

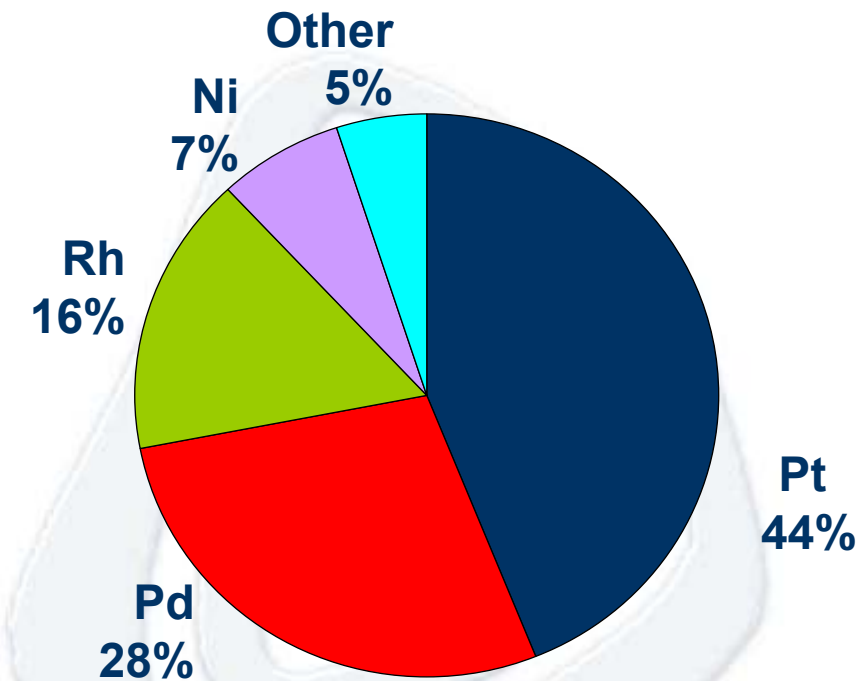
MARKETS



BUSINESS STRATEGY

- **Grow the market**
- **Expand into market growth**
- **Optimise value in current operations**

METAL REVENUE SPLIT



R16 186m
Year ended
31 December 2000

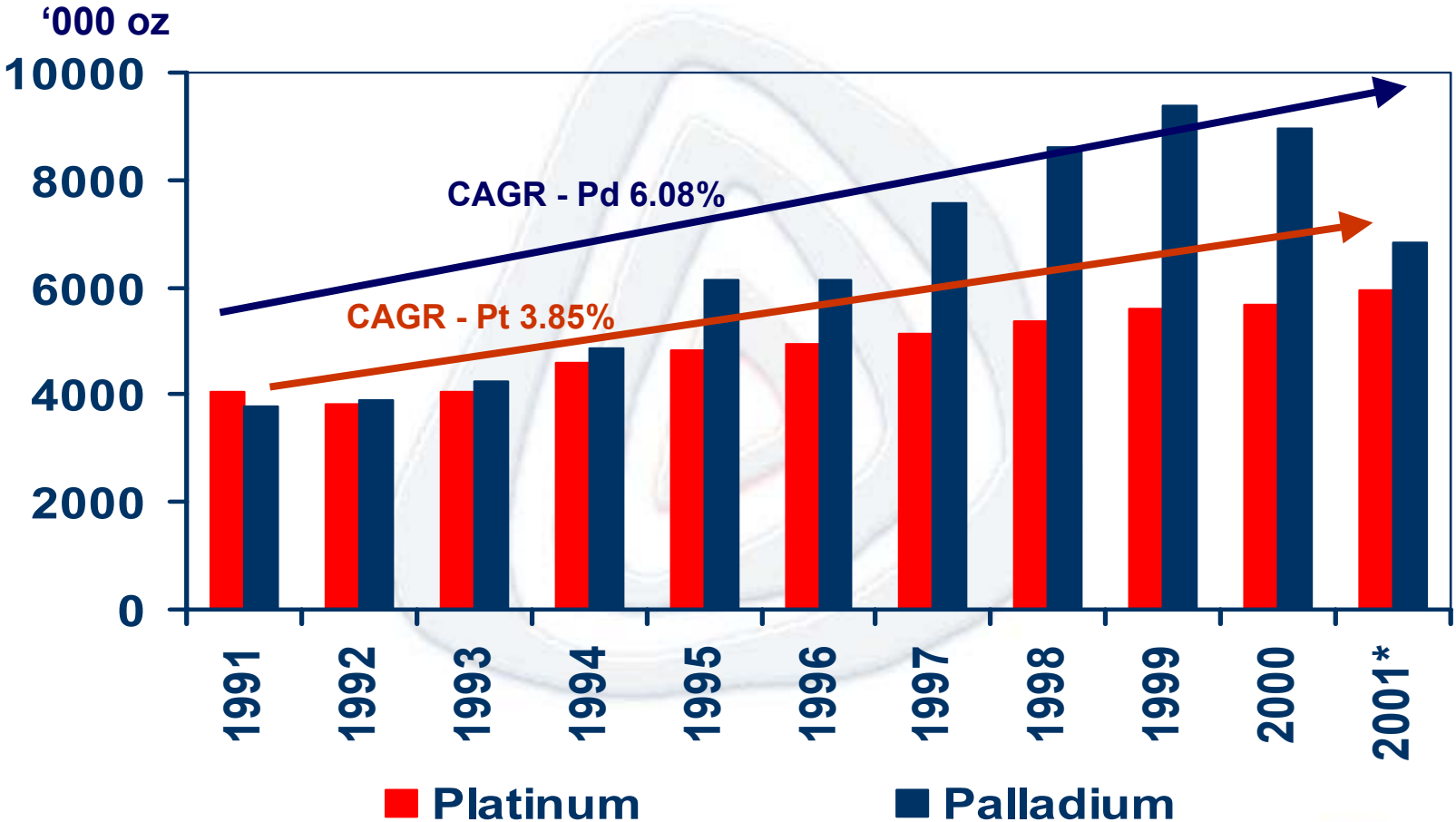
A member of the Anglo American plc group



HOW WE GROW THE MARKET

- Fundamental market research
- Identify opportunities to:
 - enhance demand in existing markets
 - encourage development of new applications for PGM's
 - geographically diversify markets
- Remove barriers to market development

PLATINUM & PALLADIUM DEMAND : 1991 - 2001



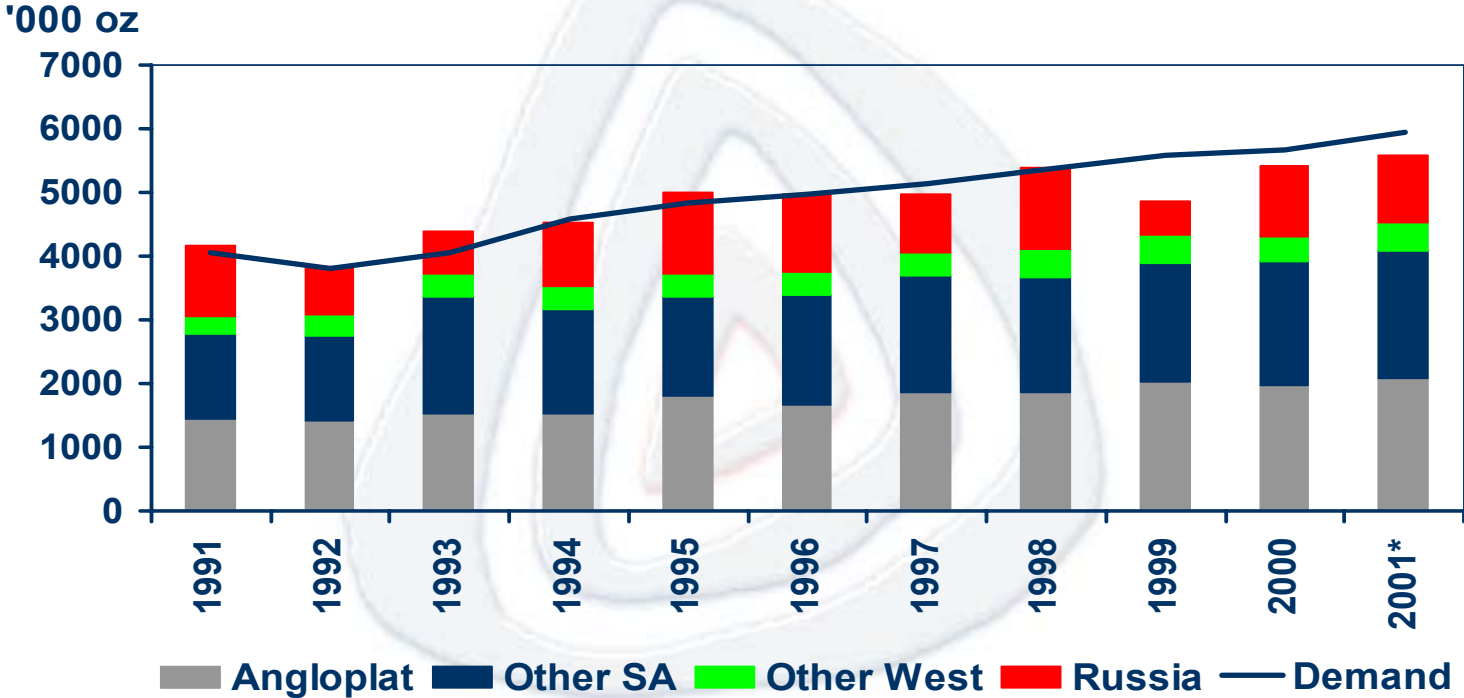
* Estimate

Source - Johnson Matthey



PLATINUM SUPPLY & DEMAND : 1991 - 2001

South Africa is the leading supplier



● Russian oversupply in the 1990's

● Strong consumer demand growth

* Estimate

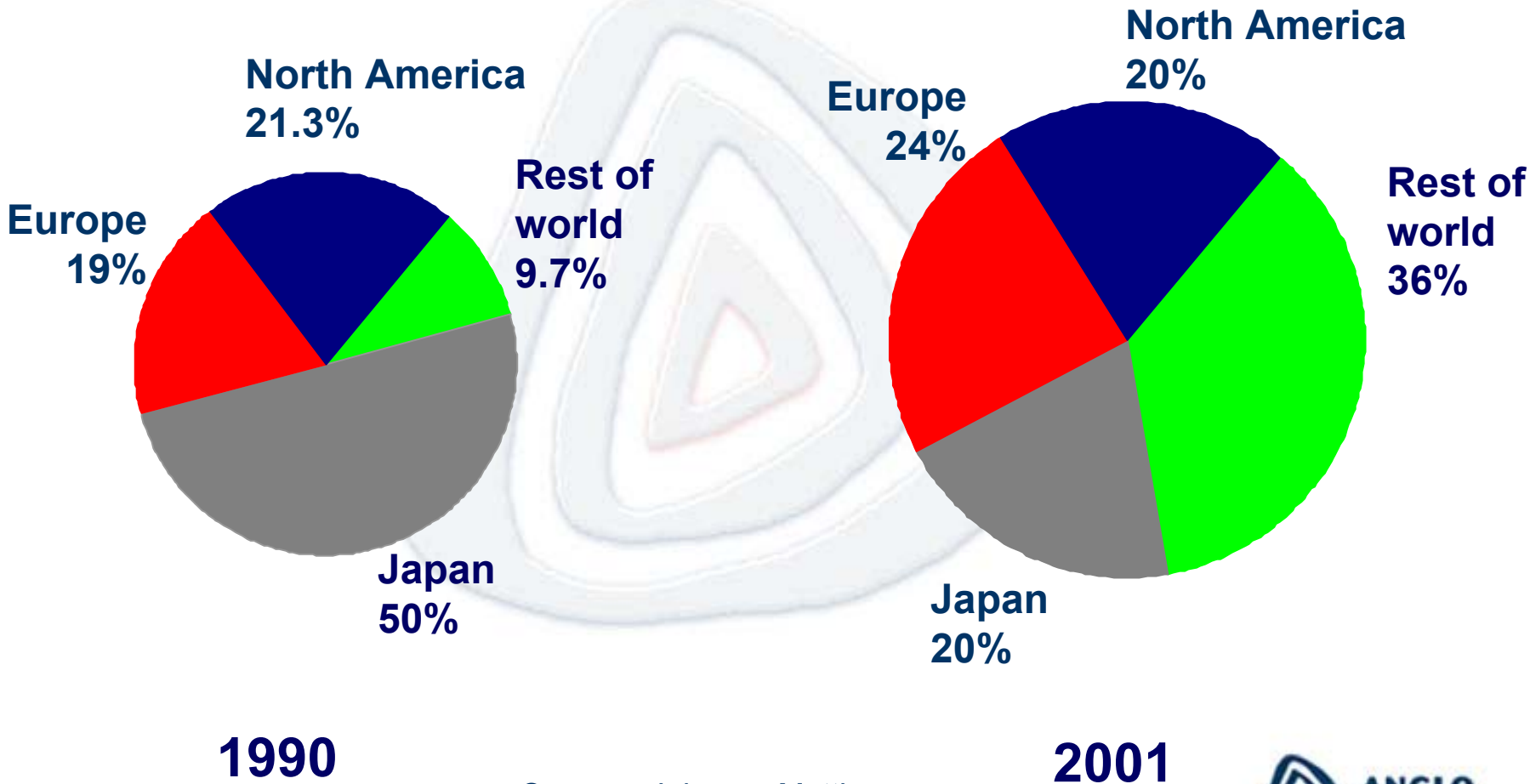
Source - Johnson Matthey



FACTORS PROVIDING STABILITY TO THE PLATINUM MARKET

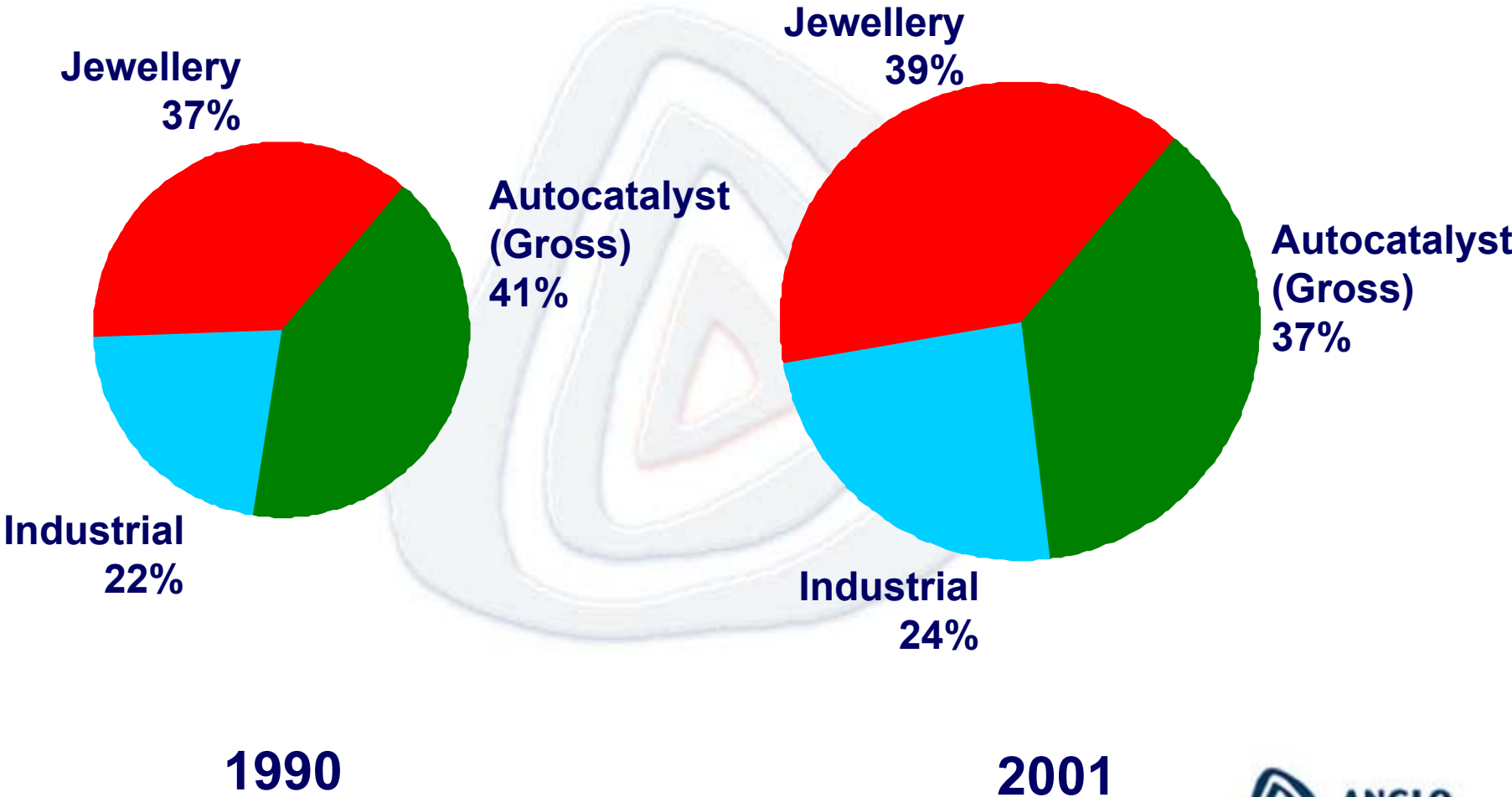
- **Broad geographic demand base**
- **Broad application demand base**
 - **Industrial**
 - **Autocatalyst**
 - **Jewellery and investment**
- **Minimal platinum stockpiles**

PLATINUM DEMAND BY REGION



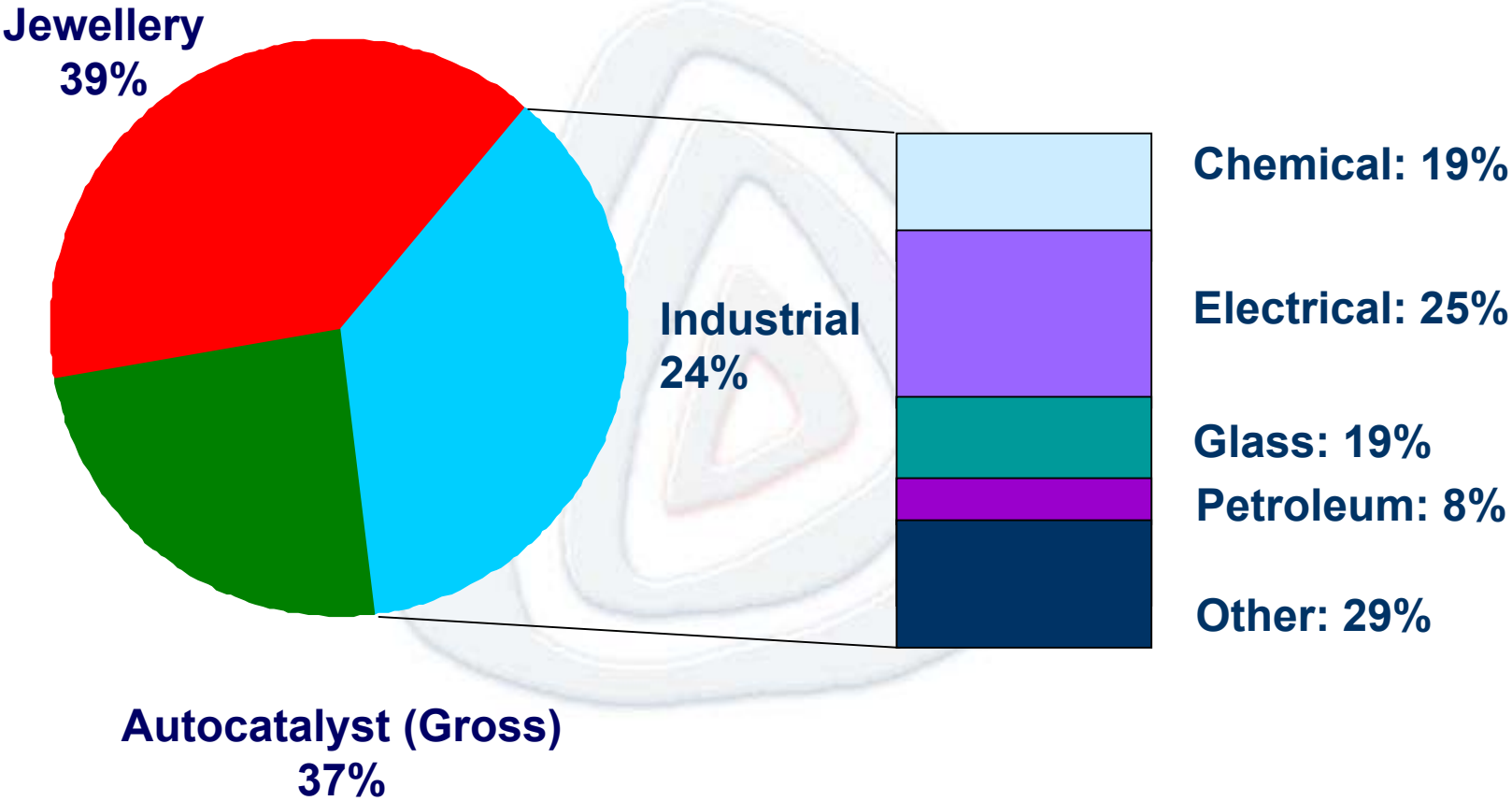
Source - Johnson Matthey

PLATINUM DEMAND BY APPLICATION



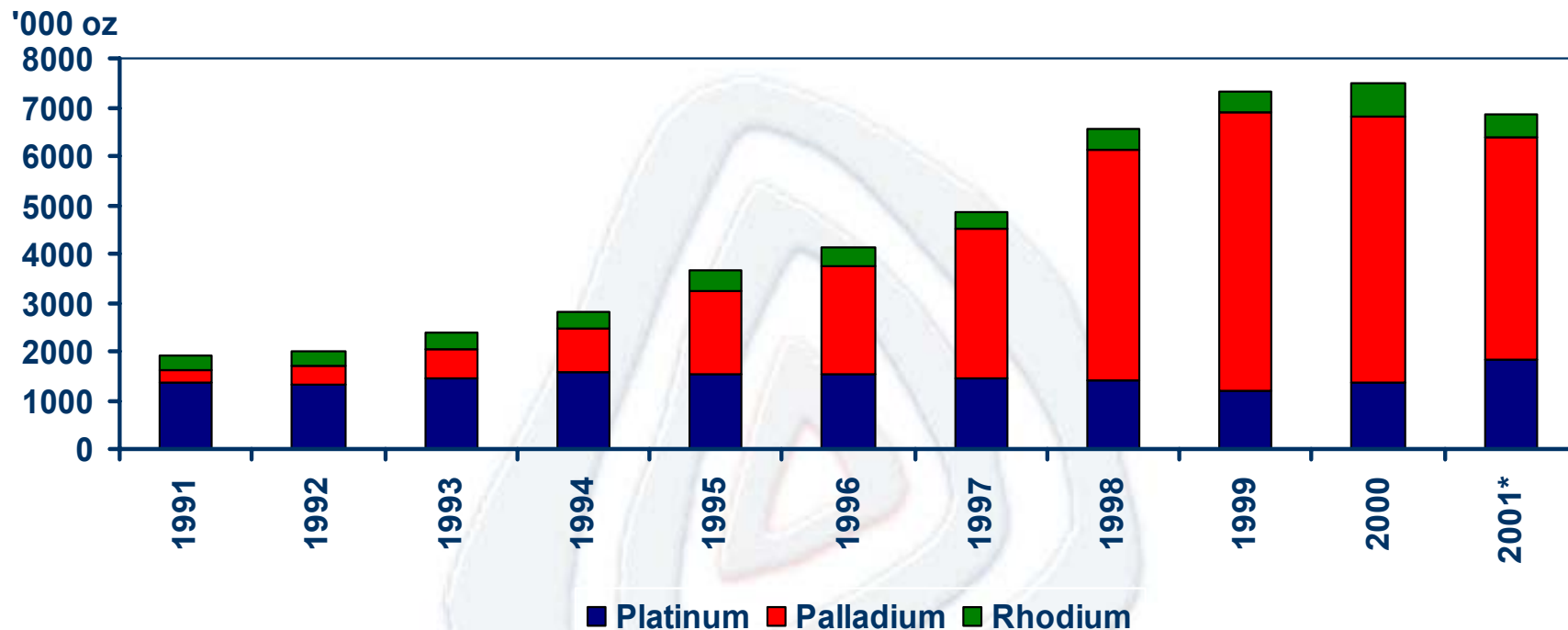
Source - Johnson Matthey

PLATINUM INDUSTRIAL DEMAND 2001



Source - Johnson Matthey

PGM AUTOCATALYST DEMAND

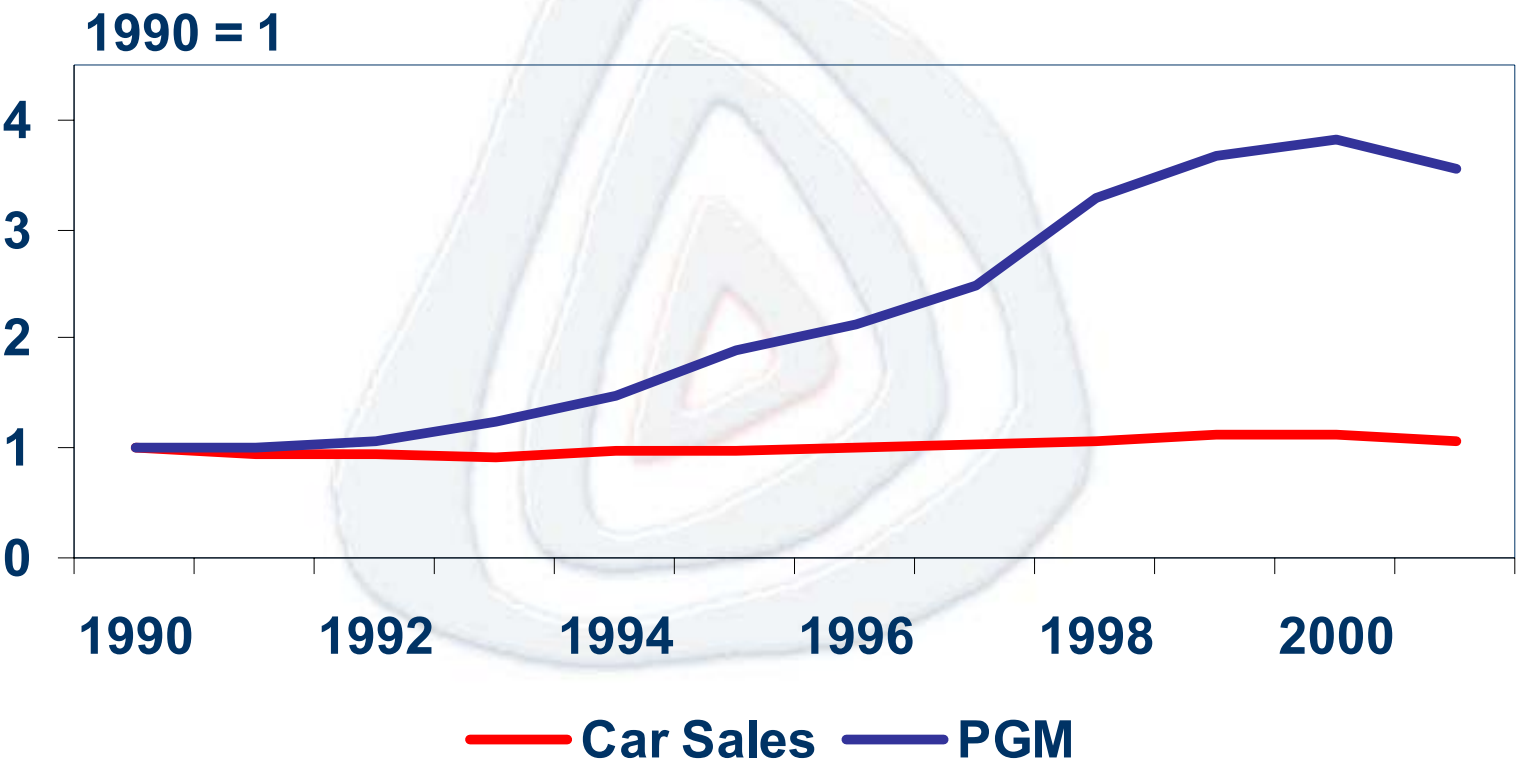


- Commitment to palladium-based technology in 1990's
- Palladium substitution by platinum commenced
- Increased PGM demand due to more stringent emission legislation

* Estimate

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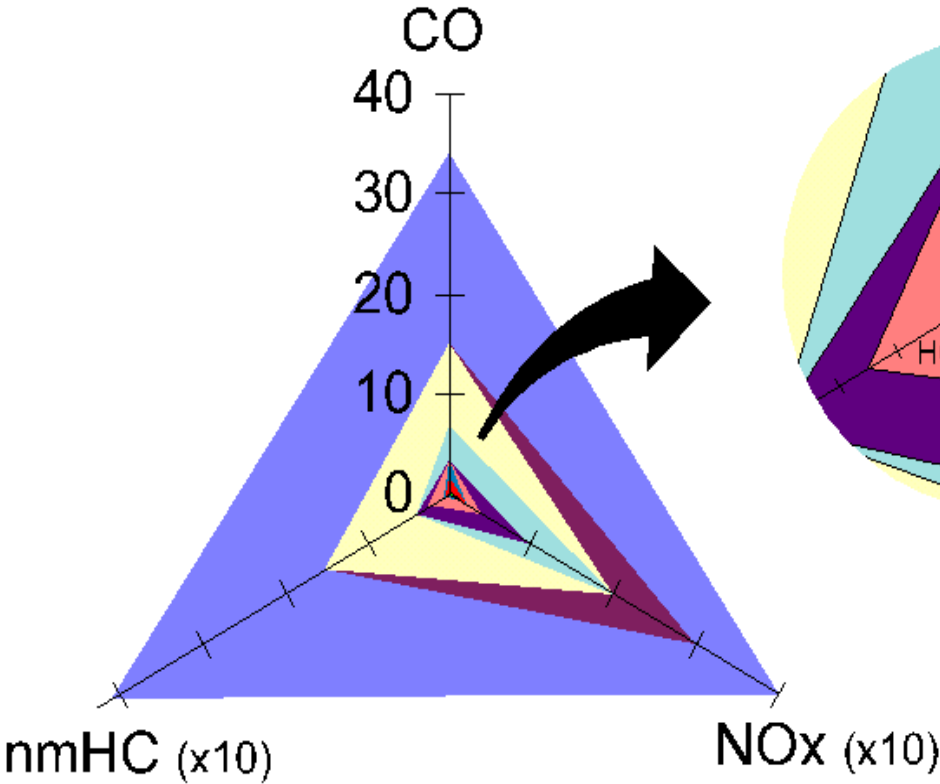
PGM DEMAND FOR AUTOCATALYST LEGISLATION DRIVEN



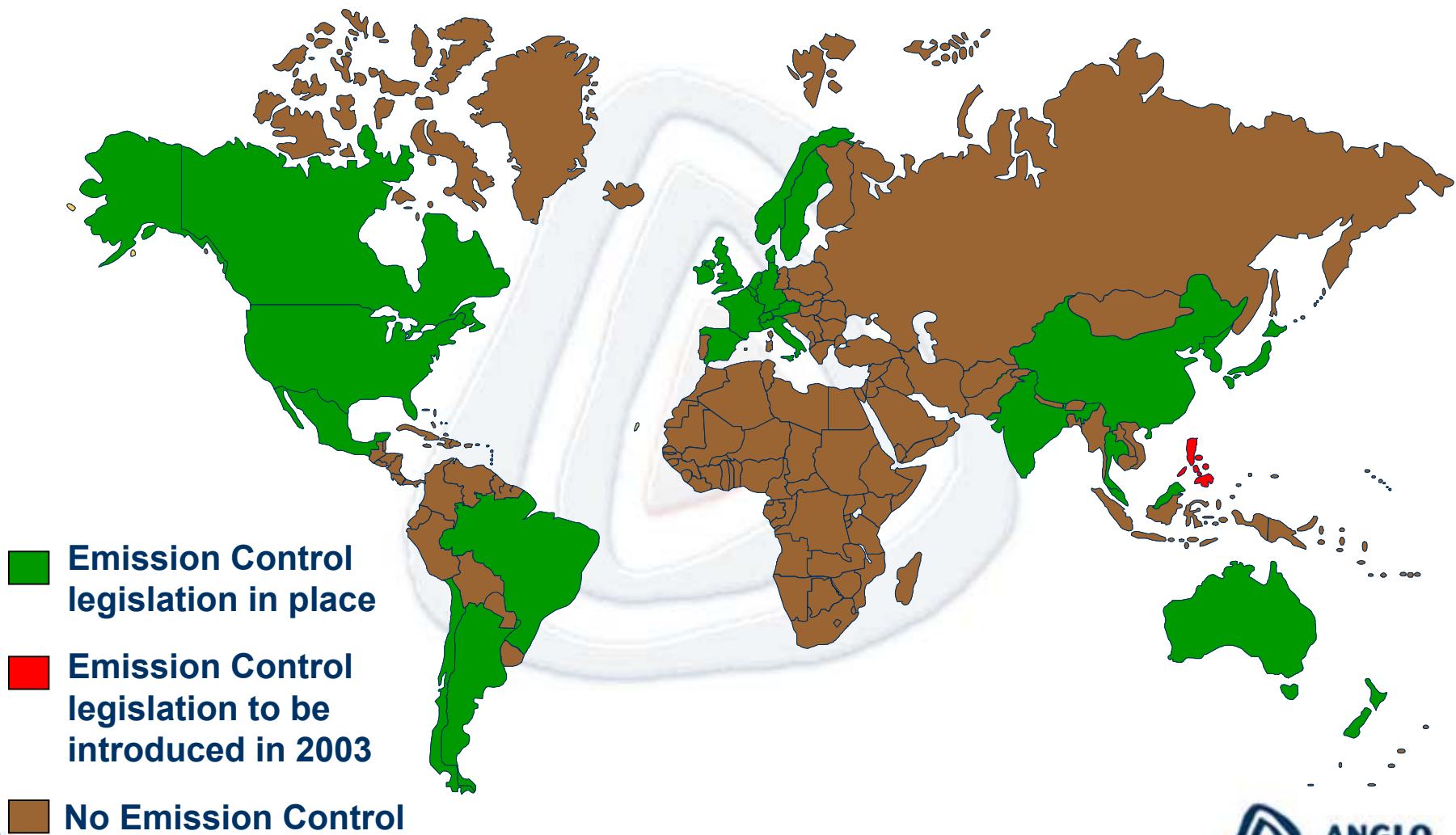
US EMISSION STANDARDS

Emission Limits

- none
- 1975
- 1977
- 1980
- 1983
- 1994
- 1997 - LEV
- 2003 - ULEV



EMISSION CONTROLS



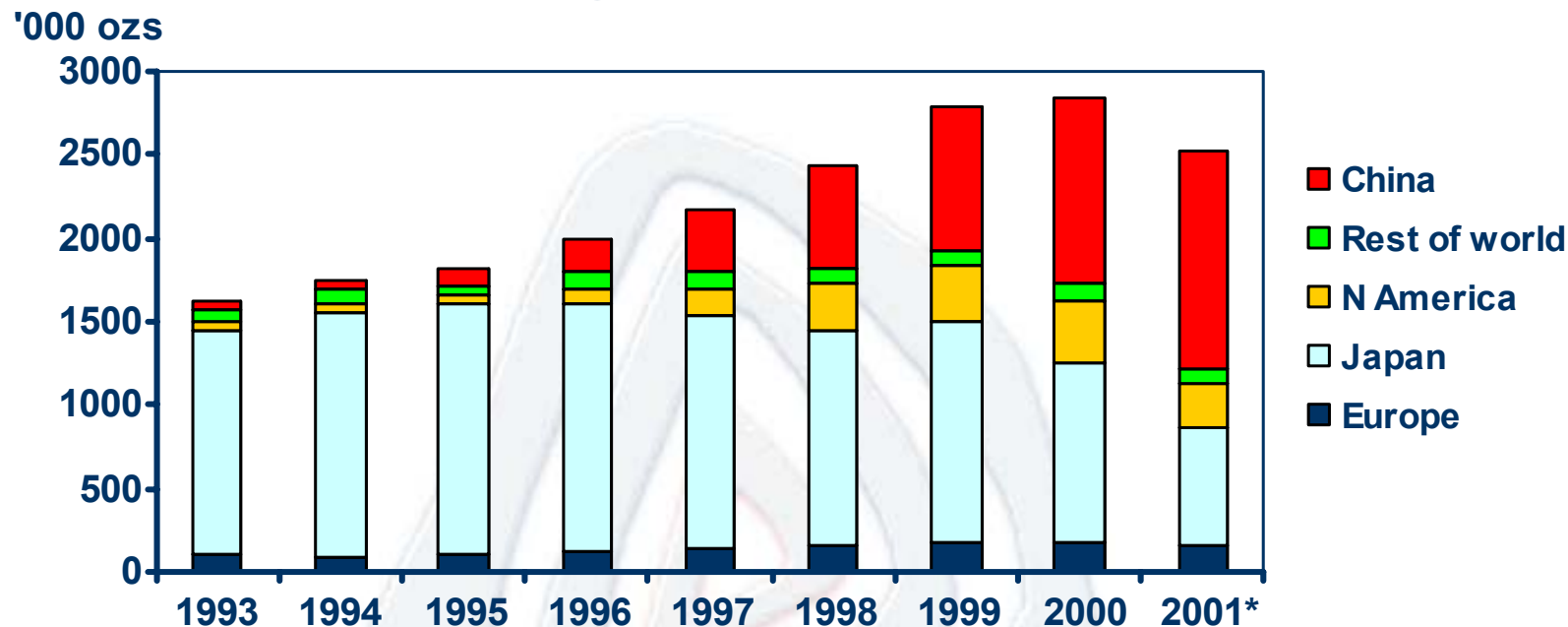
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AUTOCATALYST – PLATINUM DEMAND DRIVERS

- **Diesel engines**
- **Heavy duty trucks**
- **Palladium substitution by platinum**
- **More stringent emission standards**

PLATINUM JEWELLERY



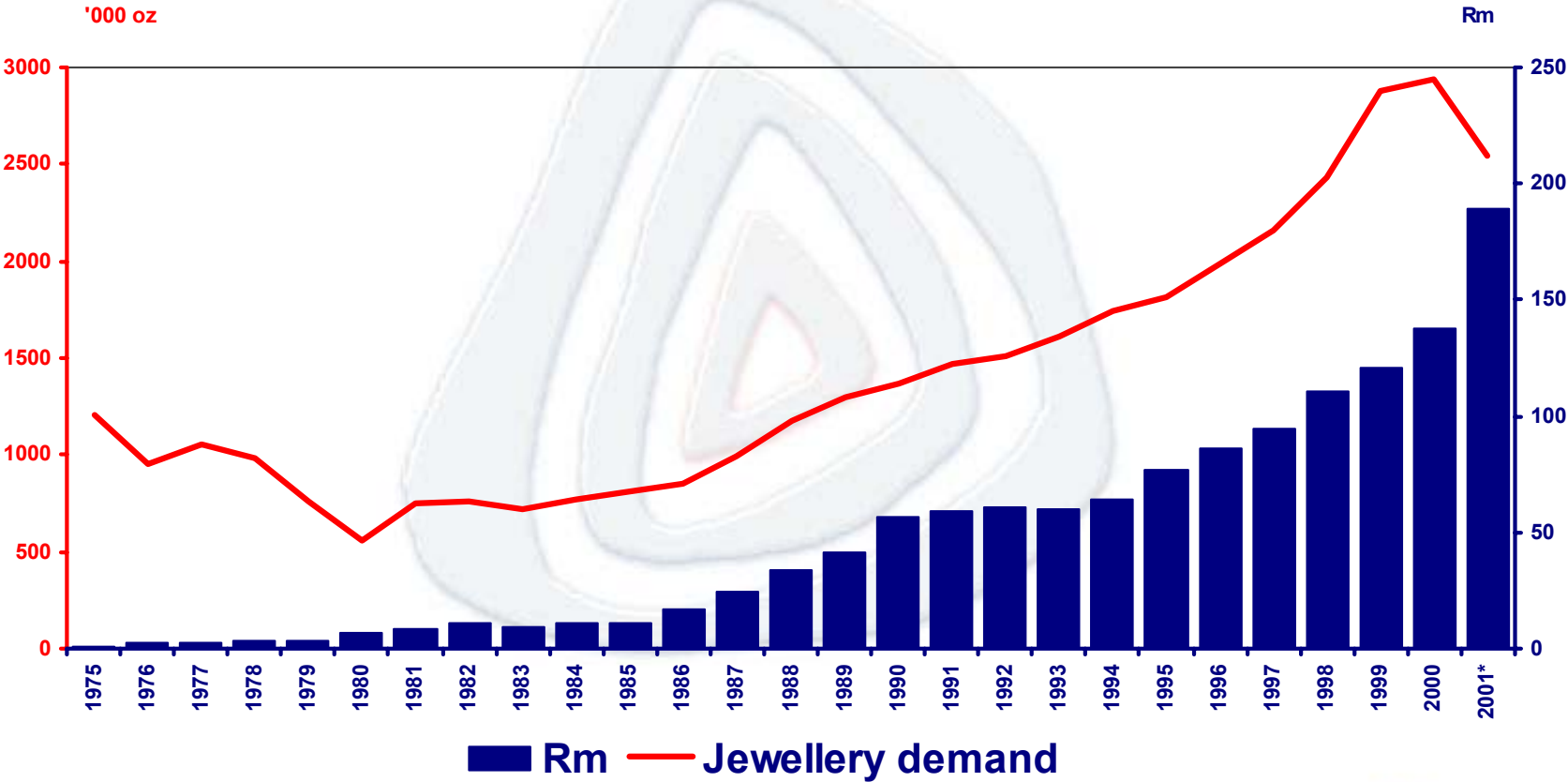
- Chinese consumer demand remains strong
- Weakness in Japan - bridal market remains the cornerstone
- Entry into India commenced
- USA developing well

* Estimate

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GROW MARKET FOR PLATINUM

Jewellery and Investment Development Expenditure via PGI

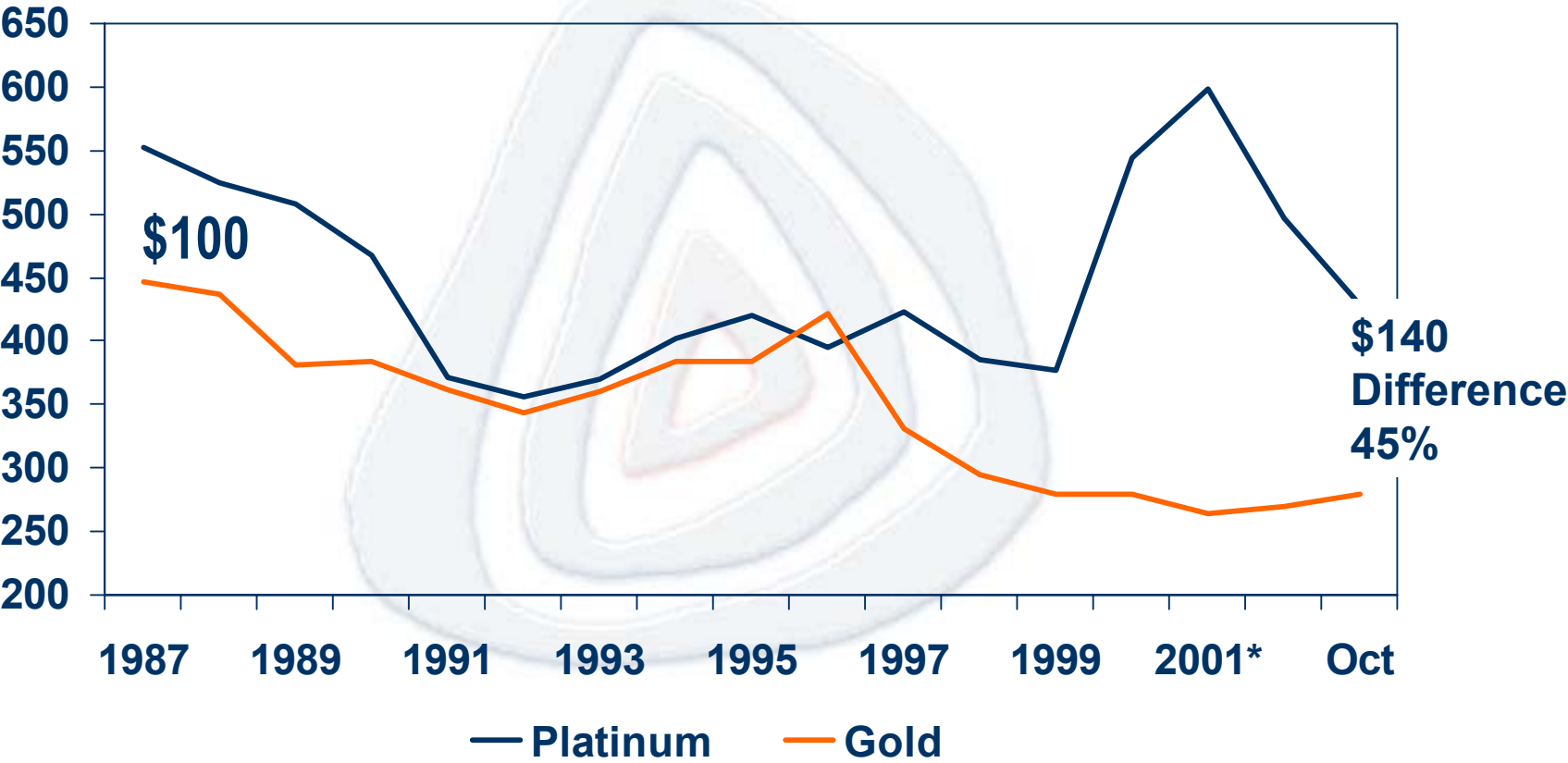


* Estimate



JEWELLERY MARKET UPDATE

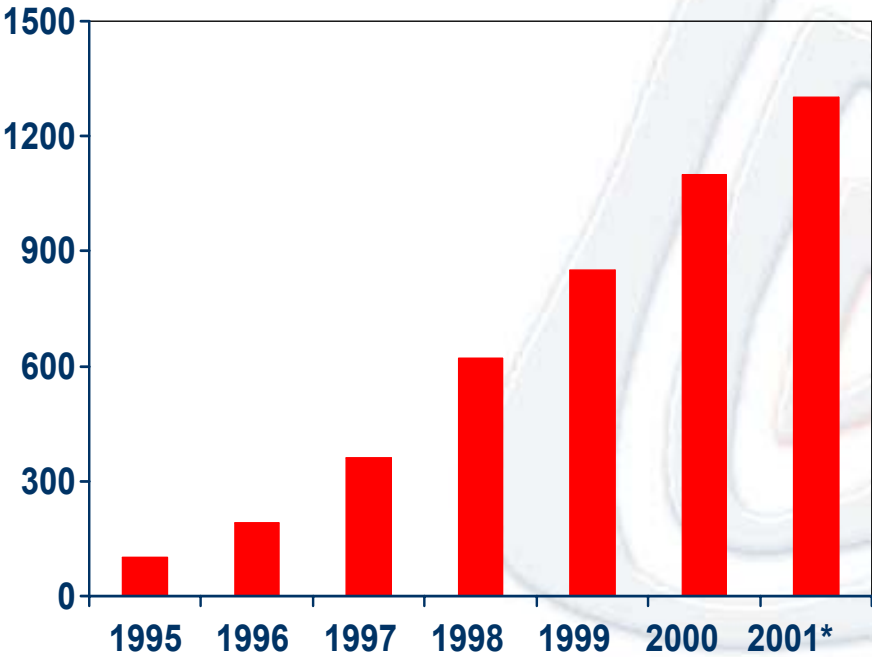
Platinum/Gold Differential



* Estimate

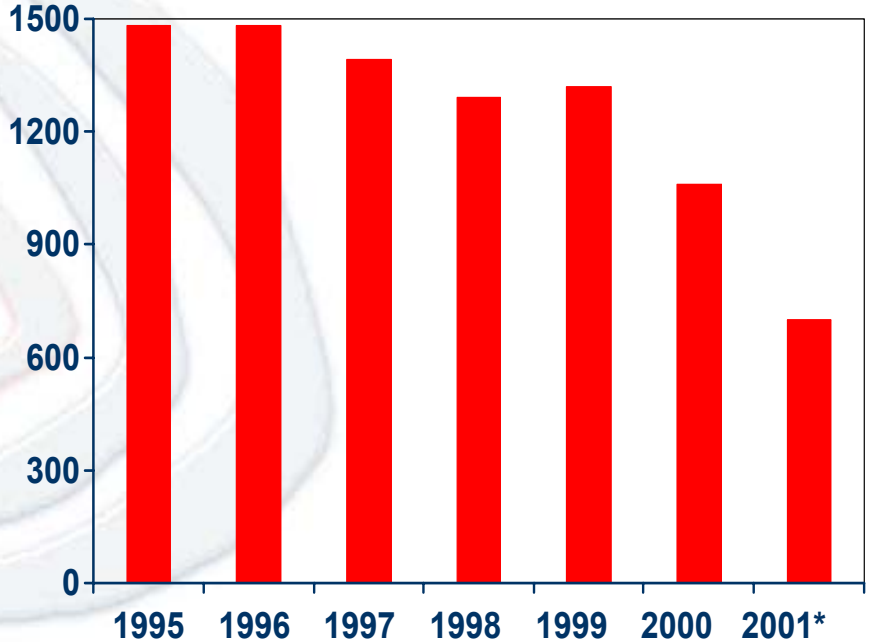
JEWELLERY MARKET - BENEFITS OF DIVERSIFICATION

Platinum
'000 ozs



CHINA

Platinum
'000 ozs



JAPAN

* Estimate



SHOPPING FOR PLATINUM AT CAISHIKOU DEPT STORE, BEIJING



INDIA 2001

- The launch advertising created consumer and trade awareness of platinum jewellery
- Trade partners are optimistic
- Interest in platinum bands/platinum diamond engagement rings
- Establishing critical mass, infrastructure & desire



Define gooseflesh.

Define a colour. Bottle green.

Define an ice-cube finding its way down your back.

Define a heavy heart.

Can you put everything within the constraints of 26 letters.

What about 'ma'? What about 'haramisu'?

There are things in life that escape 'definition'.

Life itself, for instance.

Define bitter. Tangy. Sour. Define a mistake. Wrong. Right.

Ever wonder how it changes

with every experience.

For that matter, how do you define 'experience'?

Is a kiss the mere brush of lips?

Is a smile the mere upturn of the corners of the lips?

Is platinum a mere white

metal that does not tarnish?

Is platinum a mere element on the Periodic Table?

Is platinum mere jewellery?

PLATINUM
BY INSIDE



INDIA 2001

PGI STRATEGY

- **Restore trade confidence at all levels**
- **Recognise structural change in distribution channels**
- **Sustain and build bridal markets**
- **Broaden the geographic reach to provide additional demand and to reduce risk**
- **Implement campaigns to grow platinum ownership**

PLATINUM DEMAND - OUTLOOK

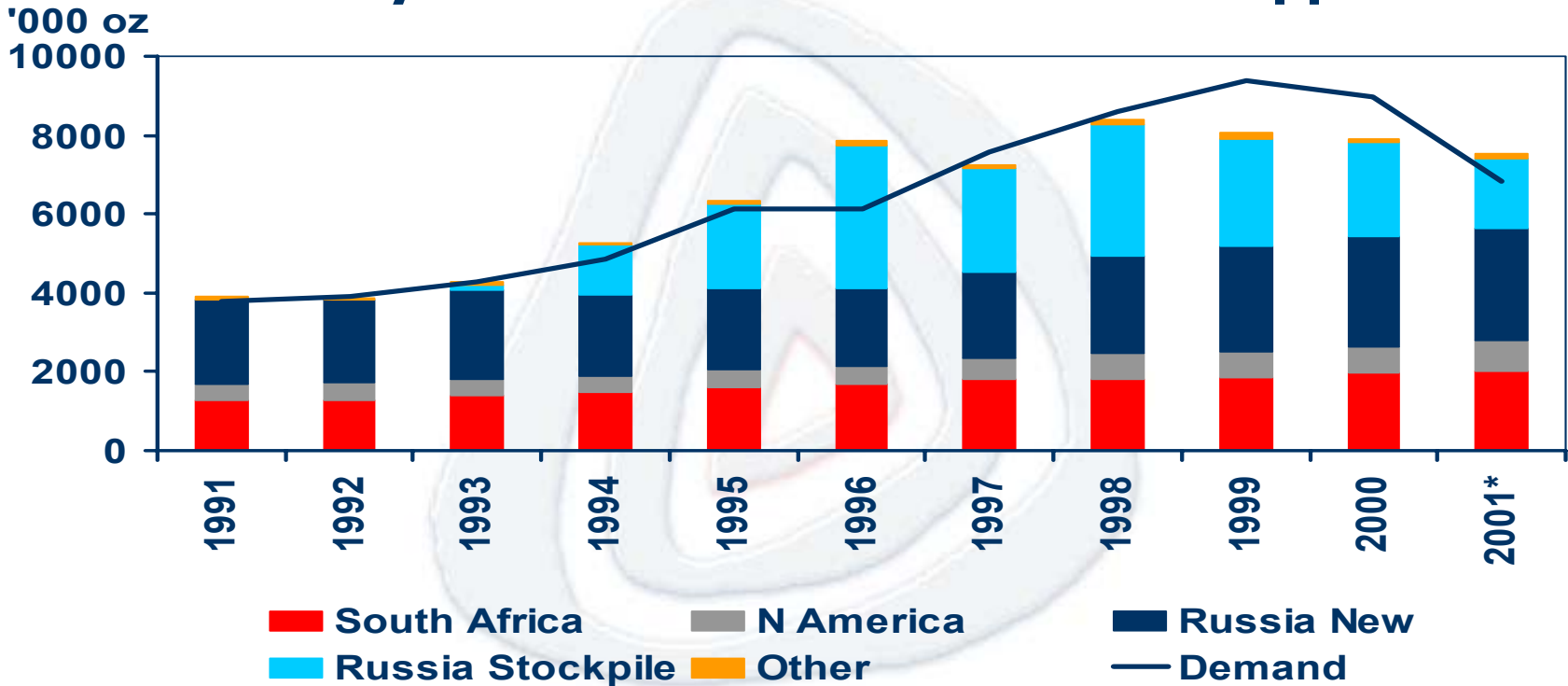
- The use of platinum in autocatalysts will continue to expand on account of more stringent emission legislation, growing demand for diesel vehicles and switching from palladium to platinum
- Chinese jewellery demand strong and USA to build on good base. Bridal support remains strong
- Traditional industrial demand stable with growth continuing to be driven by the use of platinum in electronics and chemicals

PLATINUM DEMAND DRIVERS

- **Short term** : Autocatalyst
- **Medium term** : Autocatalyst, Jewellery,
Electronic & Chemical
- **Long term** : Fuel Cells

PALLADIUM SUPPLY & DEMAND : 1991 - 2001

A heavy historic reliance on Russian supplies



- Post 1999 saw autocatalyst manufacturers draw down stocks.
- Substitution occurred in dental and electronics

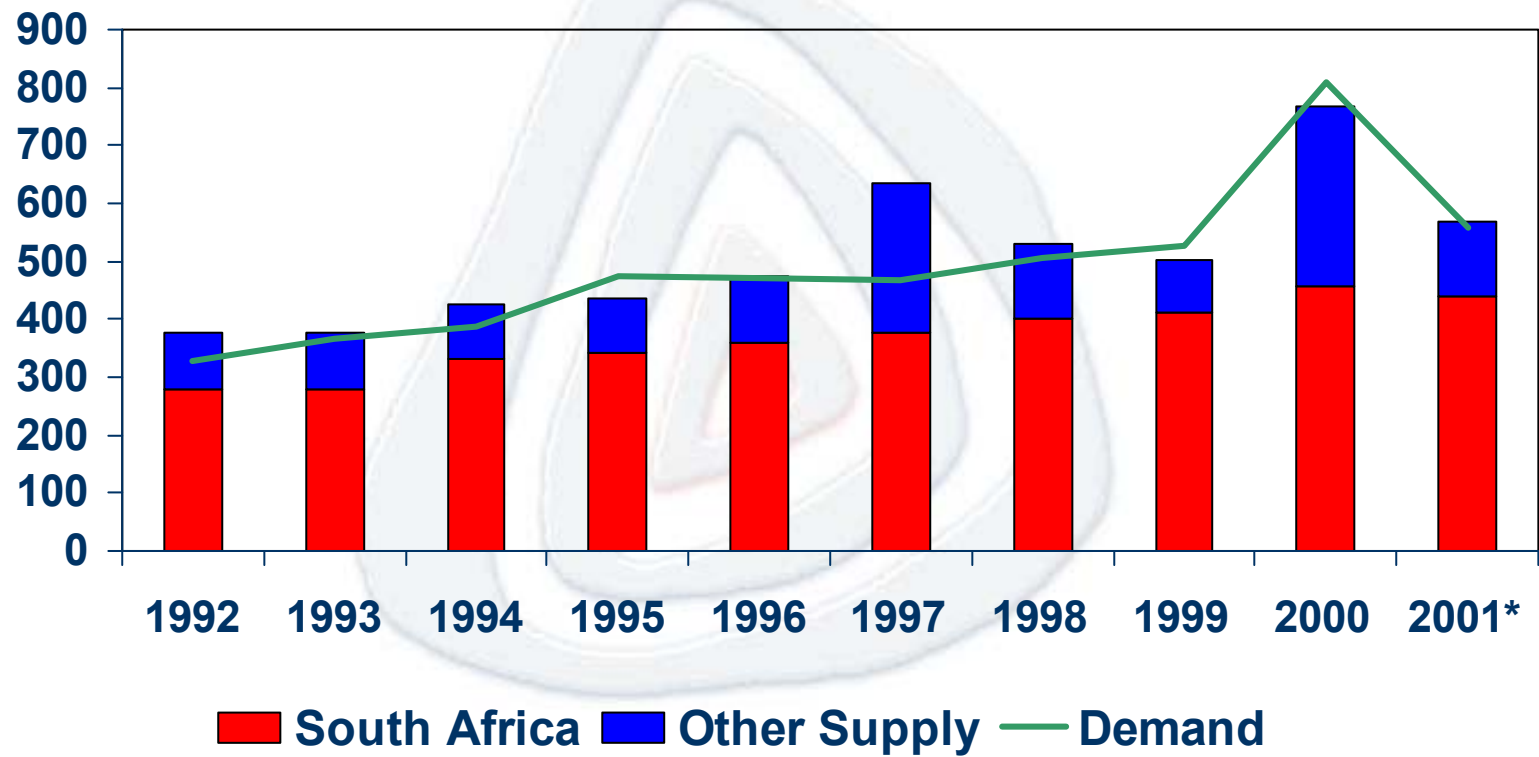
* Estimate



PALLADIUM DEMAND - OUTLOOK

- Autocatalyst demand remains. Thrifting and substitution by platinum will have an influence
- Substitution in electronics will continue
- Massive Russian selling in early 2001 has eased supply concerns
- Overhang of stock remains

RHODIUM SUPPLY & DEMAND : 1992 - 2001



* Estimate

RHODIUM - OUTLOOK

- **An essential element of the autocatalyst mix, particularly NOx control**
- **Entrenched element of PGM alloys used in glass manufacture**

FUEL CELLS - THE FUTURE

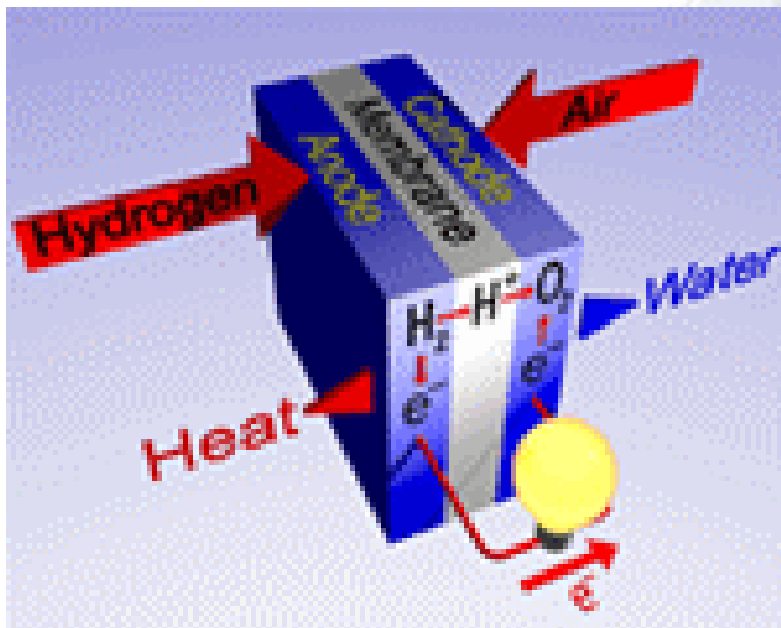
***“I believe fuel cells will finally end
the 100 year reign
of the internal combustion engine”***

Bill Ford, Chairman, Ford Motor Company



**Ford
PS2000
SUV**

FUEL CELLS



- Environmentally friendly, no harmful emissions
- Produces electricity, heat and water
- Modular
- Efficient

FUEL CELLS - FUEL OPTIONS

- Gasoline
- Methanol
- Hydrogen
- PGM contribution in fuel reforming

FUEL CELLS - RECENT DEVELOPMENTS

- General Motors plans production ready FCV by 2004 and expects to mass produce Fuel Cell cars by the end of the decade
- Ballard and Osaka Gas to collaborate in development of stationary PEM for Japanese residential applications
- Nissan Motor Company and Renault SA to invest \$695 million in the next 5 years on fuel cell vehicle research

FUEL CELLS - RECENT DEVELOPMENTS

- **NEC wants to put fuel cell powered electronic products in the market in 2005**
- **The Long Island Power Authority installed 55 fuel cells to prove the benefits of the technology**
- **Ford announces the fuel cell version of the Ford Focus will be in mass production by 2004**

FUEL CELLS - THE FUTURE

- **Initial introduction: stationary applications in the short term**
- **Commercialisation of Fuel Cell Vehicle's in medium to longer term**
- **Portable applications?**
- **Projection of 500 000 oz Platinum demand by 2010**

MARKETS - IN CONCLUSION

- **PGM demand fundamentals sound**
- **Global economic issues will have a short term influence on price**
- **Medium and long term outlook exciting**