



Polyolefins 2000

February 28, 2000, Houston, TX

POLYOLEFIN INDUSTRY TRENDS AND FUTURE IMPACTS

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Presentation Outline

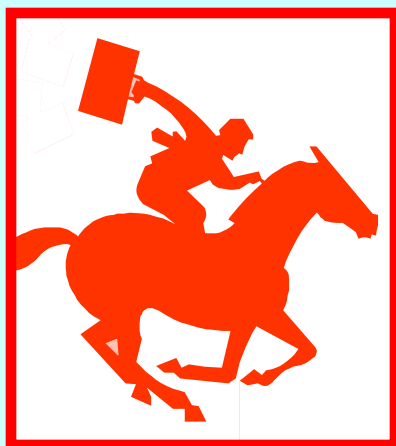
- Introduction
- Polyolefin Industry - Major Trends
- CMR Inc. Analysis
- Polyolefin Mergers & Acquisitions
- Impact on Markets, Industry Structure, Innovation
- Conclusions & Remarks

INTRODUCTION

- ◆ Polyolefins - Change is constant
- ◆ Chemical Market Resources Inc. analyzes the Strategic issues and drivers in the polyolefin industry beyond Supply/Demand/Price



New Generation Polyolefins - NGP
Global Bimonthly Review of Polyolefins Industry
Now Fifth Year in Publication



New Generation Polyolefins is
NOT a Magazine! NOT a Newsletter!

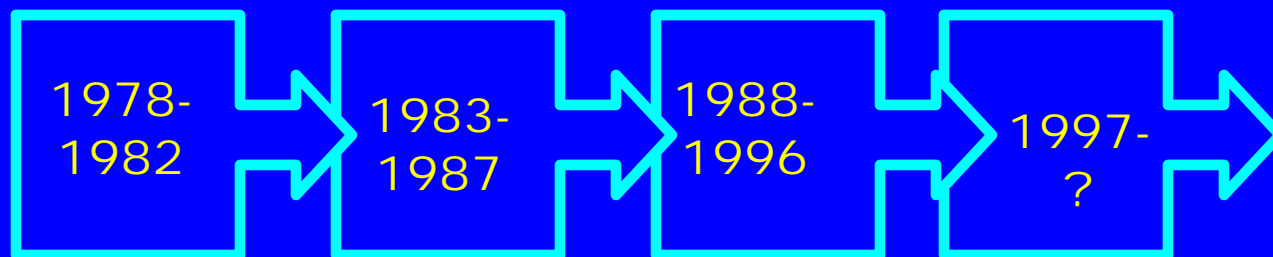
It is:

A Strategic Review of the Global Polyolefin Industry
A No Nonsense Power-packed Analysis
A Forum for Movers & Shakers



A Decade of
Polyolefins Business Research Excellence!
1990-2000

The Evolution of the Polymer Business

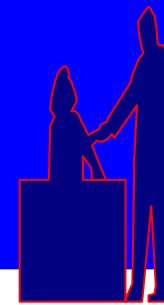
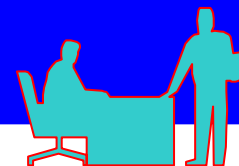
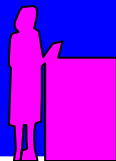
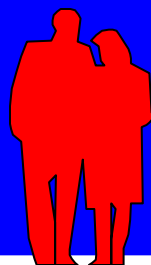


The Big Boom

Retrench for Survival

Globalize and Grow
Innovate

Increase Bottom Line
Cut Costs
Acquire/Merge
No Risks Approach
De-emphasize Innovate





POLYOLEFINS MAJOR TRENDS - 90s

- ◆ Movement to Lower Densities & Flexible Materials
- ◆ Single Site Catalyst Chemistries
- ◆ Holy War to Replace PVC
- ◆ Mergers & Acquisitions



MERGERS & ACQUISITIONS

- ◆ Economies of Scale - Capacity Justification
 - Profit Improvement - Surviving Economic Turbulence

The Significant Ventures in Recent Times

- Equistar
- Exxon-Mobil
- Dow- UCC
- Phillips - Chevron
- Total-Fina
- Amoco-BP
- Shell-BASF



LYONDELL PETROCHEMICAL
&
MILLENNIUM CHEMICAL
FORM 57-43 JV - JUNE/JULY '97

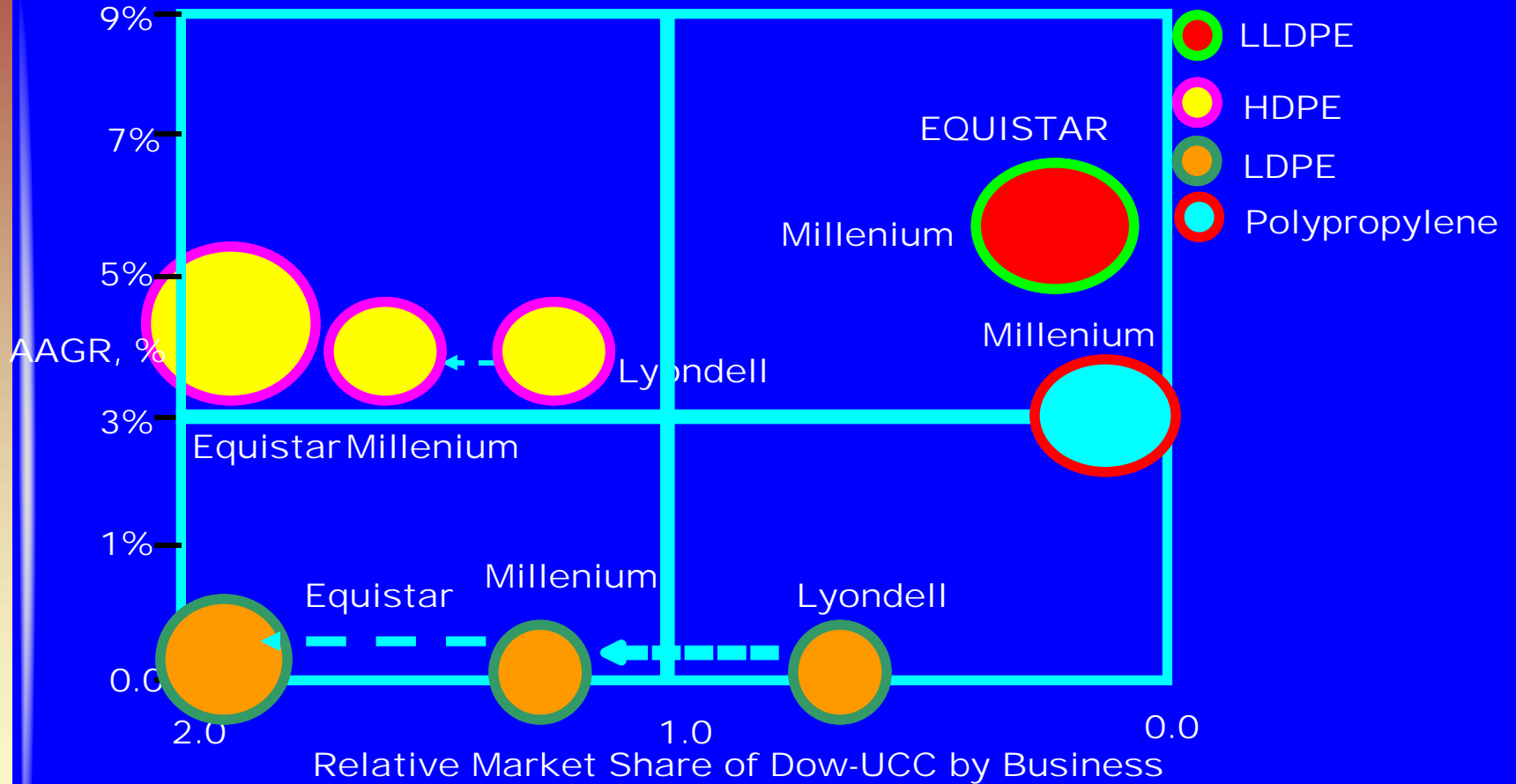




EQUISTAR - SIGNIFICANCE

- ◆ Synergistic union of HDPE and LDPE businesses
- ◆ For the first time two tier II companies with similar marketing/sales philosophies joined hands to create a larger tier II company
- ◆ Access to a variety of technologies
- ◆ Opportunity to extend the limited metallocene activities of Lyondell

EQUISTAR - BEFORE AND AFTER



Note: AAGR = Annual Average Growth Rates

Source: Chemical Market Resources, Inc., based on industry information



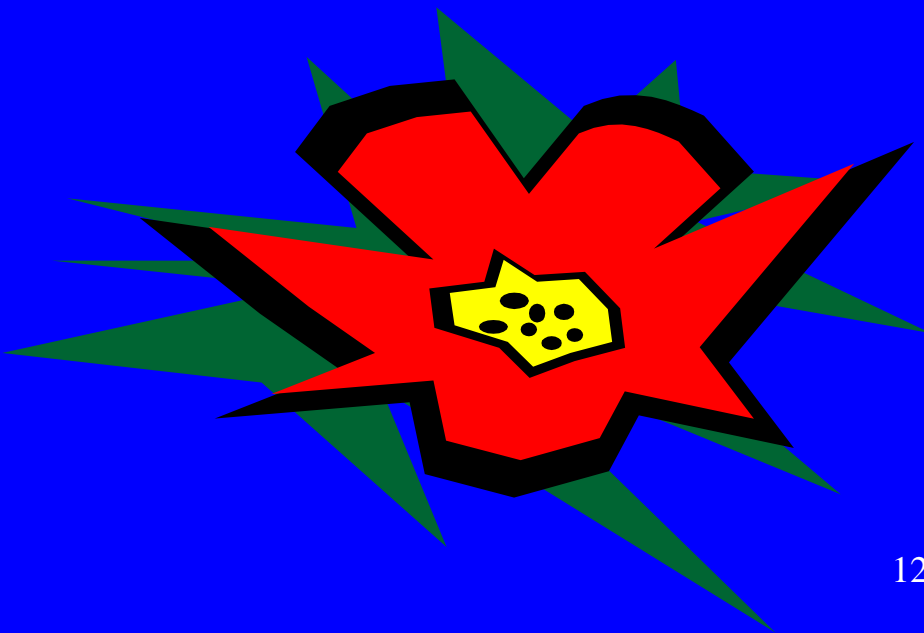


EQUISTAR - UNRESOLVED ISSUES

- ◆ The future of Lyondell's metallocene program
- ◆ How to optimize the "gemische" of technologies
- ◆ Struggle with movement to high value added specialties



EXXON AND MOBIL COMBINE FORCES DECEMBER '98

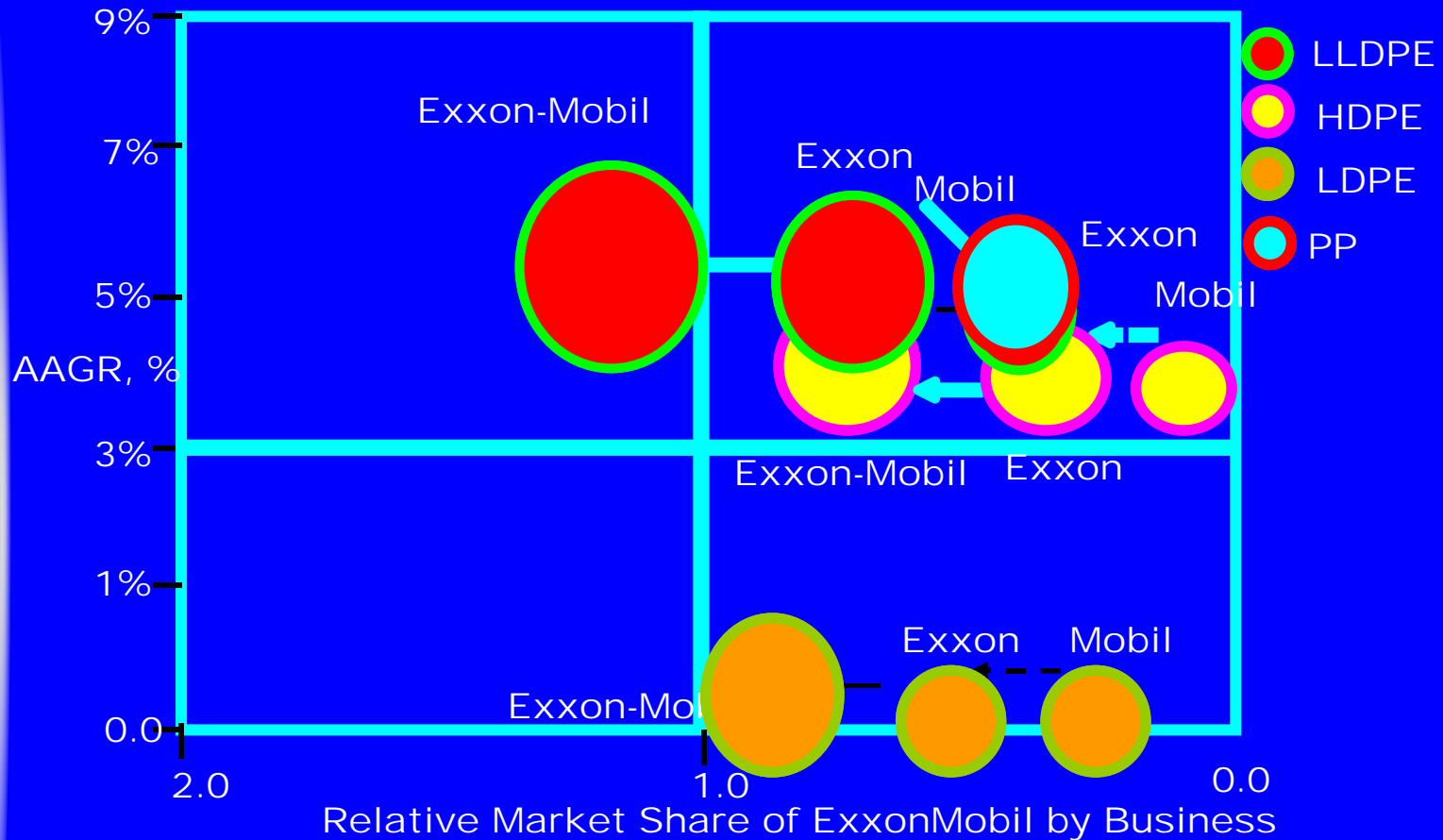




ExxonMobil SIGNIFICANCE

- ◆ The merger was driven by oil dynamics - and polyolefins is a minor portion
- ◆ Exxon and Mobil have complementary products, broader technology base and markets
- ◆ Both gained market positions and economies of scale in individual products/sectors in PE
- ◆ Long-standing disputes on metallocenes were resolved amicably

ExxonMobil BEFORE AND AFTER



Source: Chemical Market Resources, Inc., based on industry information

SA/NGP/BCG-ExxonMobil

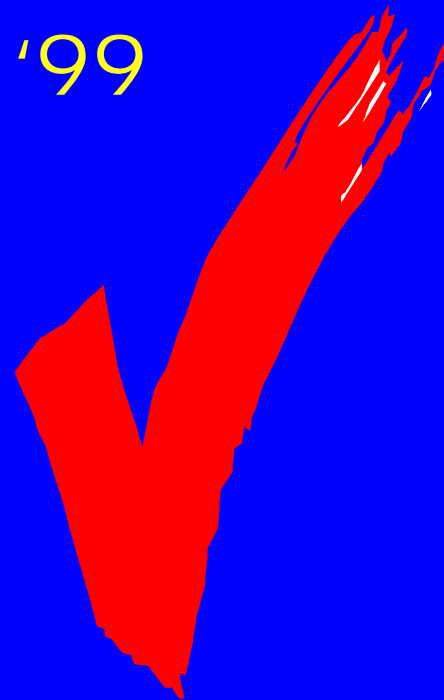


ExxonMobil UNRESOLVED ISSUES

- ◆ People Issues - Fewer People to do more work
- ◆ What to do about Univation?
- ◆ Future of Metallocenes from Exxon



DOW CHEMICAL COMPANY
ACQUIRES
UNION CARBIDE CORPORATION
AUGUST '99

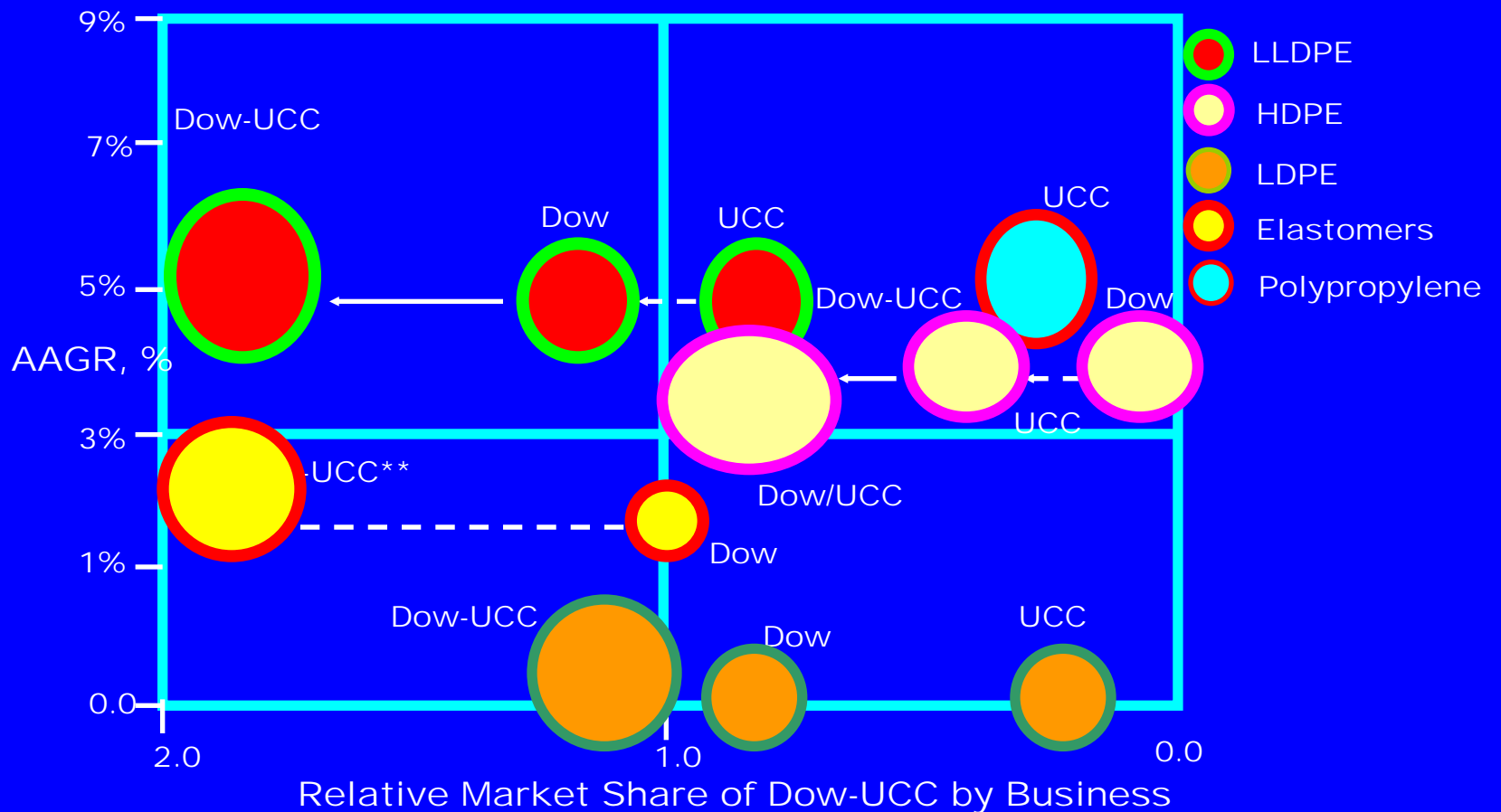




DOW - UCC SIGNIFICANCE

- ◆ Improves the overall position for both Dow and UCC in LDPE, LLDPE and HDPE - Wire & Cable
- ◆ Provides one more choice for Dow/DuPontDow in EP Elastomers
- ◆ Provides the shot in the arm - Dow Polypropylene is looking for and needs
- ◆ Extends the process options for Dow's metallocenes

DOW-UCC BEFORE AND AFTER



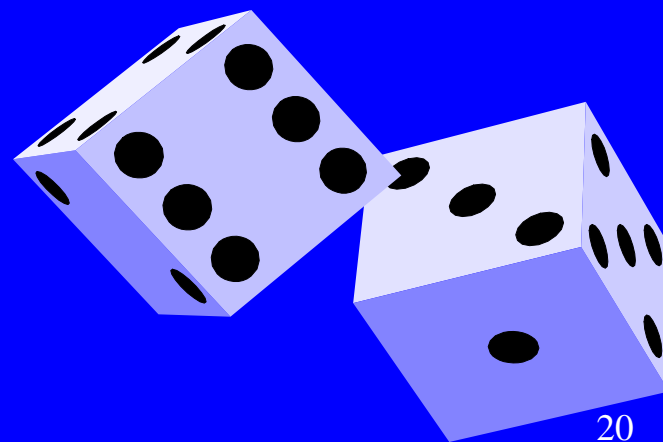
Note: AAGR = Annual Average Growth Rates
 ** -Expected Market Position

DOW - UCC UNRESOLVED ISSUES

- ◆ Addition of Hexene-1 capability to already dominant position in Octene -1 - How do you address - if it is an issue?
- ◆ What do you do with "Univation"?
- ◆ What will "New Dow" do with EPDM gas-phase and Flexomers?
- ◆ What happens to Dow-BP-Amoco-Exxon-Mobil-Mitsui-UCC-Dupont relationships?



PHILLIPS & CHEVRON COMBINE CHEMICALS AND POLYMERS FEBRUARY 2000

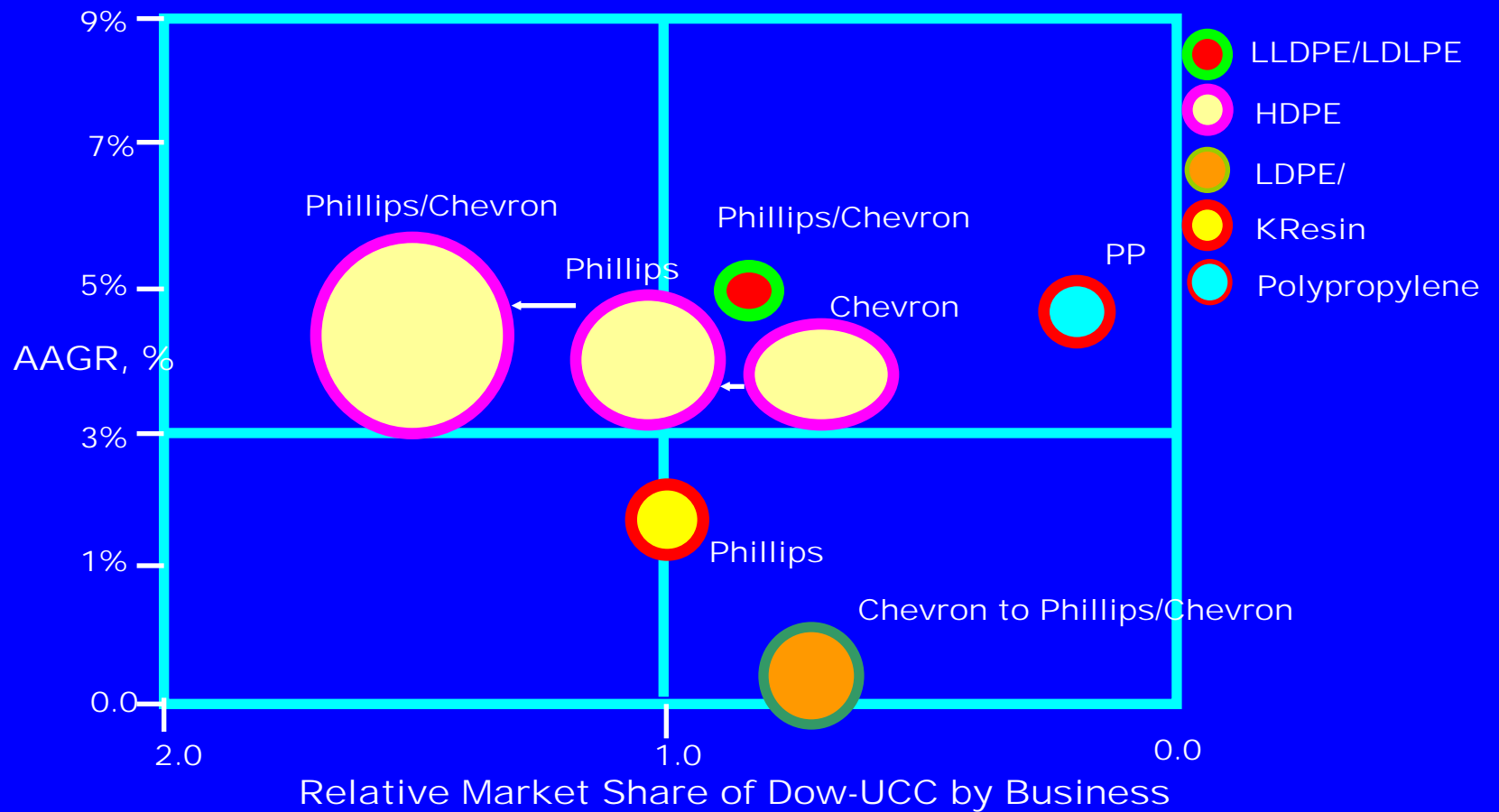




PHILLIPS - CHEVRON SIGNIFICANCE

- ◆ A leading position in HDPE
- ◆ Provides “Phillips - The Rigid Guys” an opportunity to play more effectively in flexible markets
- ◆ Provides Chevron an entree into Metallocenes
- ◆ Provides Licensing opportunities

PHILLIPS - CHEVRON BEFORE AND AFTER



Note: AAGR = Annual Average Growth Rates
 ** -Expected Market Position



PHILLIPS-CHEVRON UNRESOLVED ISSUES

- ◆ Independent company from both parents - New Identity
- ◆ Phillips' lawsuit against Exxon
- ◆ Pipe Applications? Any Issues

WHERE ARE WE HEADED?



MEGA MERGERS

- ◆ JD Rockefeller's Standard Oil controlled about 90% of the U.S. Petroleum markets
 - Widely considered a Monopoly
- ◆ Standard Oil was broken down under the powers of Sherman Antitrust Act into:
 - Standard Oil of New Jersey (Exxon)
 - Standard oil of New York (Mobil)
 - Standard Oil of Indiana (Amoco)
 - Standard Oil of Ohio (BP)
 - Standard Oil of California (Chevron)
- ◆ Year 2000 - Mobil-Exxon, Amoco-BP
- ◆ What's Next?
21st Century Standard Oil?

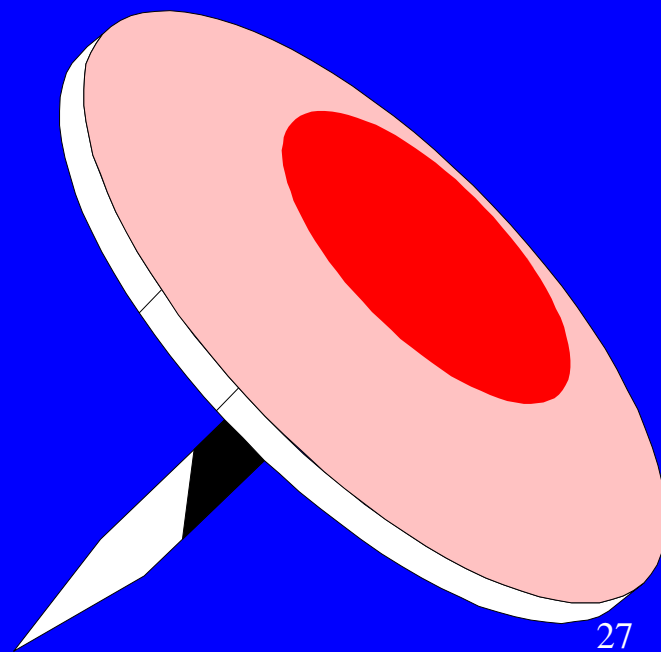


MARKET POWER - OLIGOPOLIES

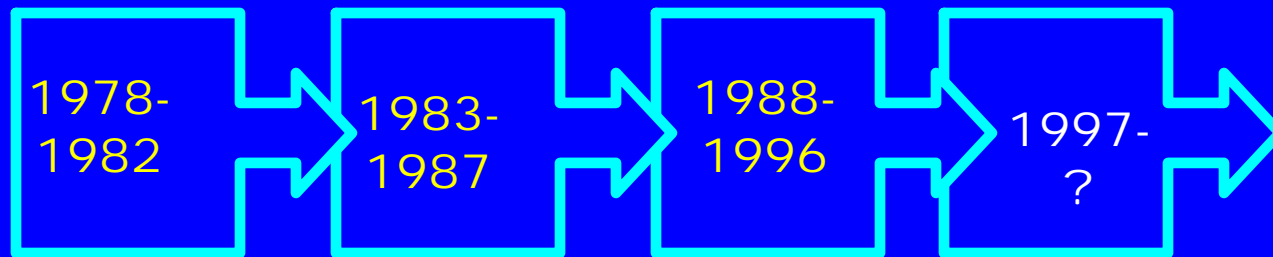
- ◆ The smaller number of firms in industry such as ours have inherent market power
- ◆ Market Power creates conducive atmosphere for: (1) Profit maximization, (2) Predatory pricing, (3) Domination
- ◆ Antitrust Legislation: Sherman Act (1890), Clayton Act (1914) FTC Act (1914), (Celler-Kefauver Antimerger Act (1950)
- ◆ Industry was considered immune to mega mergers



What Changed?



The Evolution of the Polymer Business



The Big Boom

Retrench for Survival

Globalize and Grow

Increase Bottom Line
Cut Costs

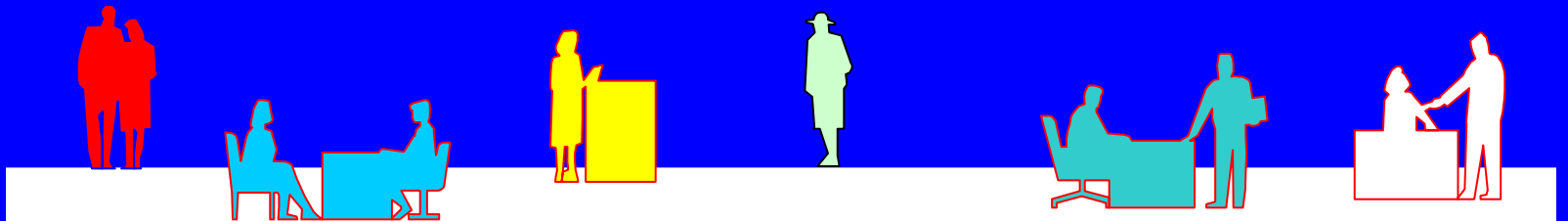
Acquire/Merge

No Risks Approach

De-emphasize

Innovation

Innovate





The New Deal

“WORKABLE COMPETITION”

- ◆ Large firms and highly concentrated oligopolistic industries are our best hope for future progress and should be left alone
- ◆ Antitrust Laws should be revised to promote “Workable Competition”
- ◆ Sticking to books, will only put us at Economies of Scale Disadvantage
- ◆ Government must interfere and keep the balance



IMPACT ON PEOPLE/MARKETS

- ◆ Reputable, independent thinking organizations will be off the map - Disheartening.
- ◆ Customers lose competitive options



IMPACT ON PEOPLE/MARKETS

- ◆ Innovation will suffer because of less choice/variety; too much emphasis on bottom line
- ◆ The ventures benefit the organizations' bottom lines at a cost to customers and employees



IMPACT ON PEOPLE/MARKETS

- ◆ Impact will be felt the most on R&D, Technical Services and Product Development People - Loss lot of good capable people.
- ◆ what message are we sending to the new graduates?



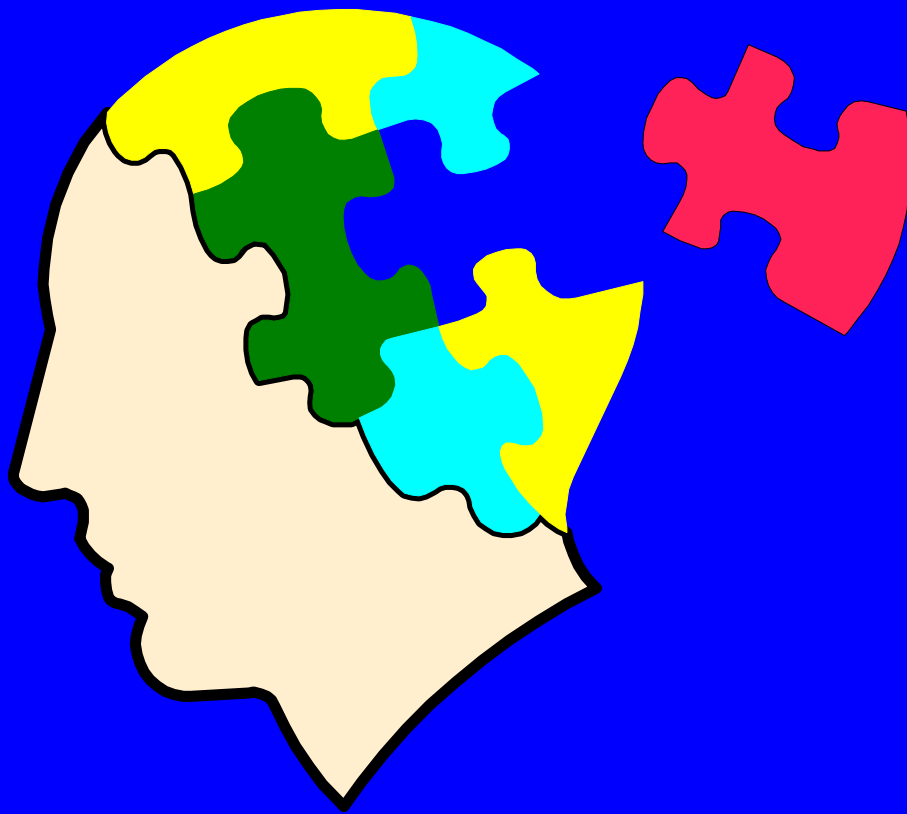
IMPACT ON PEOPLE/MARKETS

- ◆ We are heading towards a situation where only the large companies and few small companies can survive efficiently
- ◆ Large commodity oriented companies are not conducive to innovation
- ◆ Smaller Companies in our industry cannot afford innovation

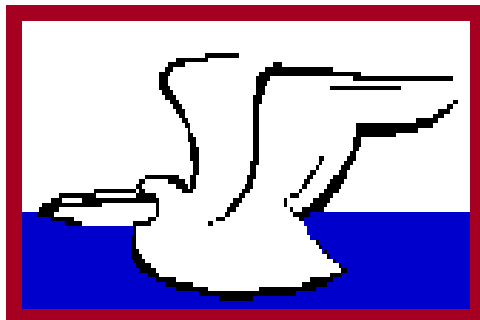




SOMETHING TO THINK !



COME ATTEND OUR CONFERENCE
FOR FURTHER DISCUSSION



**August 23-25, 2000
Galveston/Houston, TX**

FLEXPO



***THE FIFTH INTERNATIONAL
CONFERENCE ON
MARKETS, TECHNOLOGIES & TRENDS (MT&T)***

***FLEXIBLE POLYMERS
PE, PP, PVC, EP Elastomers & TPEs &
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