

Creare valore aziendale attraverso i brevetti

Giuseppe Colucci

Chief Patent Attorney Italy

Il valore dei brevetti oltre la tutela – Bologna, 17 marzo 2010



Argomenti

I

Introduzione a LyondellBasell

II

Valore dei brevetti

III

Successo dei brevetti

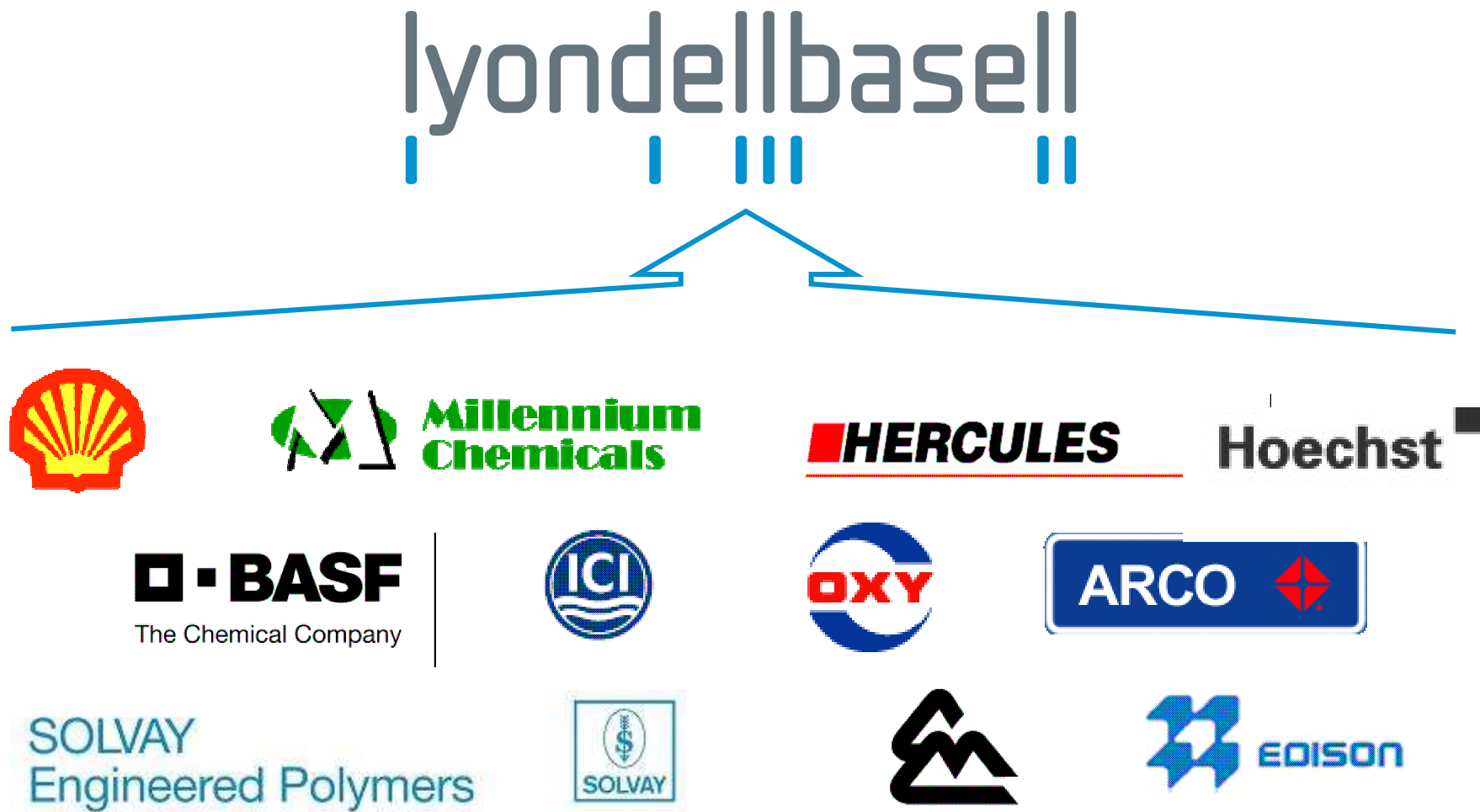
IV

Considerazioni conclusive

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- I** **Introduzione a LyondellBasell**
- II Valore dei brevetti
- III Successo dei brevetti
- IV Considerazioni conclusive

LyondellBasell – variegata e blasonata eredità



LyondellBasell – tra i *big* della chimica mondiale

GLOBAL TOP 50

LyondellBasell makes it into the top 10, and two Middle Eastern firms debut in the Top 50

RANK		COMPANY	CHEMICAL SALES	CHANGE	CHEMICAL SALES AS	HEAD-QUARTERS COUNTRY	CHEMICAL OPERATING PROFITS ^a	CHANGE	PROFITS AS % OF TOTAL OPERATING PROFIT	OPERATING PROFIT MARGIN ^b	IDENTIFIABLE CHEMICAL ASSETS (\$ MILLIONS)	ASSETS AS % OF TOTAL ASSETS	RETURN ON CHEMICAL ASSETS ^c
2008	2007		(\$ MILLIONS)	FROM 2007	% OF TOTAL SALES		(\$ MILLIONS)	FROM 2007					
1	1	BASF	\$70,485	0.9%	76.8%	Germany	\$3,857	-38.9%	40.5%	5.5%	\$62,598	83.6%	6.2%
2	2	Dow Chemical	57,514	7.5	100.0	U.S.	2,172	-44.1	100.0	3.8	45,474	100.0	4.8
3	3	Ineos Group ^d	47,000	na	100.0	England	na	na	na	na	na	na	na
4	12	LyondellBasell	38,420	90.7	75.8	Netherlands	-3,079	nm	nm	def	na	na	na
5	4	ExxonMobil ^e	38,388	4.2	8.4	U.S.	2,957	-35.2	6.5	7.7	20,156	8.8	14.7
6	7	SABIC	34,407	17.8	85.6	Saudi Arabia	9,769	-11.5	80.0	28.4	60,802	83.9	16.1
7	5	Sinopec	33,795	0.6	15.6	China	-1,921	nm	nm	def	17,471	17.7	def
8	6	DuPont ^d	30,387	4.0	99.5	U.S.	2,806	-32.4	76.9	9.2	19,267	98.3	14.6
9	8	Total	29,676	1.7	11.2	France	-85	nm	nm	def	na	na	def
10	9	Formosa Plastics Group ^f	27,476	-0.7	51.1	Taiwan	1,322	-66.3	56.7	4.8	26,267	65.1	5.0

LyondellBasell – le 4 aree di business

Polymers

Polypropylene, polyethylene, advanced polyolefins



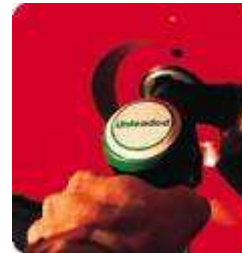
Chemicals

C₂-, C₃-, propylene oxide, acetyls,...



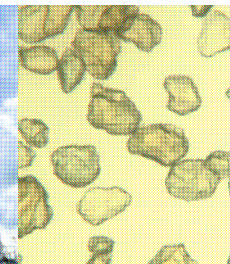
Fuels

Nafta, gasoline, ETBE, MTBE, aromatics..

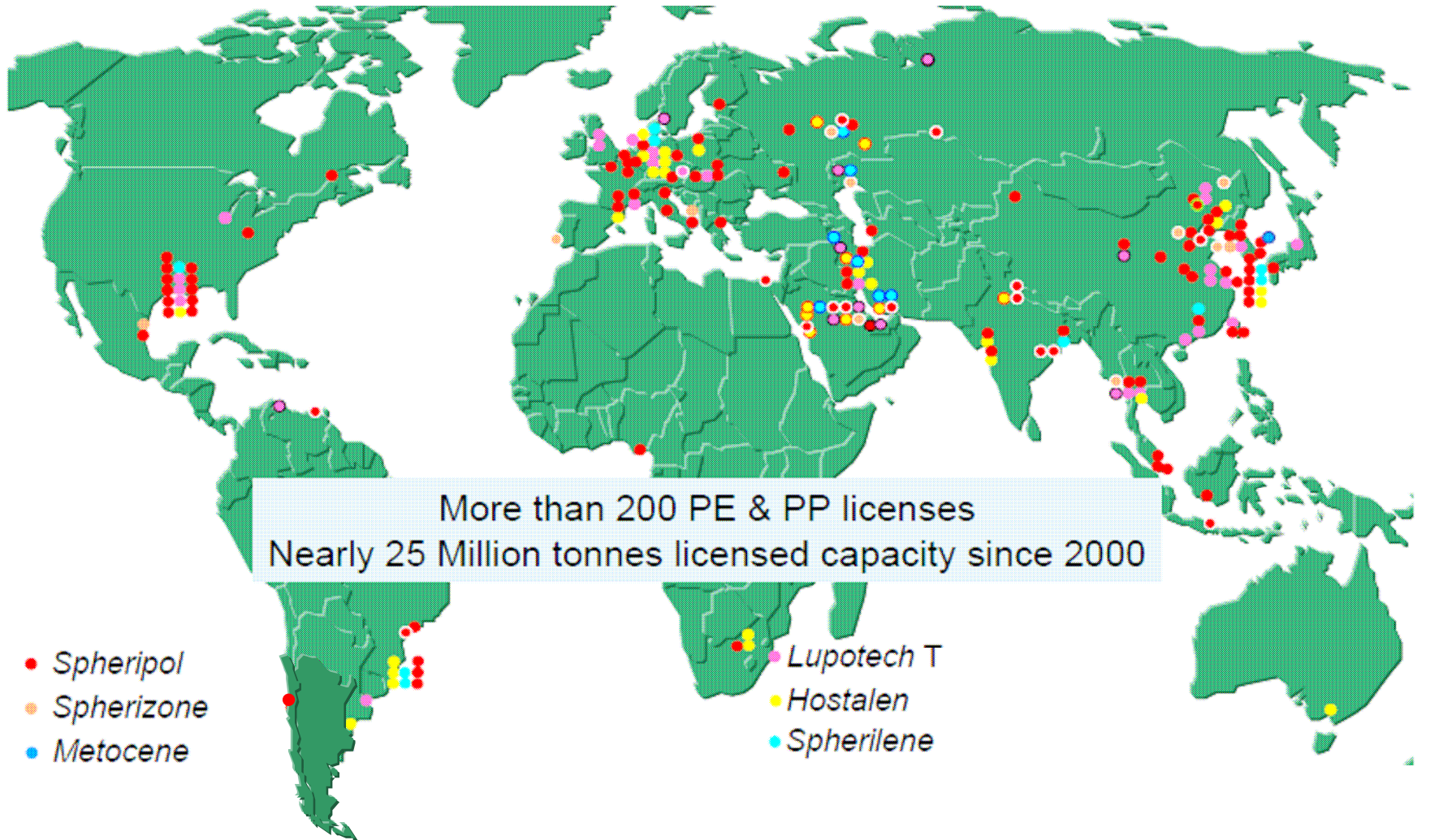


Technology

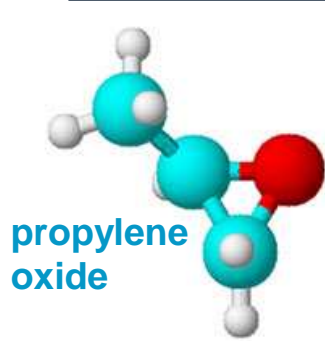
Catalysts, licenses



Lyondellbasell – licenze di tecnologia



Lyondellbasell – R&D



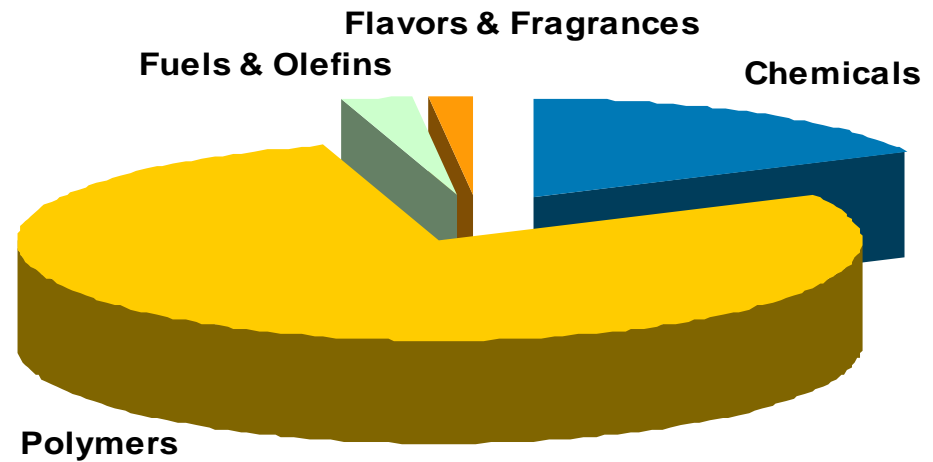
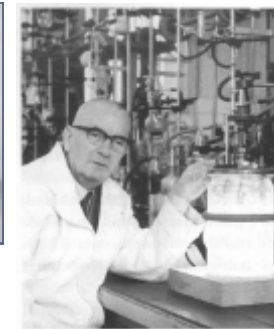
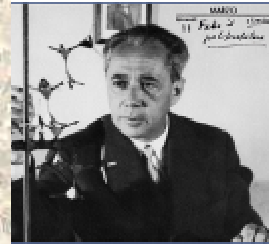
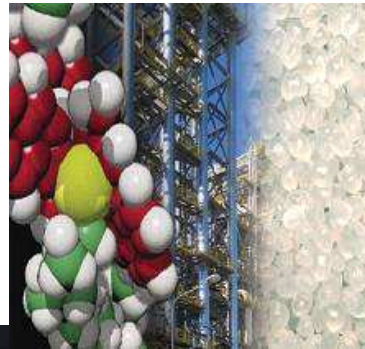
Chemicals and Fuels

Polymers

North America



LyondellBasell – innovazione e brevetti



~1.500 invenzioni protette da ~7,000 brevetti

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Principali ruoli degli asset brevettuali

- Proteggere dalla concorrenza
 - tecnologie commercializzate
 - soluzioni alternative
- Consentire partecipazione agli utili di terzi
 - *out-licensing*
- Migliorare posizione negoziale
 - acquisizioni, disinvestimenti, fusioni
 - *cross-licensing*
 - controversie
- Facilitare accesso a credito e capitale di rischio
- Garantire libertà di attuazione

Valorizzazione degli *asset* brevettuali

- Sfruttamento esclusivo
 - vantaggio competitivo
- *Out-licensing*
 - esclusivo o non
 - brevettuale puro o brevetto + *know-how*
 - *Royalties*
 - accesso a miglioramenti
- *Cross-licensing* o *pools*
 - accesso a tecnologie sviluppate da terzi
- Non-uso protettivo
 - preclusione soluzioni alternative

Il valore del brevetto – quantificazione *a priori*

- Accesso a finanziamento - pegno in garanzia credito
- Valutazione del **valore potenziale** basate su stime finanziarie e calcoli di Valore Attuale Netto (*NPV*)
- Metodi basati su:
 - costo
 - ricavo (o risparmio costo *in-licensing*)
 - mercato
- Strumenti:
 - IPScore 2.0 (Danish PTO -> EPO)
 - piattaforma UIBM
 - ...

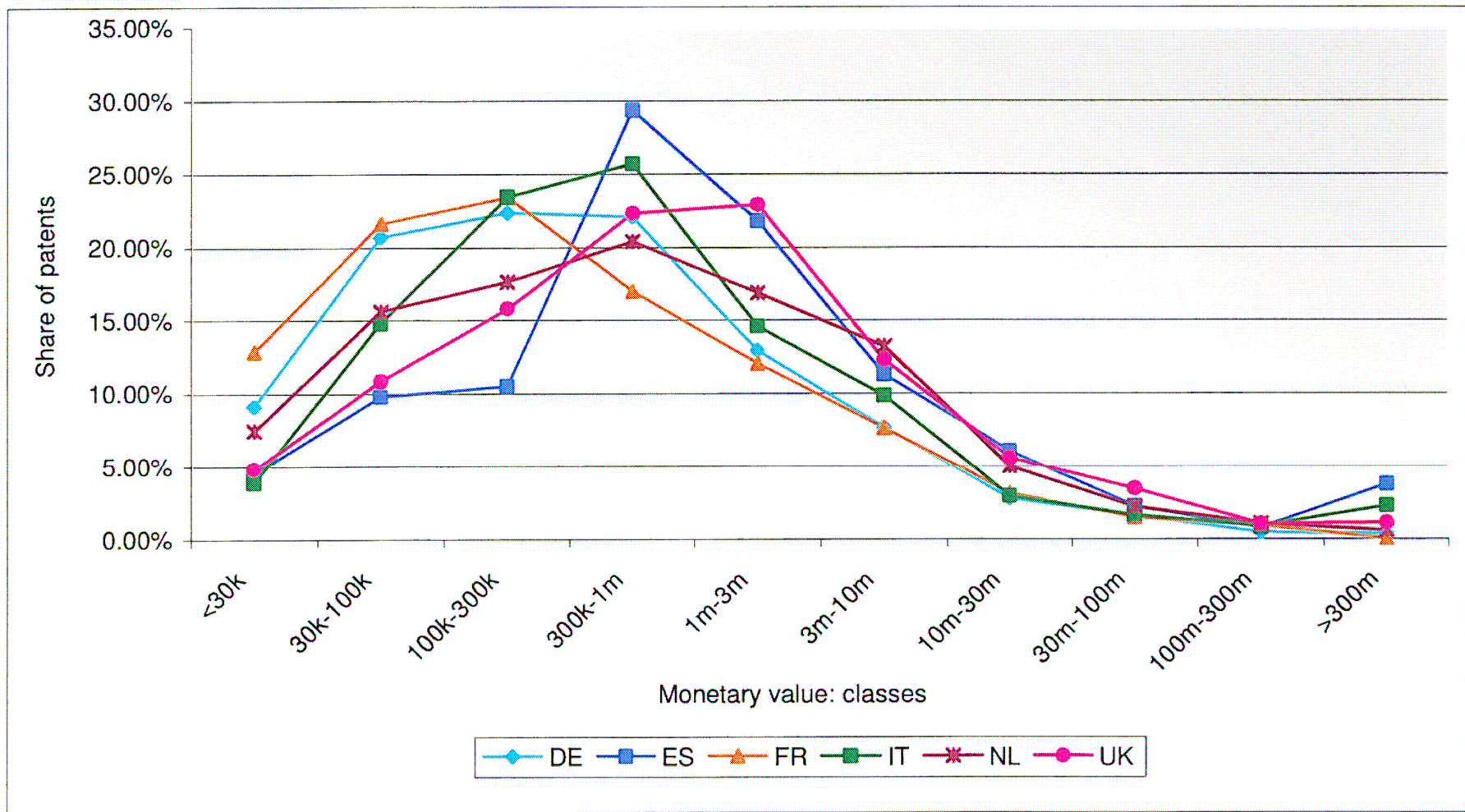
Il valore del brevetto – quantificazione *a posteriori*

- Risarcimento danno da contraffazione
- Determinazione compenso inventori (equo premio)
- Effetto commercializzazione dell'innovazione – aumento di:
 - ricavi/profitti
 - quote di mercato
- Effetto scadenza – erosione di:
 - prezzi
 - quote di mercato
- Introiti *out-licensing* o vendita
- Risparmio accesso brevetti terzi
 - *in-licensing* o altro

Aspetti di difficile valutazione

- Qualità dei brevetti
 - validità
 - ambito di protezione
- Impatto sui concorrenti
 - costi per aggirare il brevetto
 - processi alternativi
- Impatto *out-licensing* sul business
 - sfruttamento combinato: licenze + esclusiva
- Valore della libertà di attuazione
 - potenziale rischio evitato

Il valore dei brevetti Europei



Source: "Evaluating the knowledge economy – what are patents actually worth?" EU Commission study, 2005

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Il successo dei brevetti – indicatori “brevetto-centrici”

- Indicatori quantitativi:
 - brevetti concessi
 - domande di brevetto depositate
- Indicatori quanti-comparativi:
 - rapporto con spese per R&D
 - confronto con concorrenti
- Indicatori quanti-qualitativi:
 - Patent Scorecard (The Patent Board - Wall Street Journal)
 - Patent Asset Index (WHO-Prof.Ernst)
 - ...

The Patent Scorecard™ – 2010 Chemicals

Previous Rank		Current Rank	Company	Patents Granted*	Science Strength™	Innovation Cycle Time™	Industry Impact™	Technology Strength™	Research Intensity™
1	◀▶	1	DuPont	593	7808	12.2	1.32	342	2.04
2	◀▶	2	BASF SE	436	1337	12.6	0.84	163	1.07
3	◀▶	3	Dow Chemical Co	202	1017	12.4	1.38	122	1.48
5	△	4	Saudi Basic Industries	116	224	13.8	1.84	94	1.08
4	▽	5	Honeywell Intl Inc	138	126	12.8	1.50	91	0.67
8	△	6	LyondellBasell Industries	98	837	9.4	1.84	80	2.04
9	△	7	RAG AG	99	40	9.2	1.79	79	0.40
7	▽	8	3M Company	87	981	12.4	1.97	76	2.56
6	▽	9	Nitto Denko Corp	123	24	9.3	1.38	75	0.18
10	◀▶	10	Shin-Etsu Chemical Co Ltd	126	188	9.0	1.11	62	1.38

The
Patent Board™
 Decision Tools, Metrics, and Analysis for Innovation.

The Patent Scorecard™ – indicatori

- Indicatori complessi non divulgati nel dettaglio

About The Patent Board Indicators

Patents Granted – equals the number of U.S. patents granted in a given year, excluding design and other special-case inventions.

Science Strength™ – ranking measure to indicate how much a company uses science in building its patent portfolio with a combined measure of science and quantity.

Innovation Cycle Time™ – indicates whether a patent or patent portfolio is building off newer or older inventions (art).

Industry Impact™ – indicates the extent to which others are building upon a portfolio of issued US utility patents as compared to the total set of utility patents.

Technology Strength™ – ranking measure to indicate an overall strength of the company's patent portfolio holdings with a combined measure of quality and quantity.

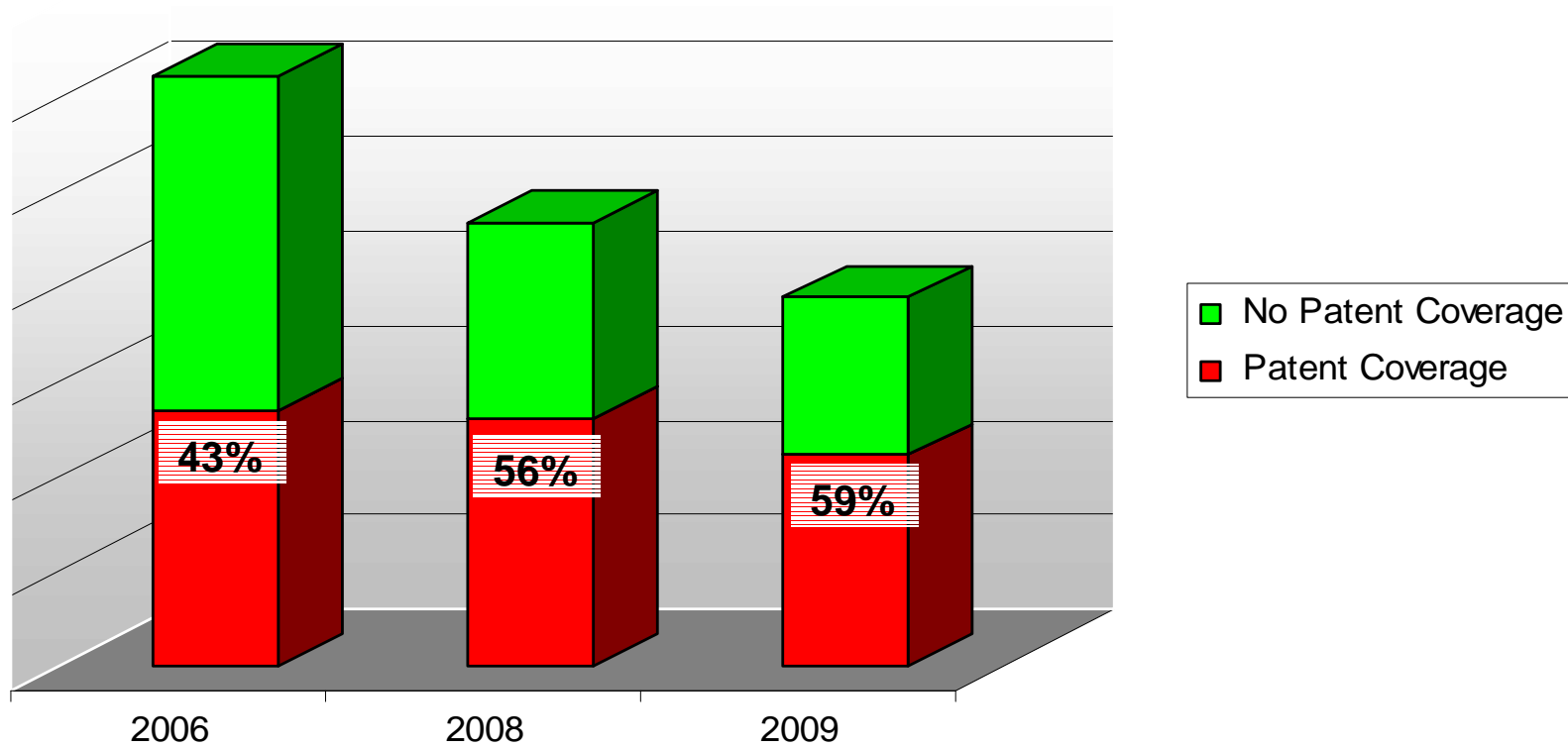
Research Intensity™ – indicates the extent to which a portfolio includes patents with above average Science Linkage as compared to the control group.

The
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Il successo dei brevetti – indicatori “prodotto-centrici”

- % brevetti in uso
- Rapporto brevetti/prodotti brevettati
- % prodotti coperti da brevetto
- % brevetti commercializzati
- % volume **vendite** coperto da brevetti
- % volume **ricavi** coperto da brevetti
- % volume **profitti** coperto da brevetti
- Rapporto vendite-ricavi-profitti/brevetti
- ...

Evoluzione dei profitti in relazione ai brevetti



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Considerazioni conclusive

- Interesse nel determinare
 - valore di un brevetto
 - successo nell'estrarre tale valore
- Metodi ed indicatori sempre più sofisticati
- Stime del valore
 - *ex ante* - proiezioni
 - *ex post* - elementi disponibili
- Valutazione rigorosa richiederebbe...
 - ...realità parallele simultanee

lyondellbasell

giuseppe.colucci@lyondellbasell.com



Joining Forces to Create a New Global Leader

- Lyondell Chemical Company and Basell merged to form LyondellBasell Industries on Dec. 20, 2007
- LyondellBasell is...
 - One of the world's largest polymers, petrochemicals, and fuels companies with combined annual revenues of \$30.8 billion* and 15,000 employees worldwide
 - The global leader in polyolefins technology, production and marketing
 - Sales in more than 100 countries
 - More than 50 manufacturing sites in 19 countries on five continents
 - A pioneer in propylene oxide and derivatives
 - A significant producer of fuels and refined products, including bio-fuels

*Based on 2009 revenues.

Global rated capacity rank⁽¹⁾

- #1 Global – Polypropylene Compounding
- #1 Global – Propylene Oxide
- #1 Global – Polyolefin Licensing⁽²⁾
- #1 Global – Polypropylene Catalysts
- #1 Global – Polypropylene
- #3 Global – Polyethylene
- #2 Global – Oxygenated Fuels
- #2 Global – Propylene Glycol & Propylene Glycol Ethers
- #5 Global – Light Olefins (Ethylene & Propylene)
- Refining Capacity – 373,000 barrels per day

(1) Sources: CMAI and LyondellBasell Industries estimates. Based on nameplate capacity as of December 31, 2008 and includes 100% of joint venture capacity.

(2) Capacity of third parties that license our technology.