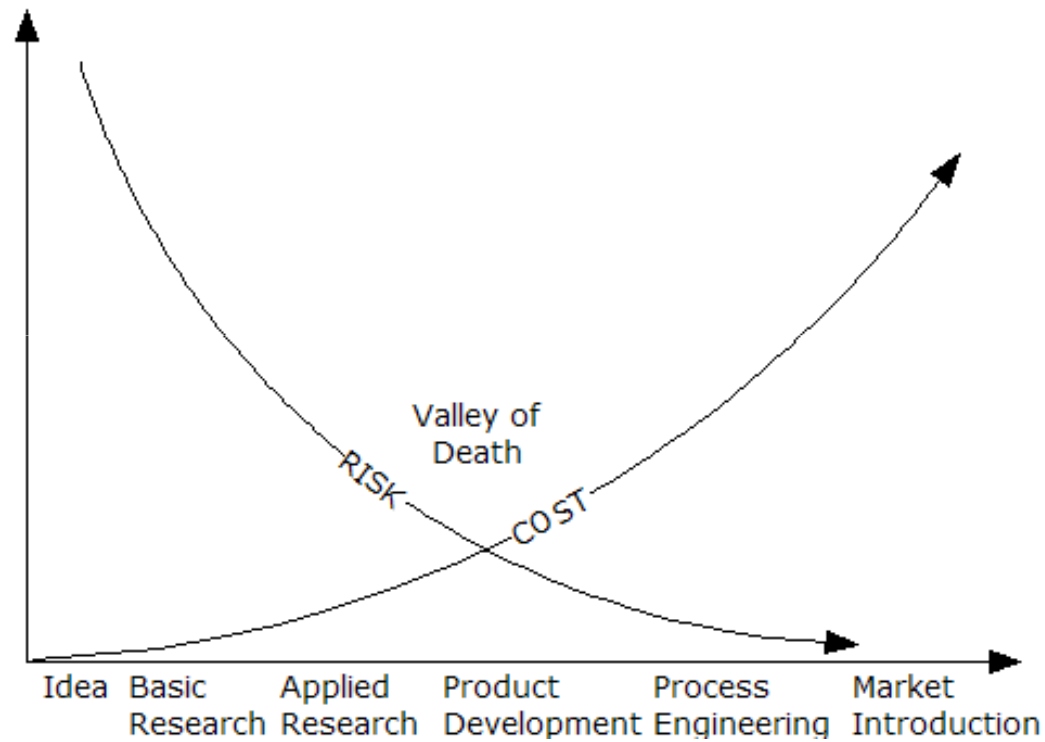
CHART 3: REPORTED MEDIAN ROYALTY RATES AND AVERAGE OPERATING PROFITS

Based on the Data in Goldscheider et al (2002)



Valley of Death

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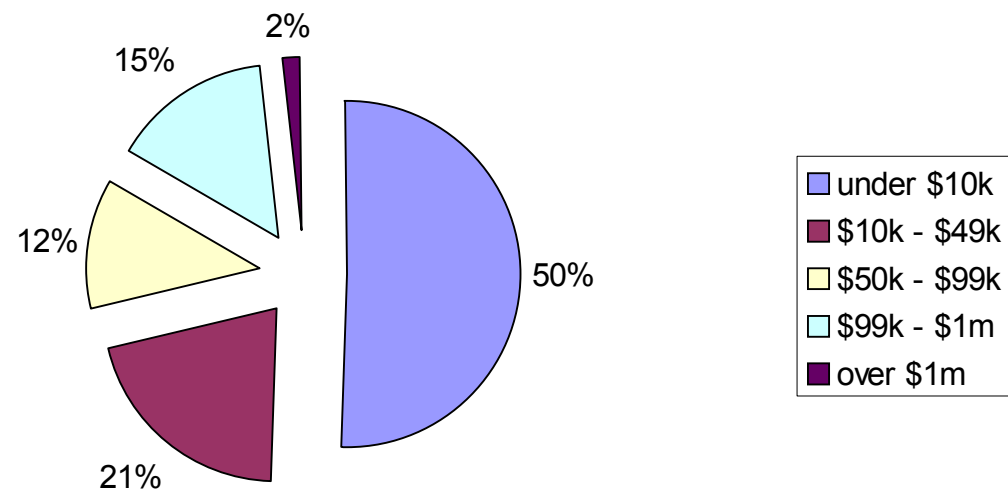


Most Inventions Do Not Make Net Revenues for the University

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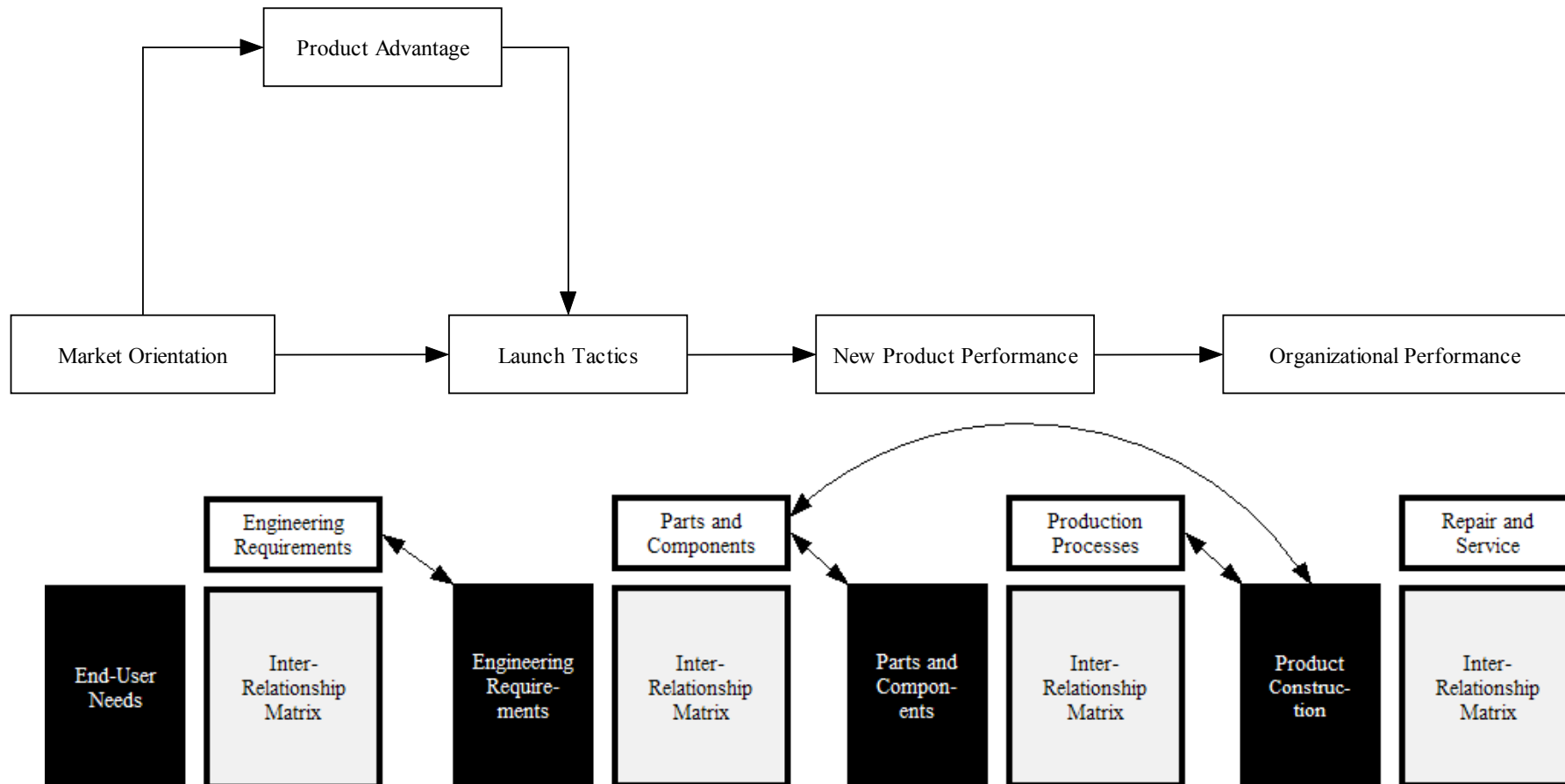
Average Licensing Revenues for Six Universities (Rounded)

Source: Julie Hancock, techno-I post, 6/17/03



IP is Simply one Input BUT It Is Not the Most Important One, *IA* is More Important

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How Do We Manage Intellectual Assets?

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Revisiting the University Side

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Maximize Revenues

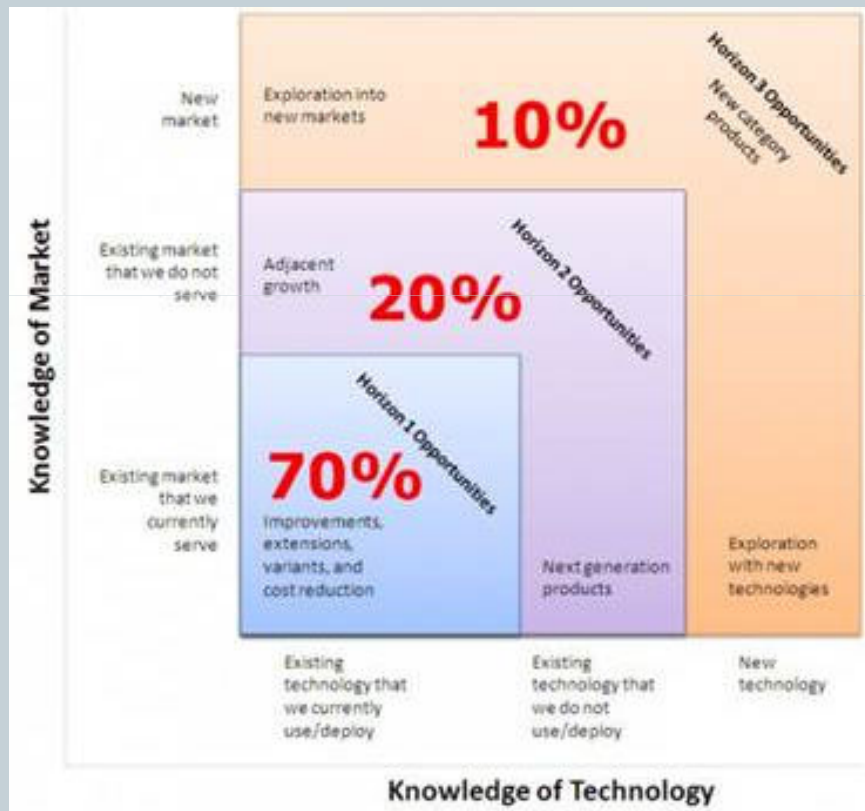
- Licensing
 - Spin-Outs
 - Established Local/National
 - Other
- Sponsored Research
 - Government
 - Foundation/NGO
 - Corporate
- Work for Hire
- Access to Facilities and Data
- Spin-Outs
 - Equity
 - Philanthropy
- Paying Students
- Alumni Philanthropy and Investment
- MTAs

Maximize Strategic Value

- Critical Mass for Global Brand Name Recognition
 - Large Research Grants
 - Sponsored Research Centers and Consortia
- Completeness of Faculty, Post/Docs, Graduate Students/Undergrads Facilities, Equipment, and Software

Time Horizons and Company Investments

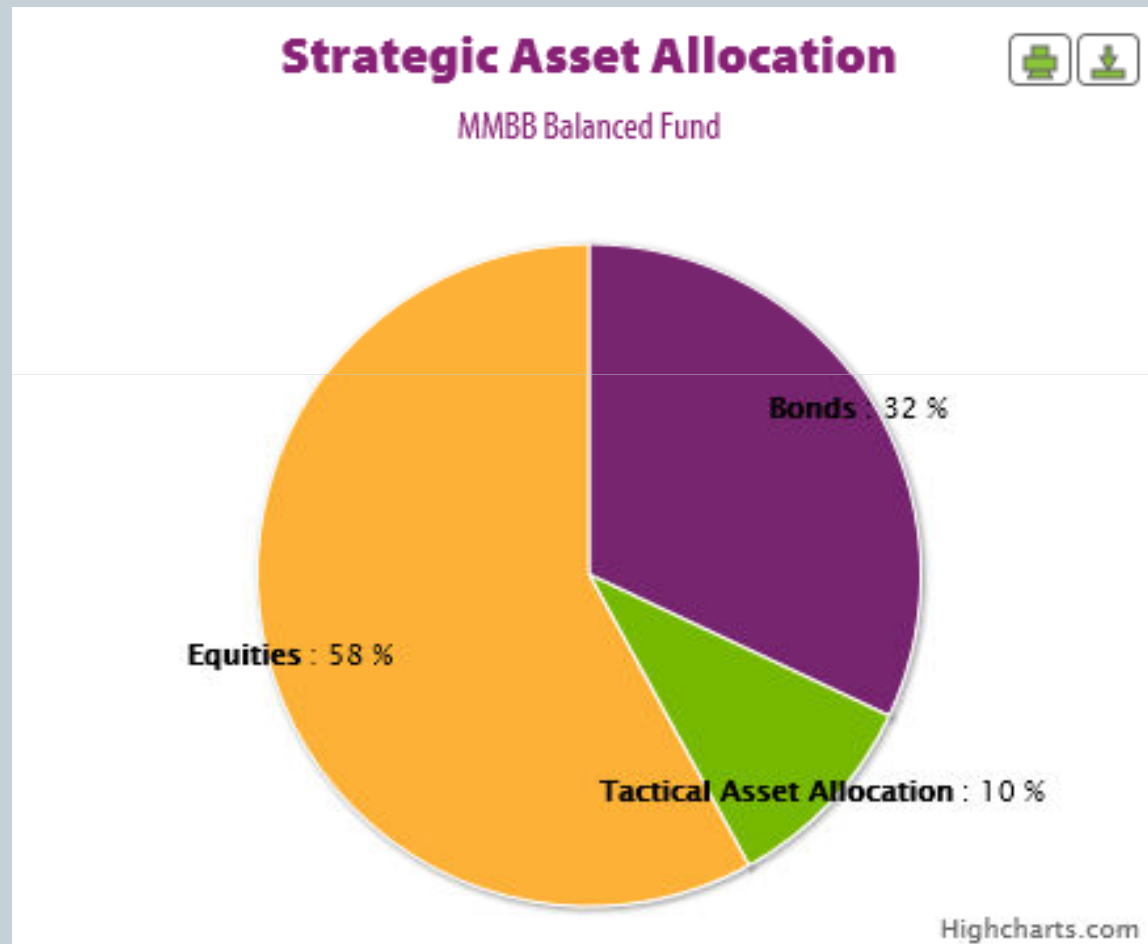
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- Horizon 1 for Work for Hire, Consulting, Licensing, and Students
- Horizons 2 and 3 Opportunities for Sponsored Research, and Licensing, Spin-Outs
- Focus Portfolios on Areas where your University has Unique Facilities or Capabilities and which Intersect with Priorities in Road Maps

University Intellectual Assets are Like a Hedge Fund

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TTO “Hedge Fund”

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Assets



■ Research Initiatives for Sponsored Research/Centers

■ Work for Hire and Consulting

■ Immature Technologies for Student Companies/Spin-Outs/Spin Ups

■ Technology Mature Enough to License

■ Materials, Facilities, and Data

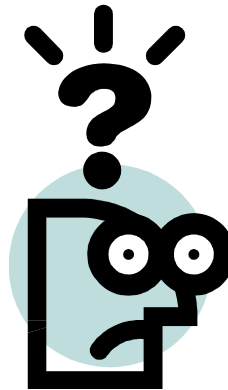
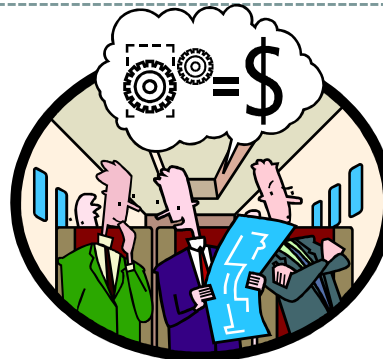
The trick in Intellectual Asset Management is to know how big a hit the technology might be

~\$1, \$10, \$100, \$1,000

Easy Access with consulting fee or equity for spin-outs and students

\$10,000 , \$1,000,000
express licensing

~\$1,000,000 >
negotiate or Spin-Out/Spin-Up



**Do not worry today about formulas.
Just get the concepts clear and try
to maintain a minimum ROI in all**

Balanced Scorecard Approach to Asset Management Linked to Milestones

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Gate	Goal	Criteria	Metric
Protect	Capture Assets	Disclosures (total, per year, per value category)	# Submitted # Disclosure without Protection % Catalogued % Assessed # of Portfolios or IPKits® Approximate Value per Category
	Protect Assets	Property (total and per year)	# Patents applied for and issued # Copyrights applied for and issued # Masks applied for and issued # Trade & Service Marks applied for and issued # Trade Secrets

Gate	Goal	Criteria	Metric
Market	Awareness	Publications/ Presentations (total, per year, per value category)	Avg. # Publications/Disclosure per Cat. Avg # Citations/Disclosure per Cat. # and % with Papers at Conf/Trade Show # and % with Poster Sessions
		PR Impact (total, per year, per value category)	# with Fact Sheets and % # and % Disclosure with Press Release # Hits on Web Avg # Hit per Public Disclosure
	Sales Leads	Contacts (total, per year, per value category)	# Licensees/Sponsors contacted Avg. # Contracts per Public Disclosure # Unsolicited Disclosures # Visits (There or On-Site) % with Visits % Visits leading to Negotiations

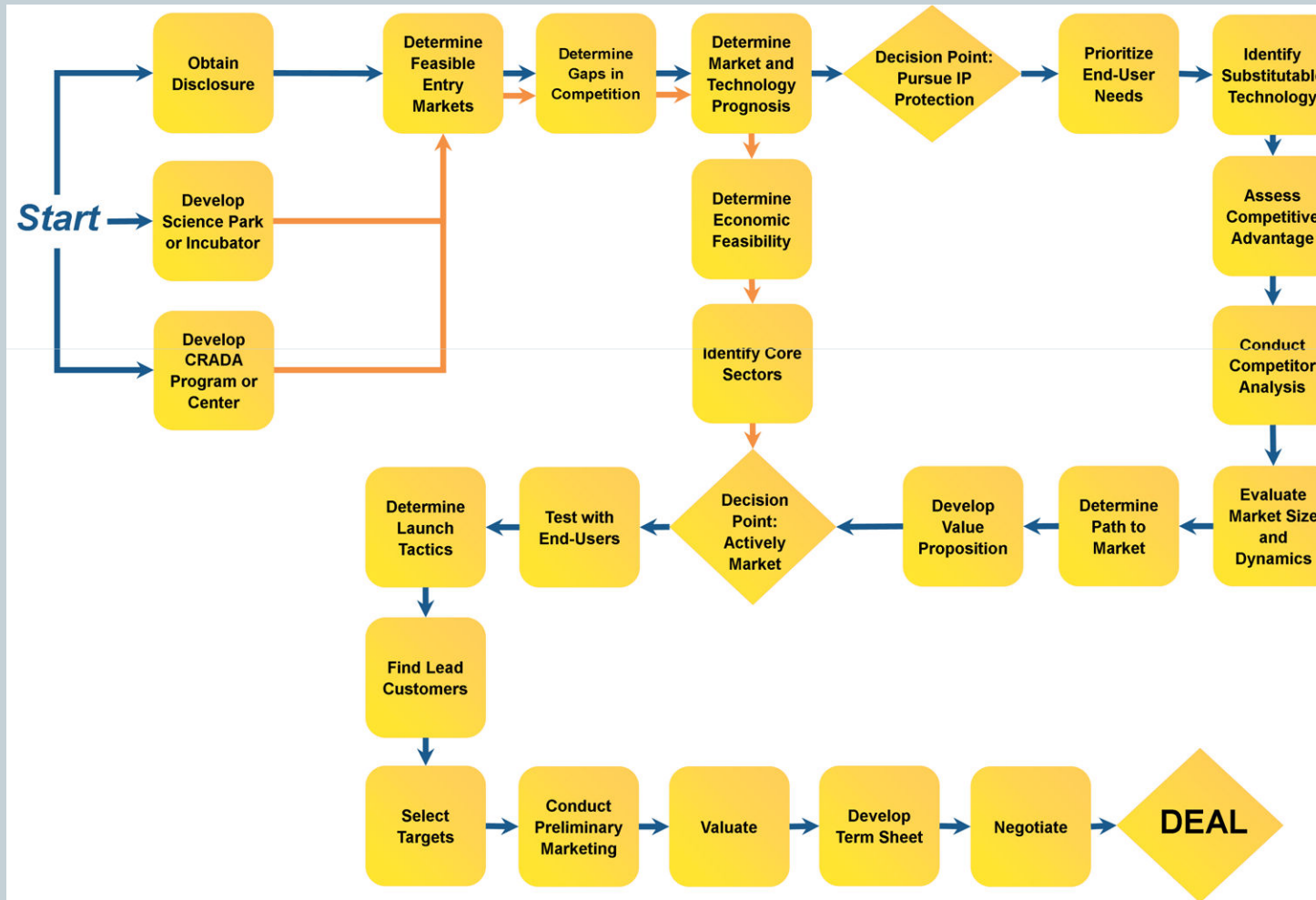
Yet One More Scorecard

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Gate	Goal	Criteria	Metric
Deal Closed	Revenues	Revenues (total and per year for each Portfolio, IPKit® and Value Category)	# Licensed # Spun-Out Dollars from Licenses Dollars from Equity Dollars from Sponsored Research Dollars from Consulting
	Profit	Net Revenue (same)	Gross Profit Net Profit
	Alliances	Relationships (same)	# of Discrete Partners Avg. Transfers/Collaborations per Partner # Student Placements (Practicums) # Jobs

Align with Policies and Processes Implemented

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Thank You

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- Nothing happens without a sale.
David Speser
- If opportunity doesn't knock,
build a door.
Milton Berle
- A well-defined imagination is the
source of great deeds.
Chinese Fortune Cookie