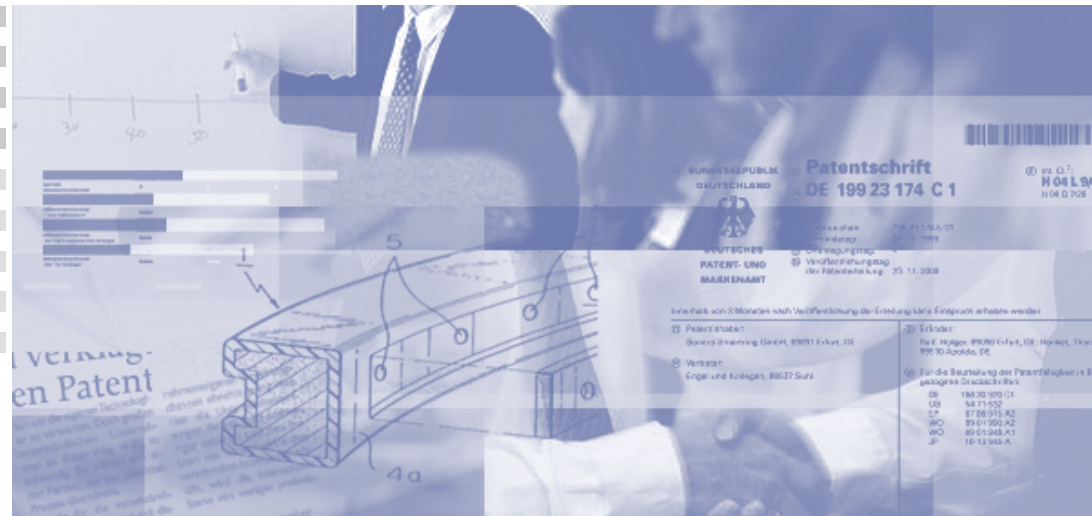


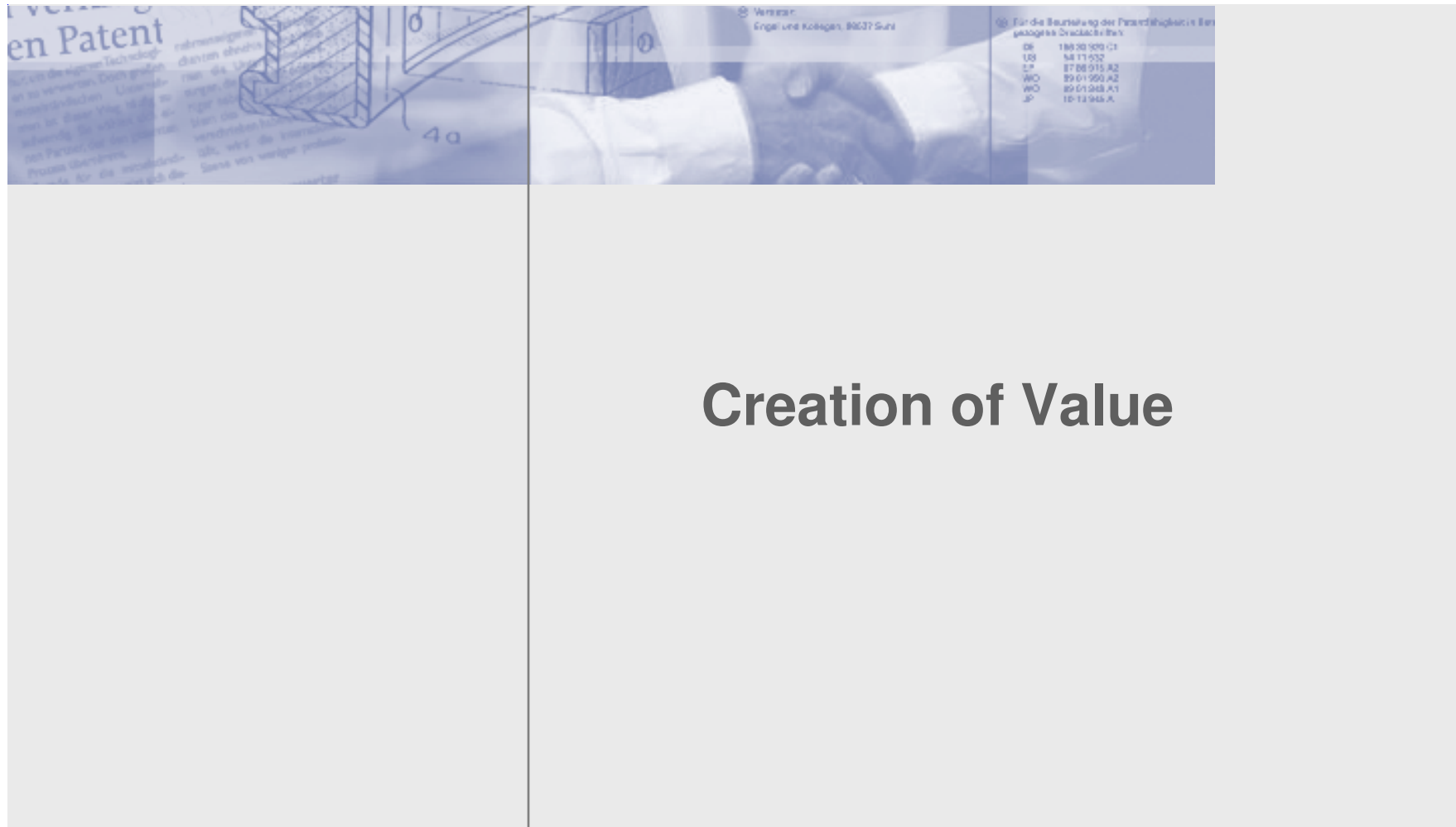
# Alpha Summit Europe 2006

## *IPR - Management*



30<sup>th</sup> November 2006  
Prof. Dr. Alexander J. Wurzer



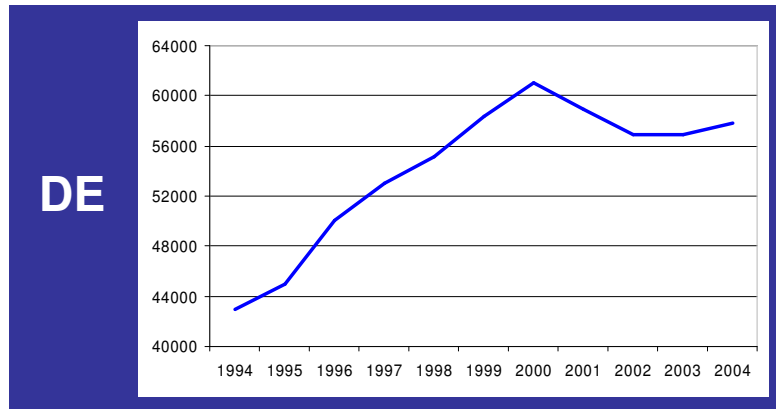


# Creation of Value

# ■ IP - Time-based Development

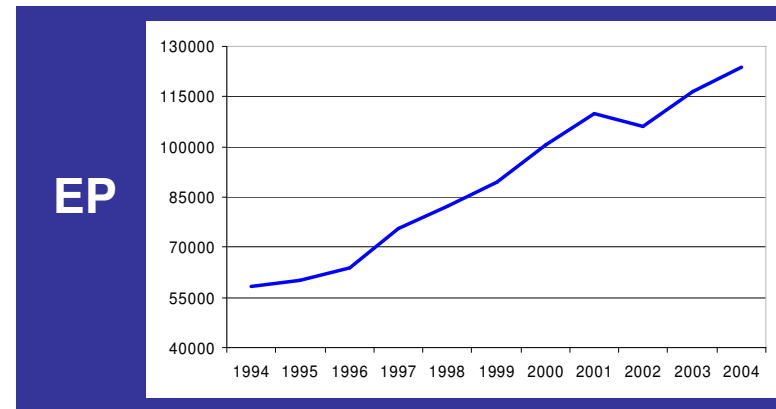


**German patent applications**



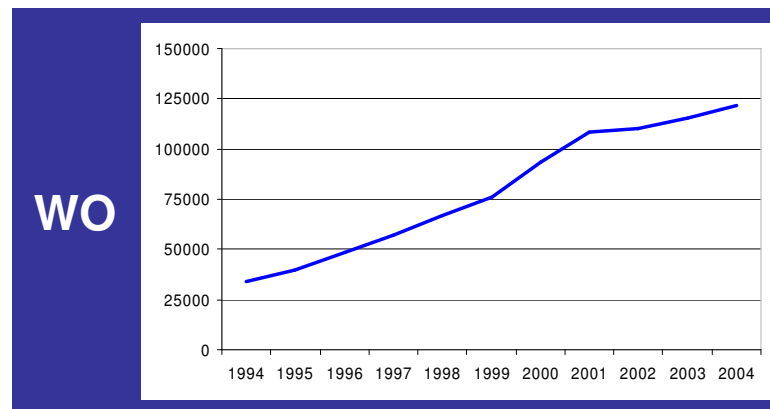
Source: DPMA Jahresbericht 1999 und DPMA Jahresbericht 2004

**Patent applications at the EPO**



Source: Europäisches Patentamt, Fakten und Zahlen 1995-2005

**PCT-Patent applications at the WIPO**

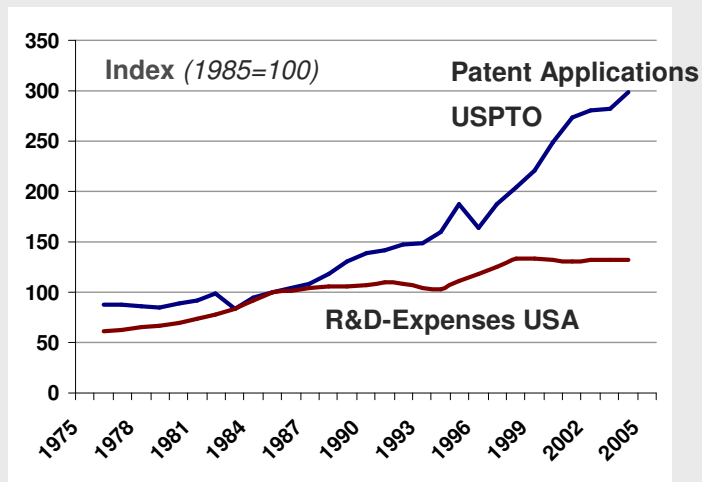


Source: WIPO Statistics, PCT Statistical Indicators Report, Annual Statistics 1978-2004

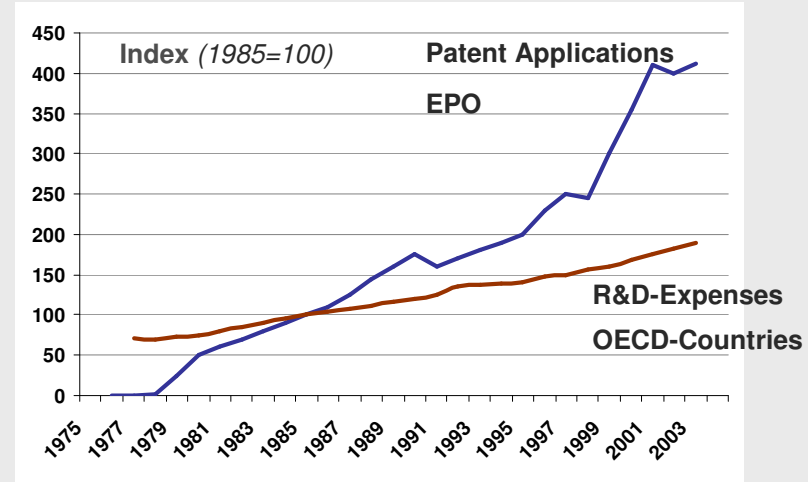
# Development of the Patent System\*



## R&D-Investment and Patent Applications in the USA



## R&D-Investment and Patent Applications in OECD-Member States



➤ **Structural Break in Patenting Activities in the mid-80s**

➤ **Uncoupling of R&D and Patent Applications**

\* USPTO, Bureau of Labor Statistics (BLS), National Science Foundation (NSF), USA, EPO, Harhoff, D. (2004): Innovationen und Wettbewerbspolitik - Ansätze zur ökonomischen Analyse des Patentsystems.



*„Economic values are no inherent values of goods, [...] but values based on effects and impacts that are determined by external purposes of these goods.“ [Böhm 1928]*

*„Assets are probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events.“ [USGAAP No. 6, § 25]*

**IP = Asset**

Value of IP  
(for a business)

=

Prospective Earnings  
(that can be derived with  
a patent or trademark)

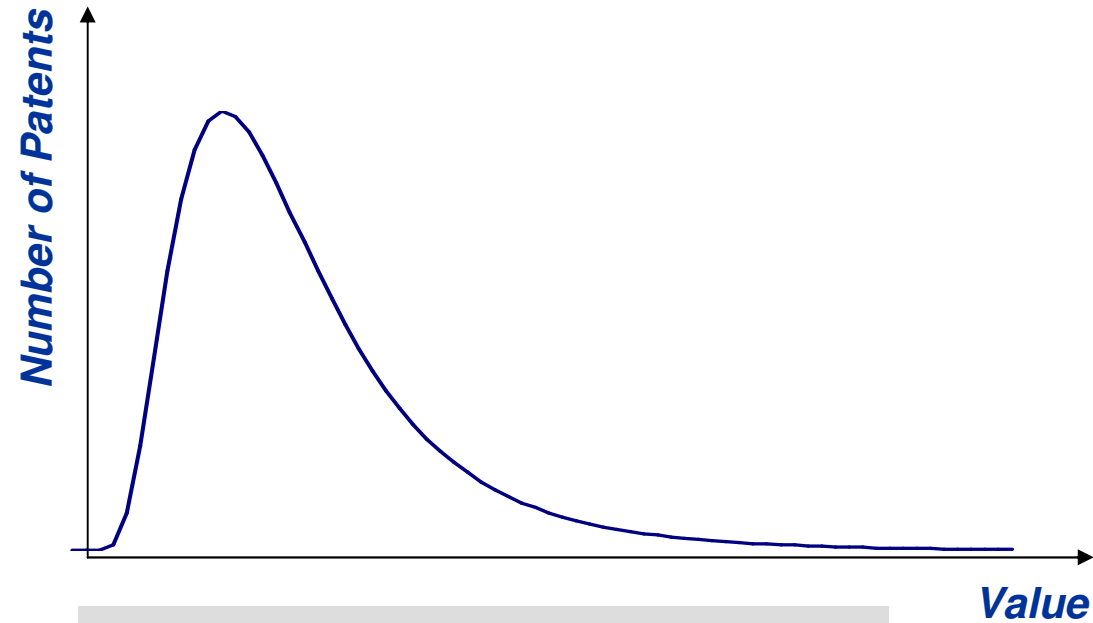
# Commercial Use of IPR – Patent Functions



Protection	<i>Protection of own products / processes against copying</i>
Reserve / Improvement	<i>Protection of future or improved products / processes</i>
Blocking	<i>Patents not used by owner – only for blocking competitor's products</i>
Cross Licensing	<i>Access to third party technologies through cross licensing</i>
Licensing-out	<i>Better market penetration, generating income through licensing</i>
Patent Transfer / M&A	<i>Generating income or cost savings; Providing basis for co-operations, joint ventures or start-ups</i>
Confusion / Intimidation	<i>Confusing or intimidating competitors</i>
Reputation / Motivation	<i>Improving company image; promoting sales; motivating employees</i>



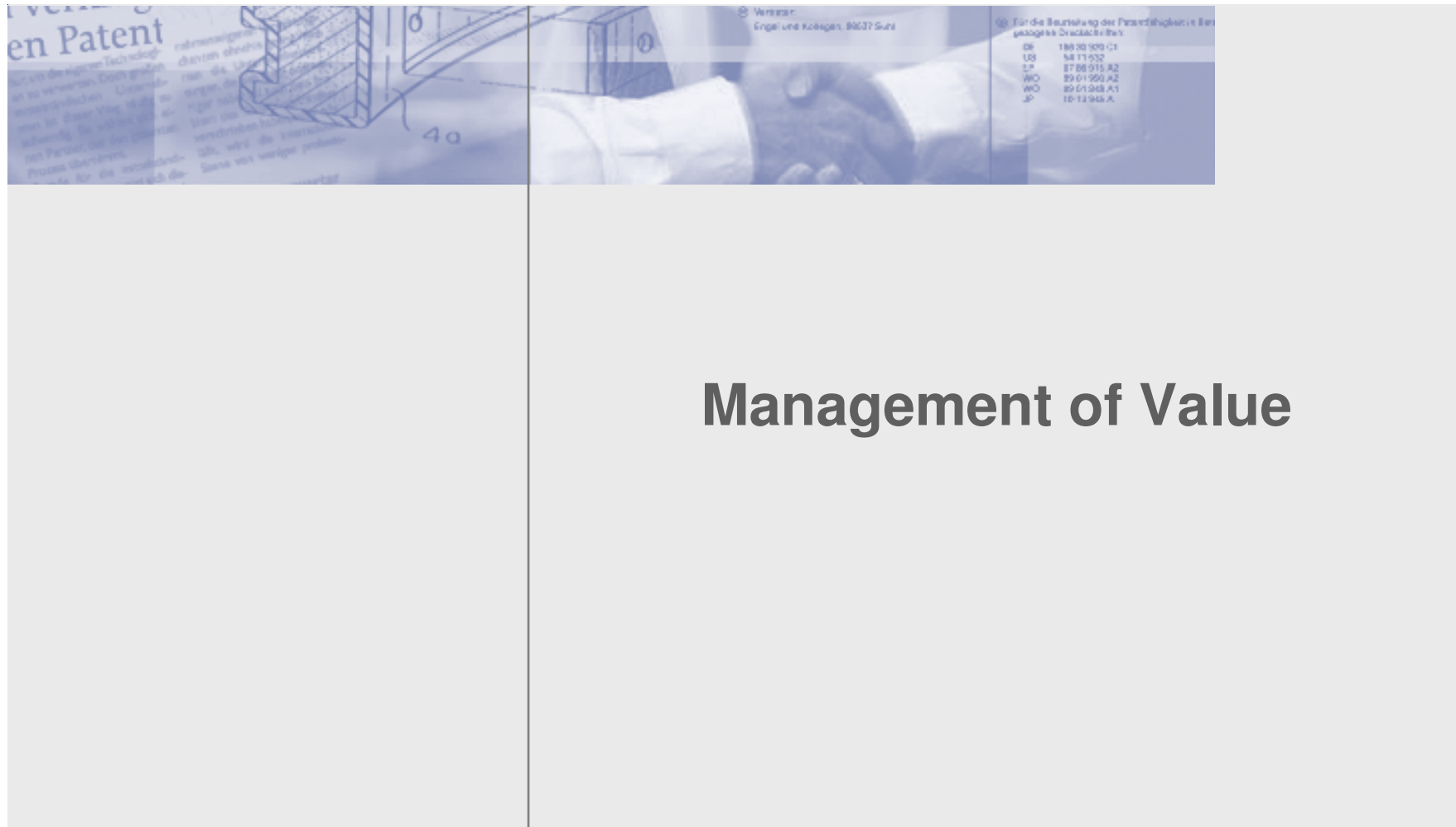
# ■ Patent Value Distribution



*Empirical Studies\**

Data	Number of Patents	Value of TOP 10% Patents
German Patents (1977)	772	88%
USPTO Patents (1977)	222	83%
University Patents USA	411	92%

\* Portfolio Perspective, Source: Scherer, Harhoff, Kukies (2000) Journal of Evolutionary Economics



# Management of Value

# Objectives for the management organization of IP



---

1) *Know-how protection and competitive effects*

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2) *Efficient protection of relevant technologies  
-> competition oriented cost-benefit-ratio*

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3) *Realization of additional income beyond  
the core business through licensing*

---

4) *Combined business model with internal &  
external IP exploitation*

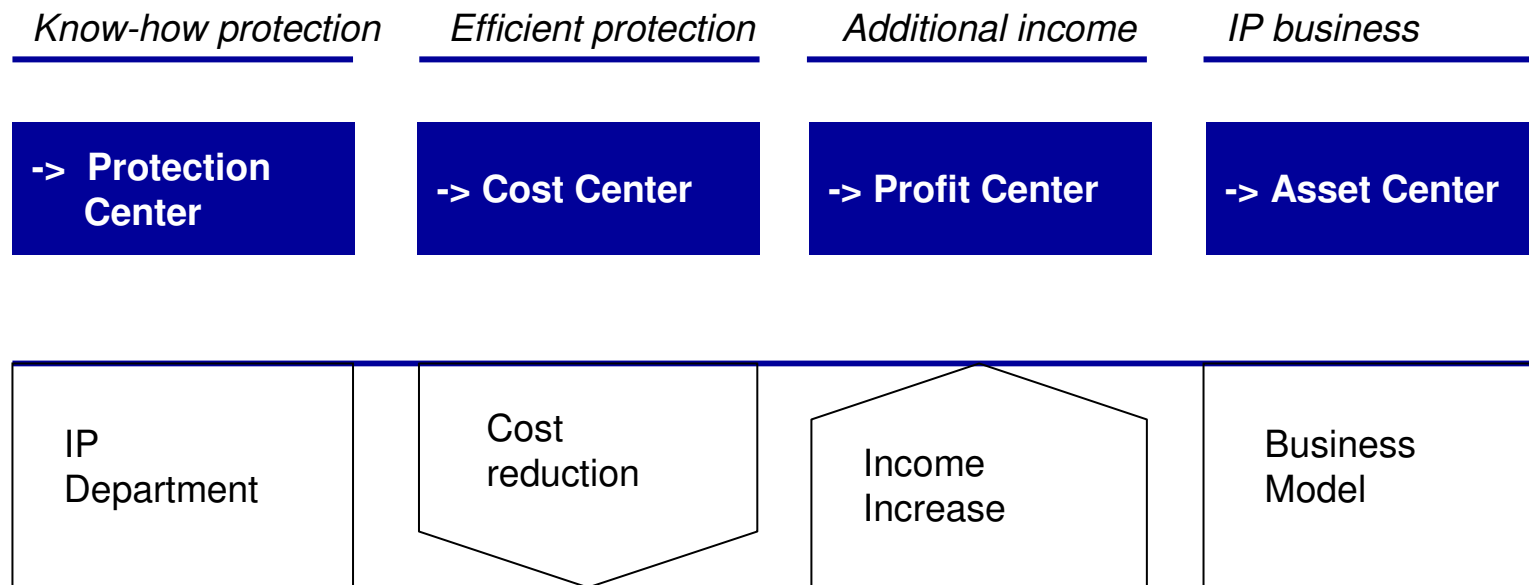
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} IP management as  
supportive function  
of the primary value-added  
chain

} IP management for  
establishing and exploiting of  
a second value-added chain

} IP based business models

# Strategic objectives for organizational structures in IP exploitation



# ■ Implications for companies



## *Know-how protection*

## *Efficient protection*

▲ **Protection Center**

▲ **Cost Center**

### **Advantages**

- quick informal decisions  
„if in doubt – file!“
- low personnel resource linkage  
at filing procedures

- Efficient product protection
- cost controlling

### **Disadvantages**

- High costs and budget requirements
- Implementation effort
- Management effort if  
cost-induced portfolio adjustment

- Resource requirement
- formalization
- Information demand:  
Risks, opportunities and strategy

### **Tendencies**

- uncontrolled piling up of  
IP assets
- lag-structure development between  
product and patent portfolio

- Resistance while implementation
- No strict realization  
in daily business

# ■ Implications for companies



*Additional Income*

▲ Profit Center

*IP Business*

▲ Asset Center

## Advantages

- No resource linkage in tangible assets – production capacity
- Additional income
- New market options and scalability

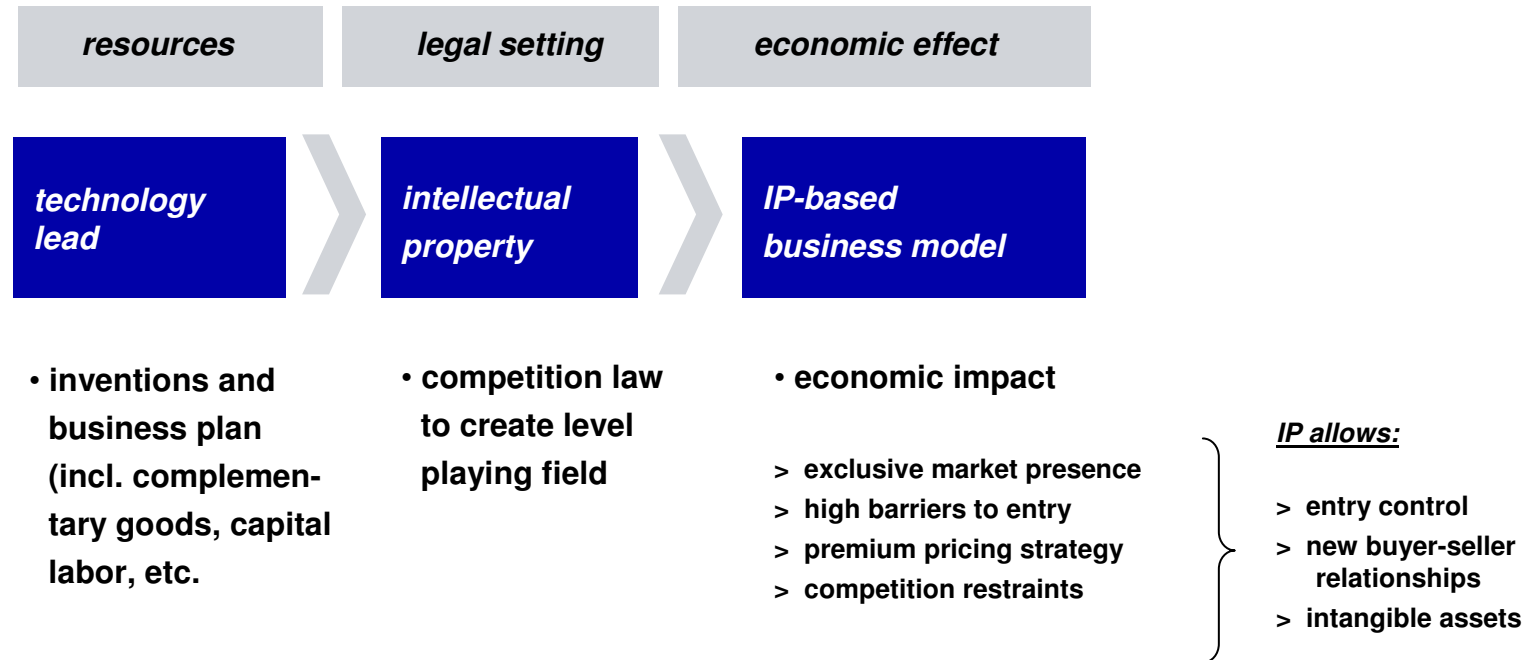
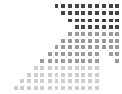
## Disadvantages

- long range strategic company positioning
- Complex economic management of technical and non-technical topics
- Abandon of grown technological and market positions

## Tendencies

- Dominance of technology driven challenges – not business and economics
- Technological deficiencies because of missing internal input from internal technology conversion and exploitation

# IP-Supported / IP-Based Business Models



# IP-Supported / IP-Based Business Models \*



<i>IP strategy</i>	<i>typical strategy user</i>	<i>typical sectors</i>	<i>exploitation</i>	<i>inherent problem</i>
<ul style="list-style-type: none"> <li>• <b>Fortress Monopoly</b></li> <li>- large portfolios</li> <li>- market barriers</li> <li>- consistent action against infringements</li> </ul>	<ul style="list-style-type: none"> <li>• Pfizer</li> <li>• Merck</li> <li>• Astra Zeneca</li> <li>• Xerox</li> </ul>	<ul style="list-style-type: none"> <li>• pharmaceutical</li> <li>• chemical</li> </ul>	<ul style="list-style-type: none"> <li>• premium price</li> </ul>	<ul style="list-style-type: none"> <li>• patent expiry problem</li> <li>• antitrust law</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Value-Added Monopoly</b></li> <li>- protection of user relevant features</li> <li>- strategic patents to obstruct competitors</li> <li>- fast documentation and protection</li> </ul>	<ul style="list-style-type: none"> <li>• Beiersdorf</li> <li>• Nestlé</li> </ul>	<ul style="list-style-type: none"> <li>• consumer products</li> <li>• automotive</li> </ul>	<ul style="list-style-type: none"> <li>• costs benefits</li> <li>• user benefits</li> </ul>	<ul style="list-style-type: none"> <li>• time trap</li> </ul>

\* compare: Pike, C.Y.:Virtual Monopoly, London: 2001

# IP-Supported / IP-Based Business Models \*



<i>IP strategy</i>	<i>typical strategy user</i>	<i>typical sectors</i>	<i>exploitation</i>	<i>inherent problem</i>
<ul style="list-style-type: none"> <li>• <b>Hub Monopoly</b></li> <li>- standard-setting proprietary rights</li> <li>- rights pooling</li> <li>- IP holding organization</li> </ul>	<ul style="list-style-type: none"> <li>• Sony</li> <li>• Philips</li> <li>• Matsushita</li> <li>• Siemens</li> <li>• Telekom</li> </ul>	<ul style="list-style-type: none"> <li>• consumer electronics</li> <li>• IT / telecommunication</li> </ul>	<ul style="list-style-type: none"> <li>• entry license</li> </ul>	<ul style="list-style-type: none"> <li>• technology shift</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Monopoly in-a-box</b></li> <li>based on:</li> <li>- well-defined portfolio</li> <li>- good technology coverage</li> <li>- enforceable rights</li> </ul>	<ul style="list-style-type: none"> <li>• Cambridge Antibody</li> <li>• Powderject</li> <li>• Shimano</li> <li>• Intel</li> </ul>	<ul style="list-style-type: none"> <li>• biotechnology</li> <li>• mechanical devices</li> <li>• consumer products</li> </ul>	<ul style="list-style-type: none"> <li>• entry license</li> </ul>	<ul style="list-style-type: none"> <li>• technology shift</li> </ul>

\* compare: Pike, C.Y.:Virtual Monopoly, London: 2001

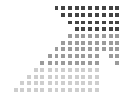
# Types and Setting of Intellectual Property Strategy \*



	<i>features</i>	<i>setting</i>	<i>problems</i>
<b>Early Evaluator</b> proactive regarding IP passive regarding IP business	- diligence in early project phase detailed research and evaluation of rights and competitive environment	- transparent rights environment - few infringements of third-party rights	- complex defense positions - substantial resources
	<ul style="list-style-type: none"> <li>• high R&amp;D investment</li> <li>• narrow product range</li> <li>• long life cycles</li> <li>• competitor follow-up on patent infringements</li> <li>• investor/funding needed</li> </ul>		<ul style="list-style-type: none"> <li>▲ high loss potential</li> <li>▲ high individual risk <math>\frac{\text{revenue loss}}{\text{product}}</math></li> <li>▲ high new product launch cost</li> <li>▲ growing dispute probability</li> <li>▲ transparency of IP risk management</li> </ul>

\* compare: Pike, C.Y.: Virtual Monopoly, London: 2001

# Types and Setting of Intellectual Property Strategy \*



	<i>features</i>	<i>setting</i>	<i>problems</i>
<b>Negotiator</b>  active regarding IP active regarding IP business	- hardly any proactive research and evaluation risks, infringement information from third partners own IP negotiating asset	- little infringement potential - cross-licensing capabilities and acceptance by competitors	- uncertain starting position - third-party willingness to come to agreement
	<ul style="list-style-type: none"> <li>• little R&amp;D investment</li> <li>• high product diversifications</li> <li>• willingness to negotiate</li> <li>• willingness of competitors to negotiate</li> <li>• funded business model</li> </ul>		<ul style="list-style-type: none"> <li>▲ low loss potential</li> <li>▲ low individual risk <math>\frac{\text{revenue loss}}{\text{product}}</math></li> <li>▲ high new product acceptance</li> <li>▲ competence and resource integration</li> <li>▲ technology dependence</li> <li>▲ no transparency for fund provider needed</li> </ul>

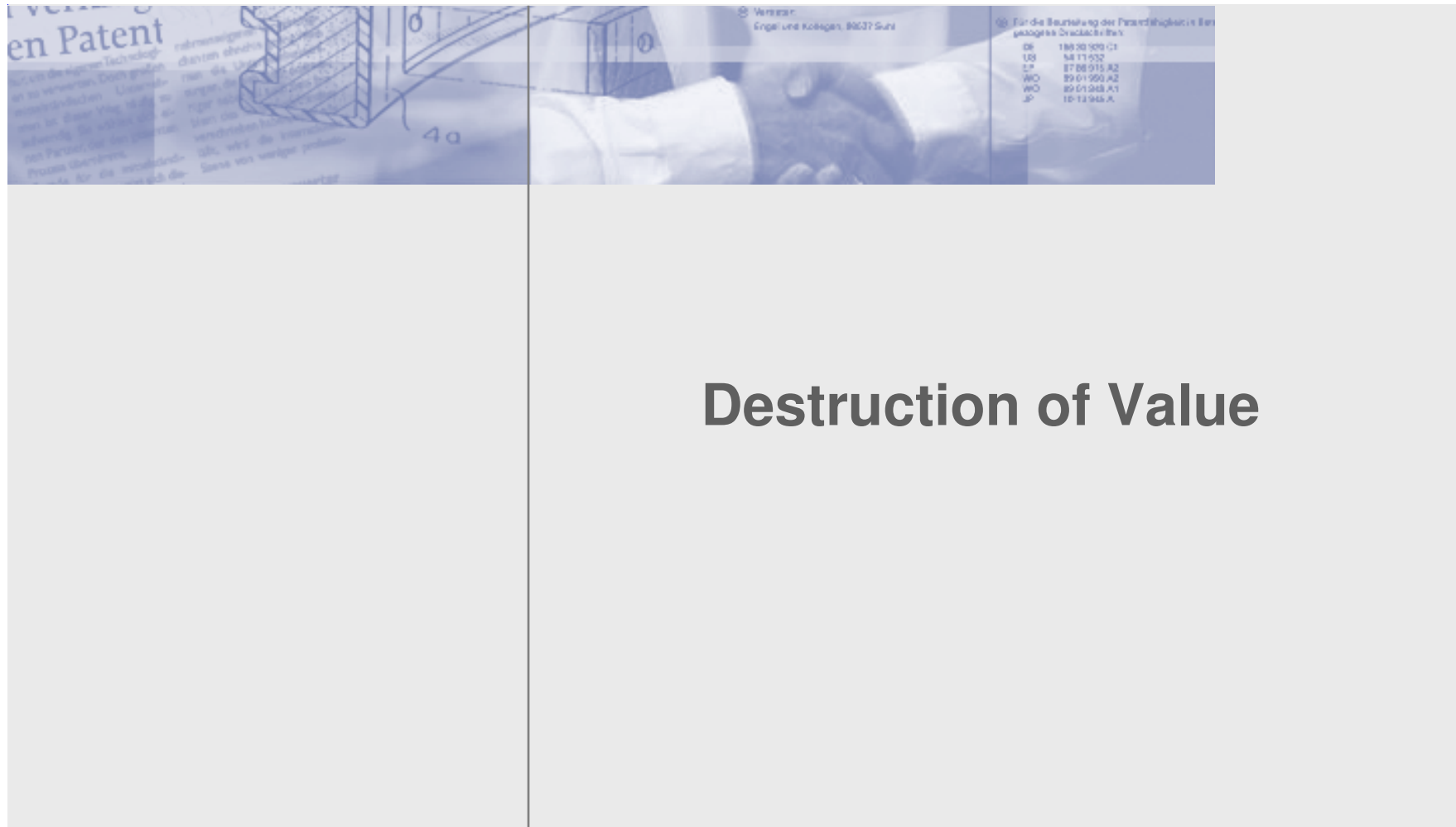
\* compare: Pike, C.Y.:Virtual Monopoly, London: 2001

# Types and Setting of Intellectual Property Strategy \*



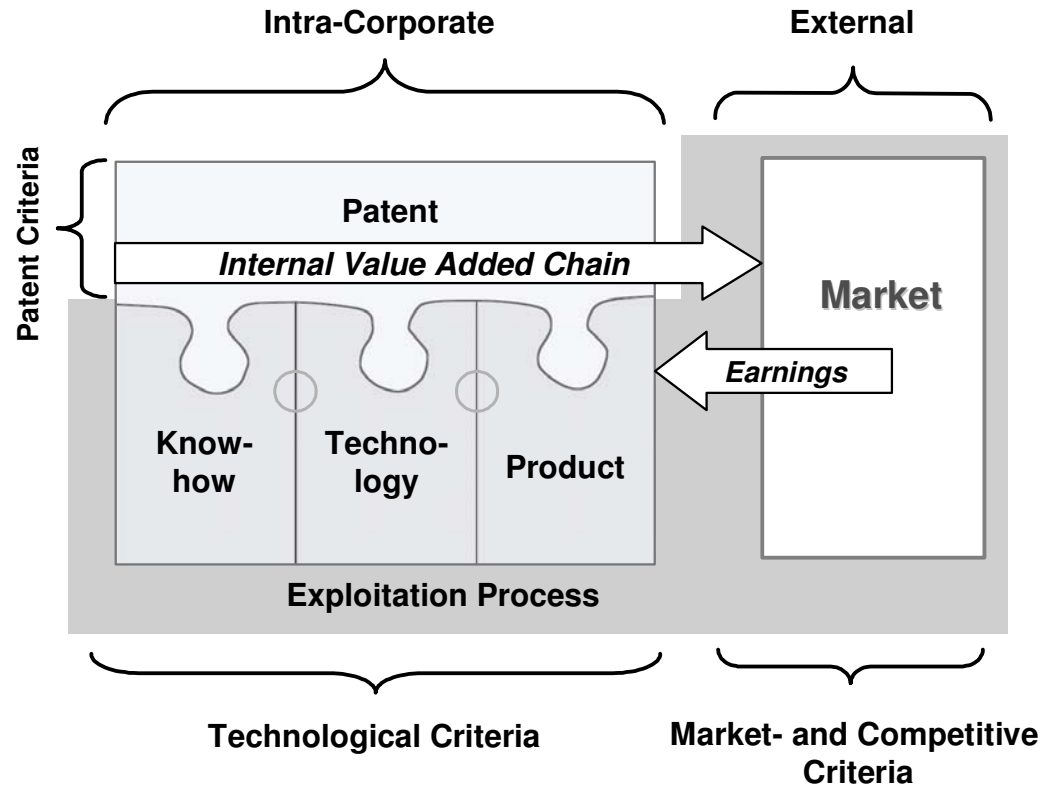
	<i>features</i>	<i>setting</i>	<i>problems</i>
<b>Innovative Protector</b> proactive regarding IP active regarding IP business	- proactive research and evaluation - good protection of technology - lead start-up from niche - expanded by sustained IP work	- good identification of niche - enforcement of rights against third part	- proactive research - legal uncertainty
	<ul style="list-style-type: none"> <li>• creation of business leeway through IP</li> <li>• displacement of competitors from niche through IP</li> </ul>		<ul style="list-style-type: none"> <li>▲ integration of R&amp;D, marketing and IP</li> <li>▲ active IP management (rather than administration)</li> <li>▲ identification of business-oriented IP gaps</li> <li>▲ high flexibility</li> <li>▲ no bypass, but new solution (toner ☒ ink; fountain pen ☒ ballpoint pen)</li> </ul>

\* compare: Pike, C.Y.: Virtual Monopoly, London: 2001



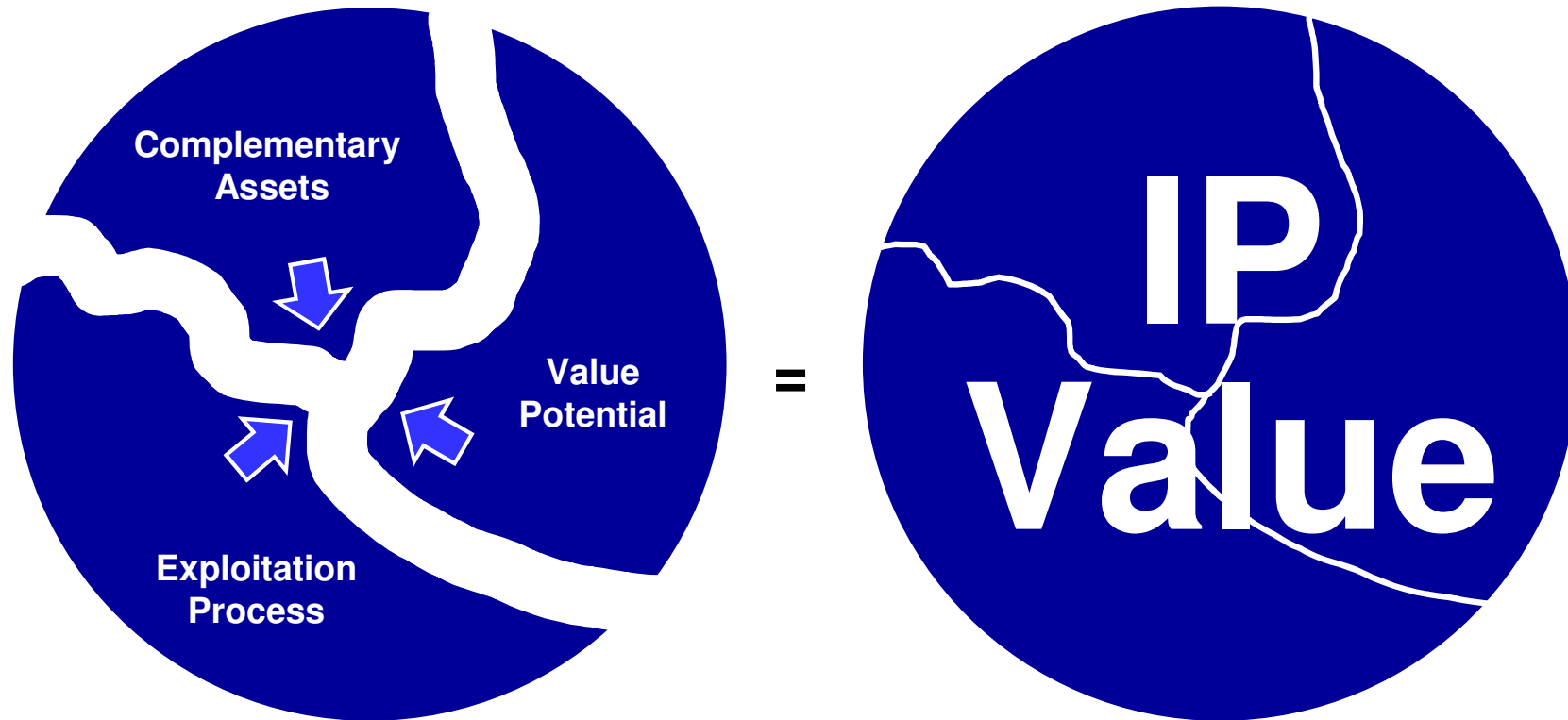
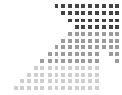
## Destruction of Value

# ■ IP Value Realization



$$\begin{array}{c}
 \text{Patent} \\
 + \\
 \text{Exploitation Process}
 \end{array}
 = \text{Value}$$

# Value Constitution of IP





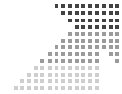
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geeignete Druckverfahren

DE	186 20 509 C1
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WO	89 01 950 A2
WO	89 01 948 A1
JP	10-13 948 A

- > Creation of Value
- > Management of Value
- > Destruction of Value



■ **Prof. Dr. Alexander J. Wurzer** is a managing director of PATEV<sup>®</sup> GmbH & Co. KG, corporation for rating and commercialization of property rights and technologies, Munich · Karlsruhe. His professional responsibility is the support of industrial companies, insolvency receivers, patent attorneys as well as financial institutions during the risk analysis, rating and commercialization of industrial property rights.

Following his studies of physics, microbiology and molecular biology at the Ludwig-Maximilians university in Munich, and parallel to his Ph.D. in biophysics, he worked in the industrial property rights sector, also for the Fraunhofer Gesellschaft.

Dr. Wurzer is invited Professor at the CEIPI, centre for International Industrial Property Studies, at the Robert Schuman University in Strasbourg in France and the director of the Institute for Intellectual Property Management at the Steinbeis University in Berlin. He is a guest lecturer at the Heinrich-Heine University in Düsseldorf, at the chair for civil law and commercial legal protection for patent searching and rating. He also supports this work as a member of the working party for patent law at the center for commercial legal protection at the University of Düsseldorf. He is a member of the working party for patent rating of the Licensing Executives Society (LES).

He is a lecturer at the banking commerce college, the European Business School, the academy for financial management, Stuttgart and the GENO academy of cooperative banks in Baden Württemberg, and is also a lecturer at the training service of the federal association of public banks in Germany as well as at the banking academy in Frankfurt/Main.

Dr. Alexander J. Wurzer is the publisher of a manual on patent searching together with the department president for information at the German patent and trademark office. At the technical information center in Karlsruhe, the second edition of "competitive advantages through patent information" was published in 2003.

Dr. Alexander J. Wurzer is the author of several books and numerous articles on the topic of commercial patent management.

He is a member of EPIP, European Policy for Intellectual property, the German Association for the Protection of Industrial Property and copyright Law (GRUR), the association of German engineers (VDI), the Schmalenbach-Gesellschaft für Betriebswirtschaft e.V., the Vereinigung von Fachleuten des gewerblichen Rechtsschutzes (VPP) and of the Scientific Association for Inspection and Controlling at the university in Augsburg.



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