



Roundtable on sustainable production and use of PGM-metals

The Hague, December 12, 2005

facilitator's introduction



program

- Welcome and introduction (10:00 – 10:45)
 - introduction of the participants
 - short presentation by Armin Reller
 - short presentation by Reinier de Man
- PART I: PGM in Russia (11:00 – 13:30)
 - Presentation by Anton Berlin, *Norilsk Nickel*.
 - Presentation by Vladimir Masloboev, *Kola Science Centre*.
 - discussion

lunch break

- PART II: closing the PGM cycle (13:30 – 15:15)
 - Presentation by Christian Hagelueken, *Umicore*
 - Presentation by Karsten Krause, *TMI*
 - discussion
- PART III: roundtable discussion (15:45 – 17:00)



A note from the facilitator

- We are here for discussion and for optimally profiting from each other's expertise and ideas.
- We are not here for hearing long presentations
- Therefore: please keep your presentations as short as possible so that we have time for discussion!

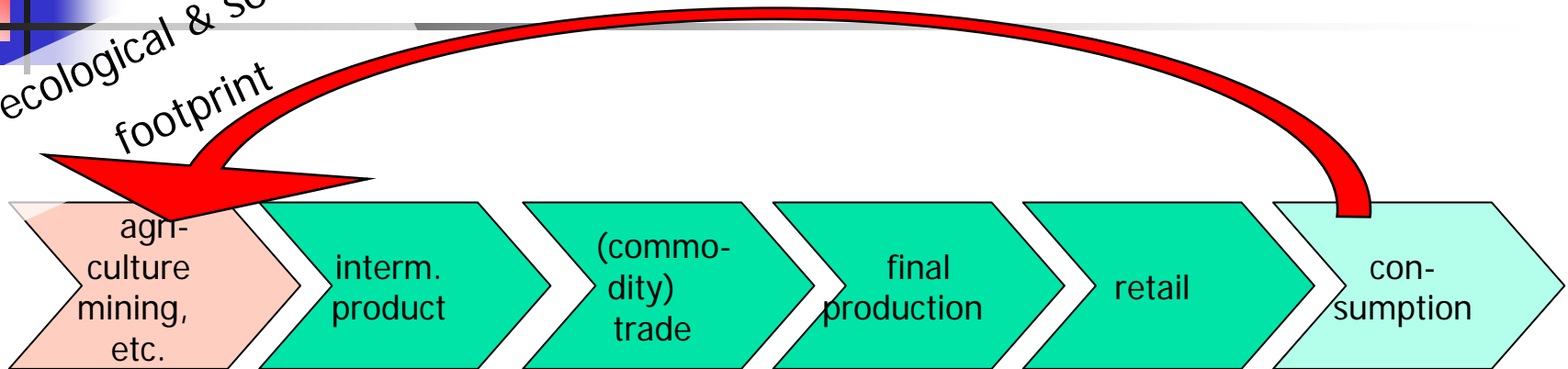


Part A

supply chains and sustainability

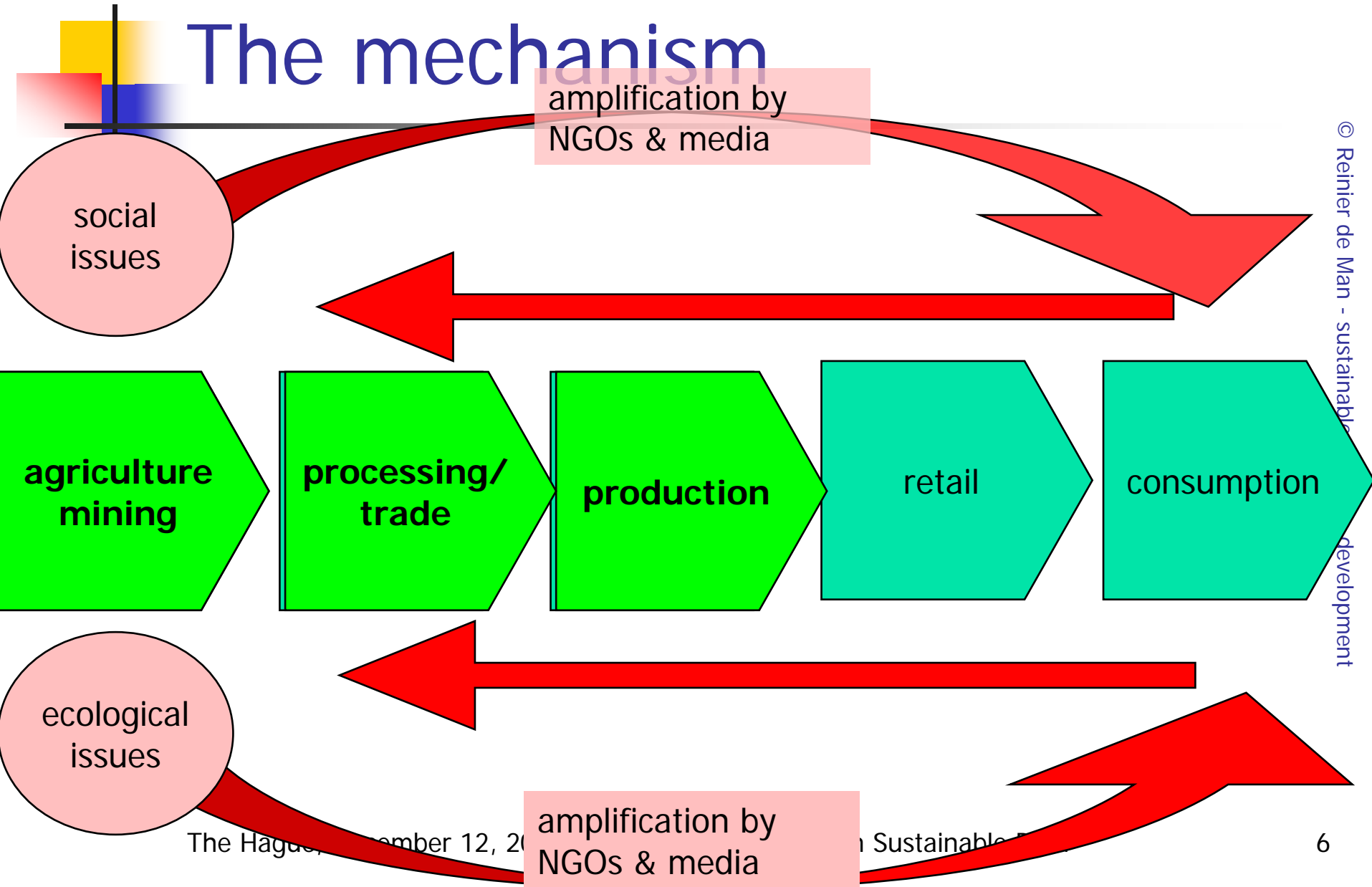
supply chains & sustainability

ecological & social footprint



forestry	pulp and paper		journals, magazines, copy paper		printing, reading
oil palm plantation	(ruwe) palmolie	palm oil trade	margarine bakproducten wasmiddelen	supermarket	diverse consumer products
PGM mining	PGM	PGM trade	catal. converter	car retail	driving
cotton growing	raw / ginned cotton	cotton trade	weaving, knitting, clothing prod.	fashion retail dep. stores	consumption

The mechanism





Managing supply chain risk

- supply chain issues create risks for manufacturers, retailers:
 - damage to company reputation
 - damage to product brands
 - supply chain disruptions
- supply chain risk management
 - supply chain control / transparency
 - implementing minimum standards (next slide)
 - stakeholder engagement



Minimum standards

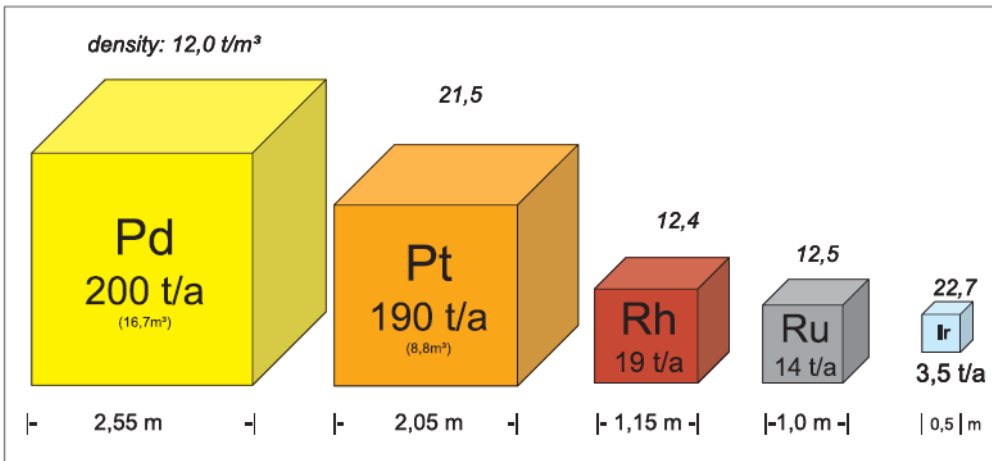
- Forestry / Agriculture
 - forest – wood – paper (FSC standard 1997)
 - palm oil (RSPO criteria 2005)
 - soya (RSS, about 2007)
 - cotton ('better cotton', about 2007)
 - sugar
- Minerals / Metals
 - initiatives are developing



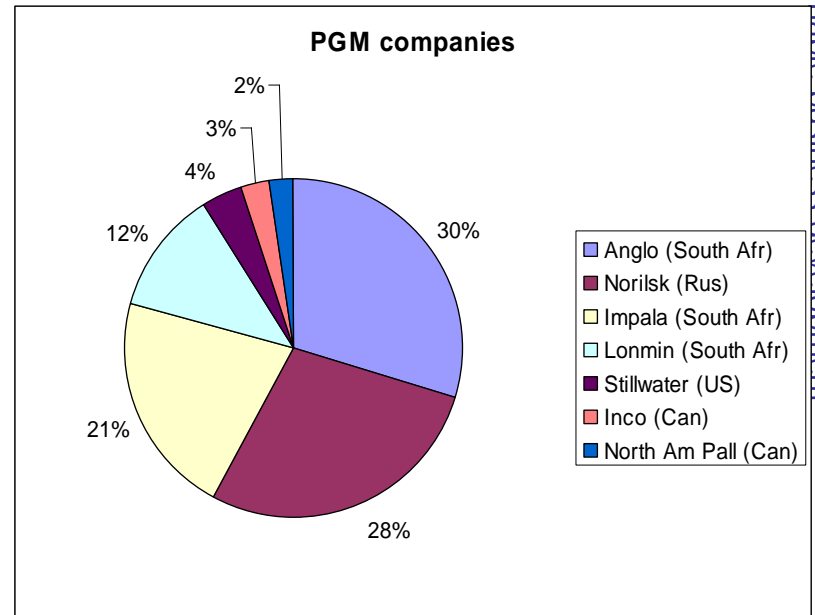
Part B

The PGM-automobile supply chain

PGM production



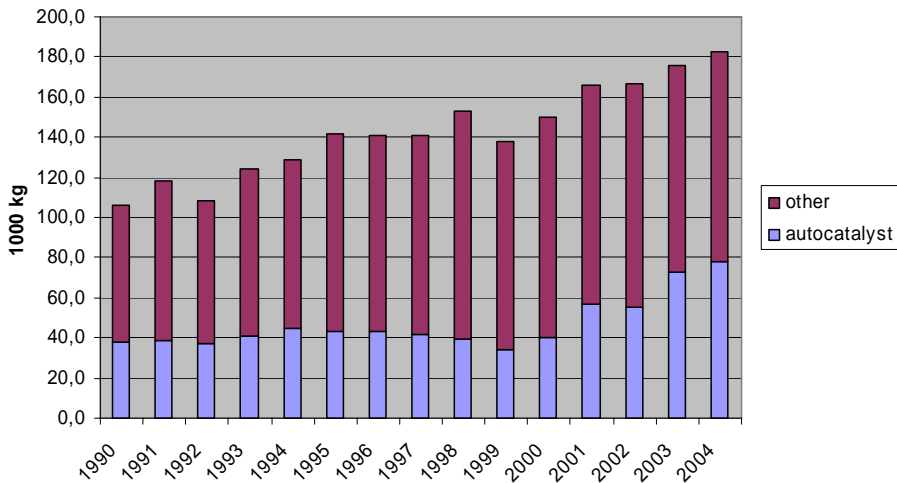
production volumes per company



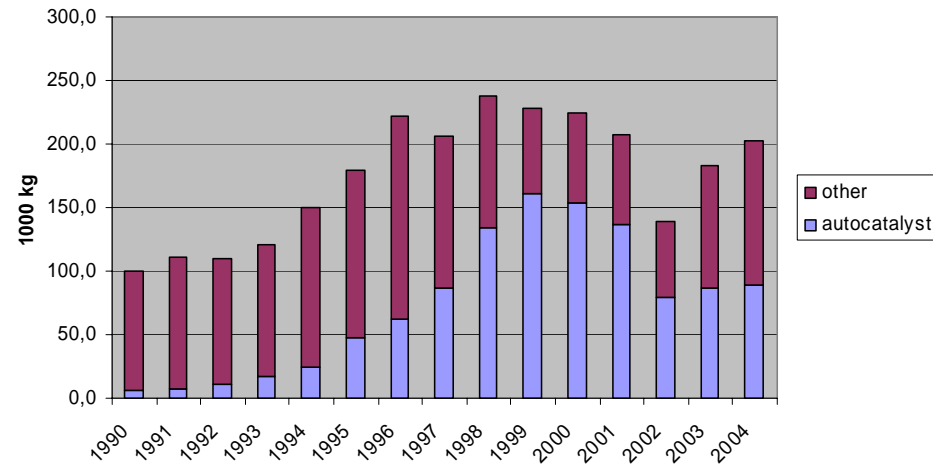
production volumes according to Hagelueken

PGM demand

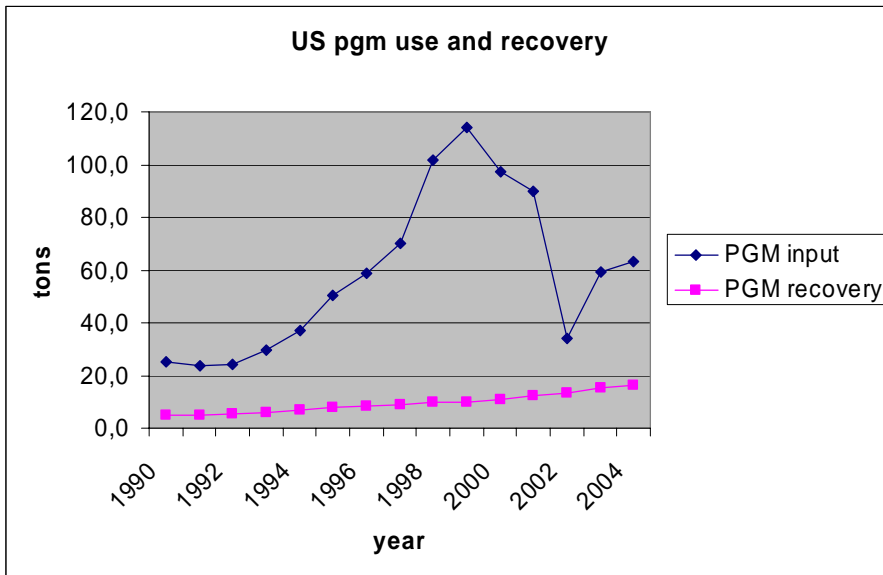
Platinum demand



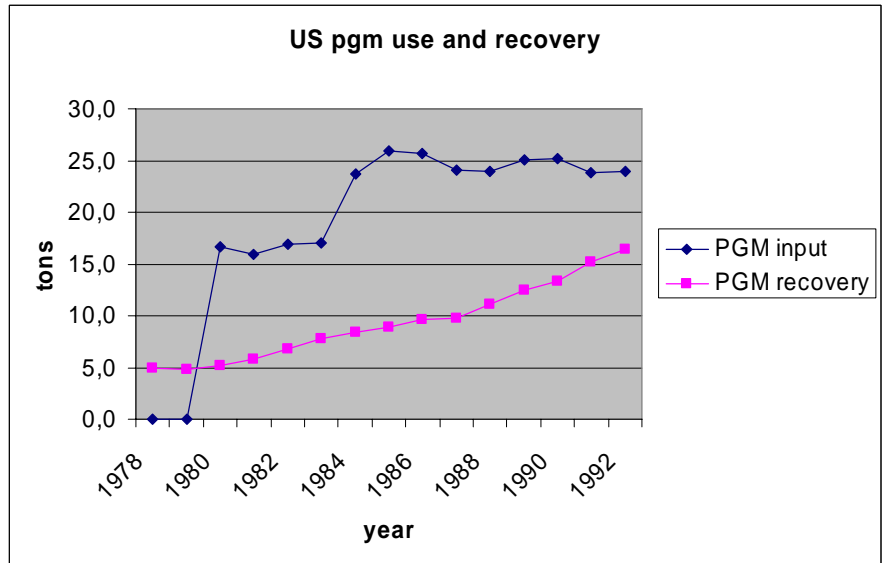
Palladium demand



Recycling car PGM (US)

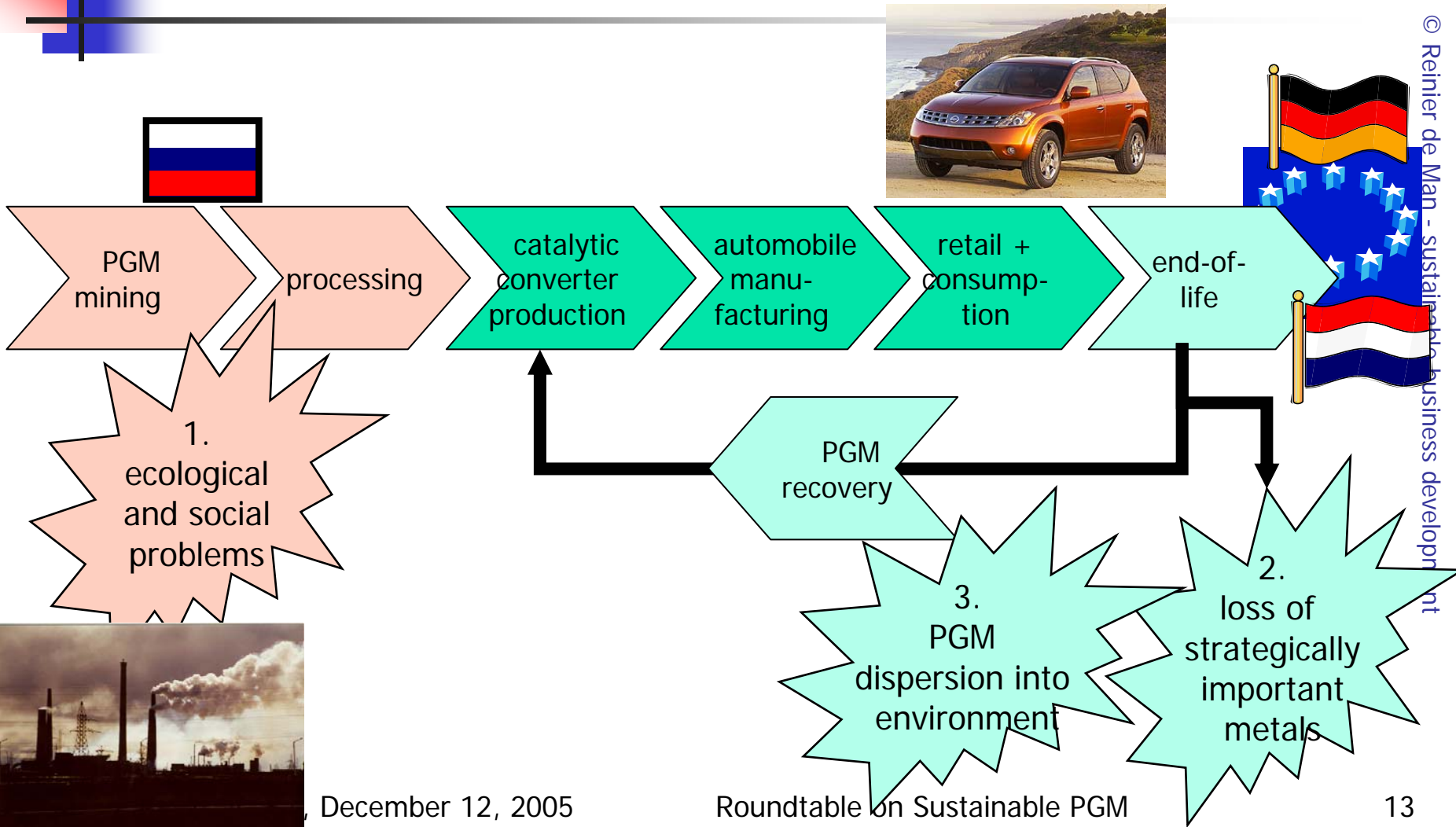


Static recovery quote = 20%
(2000-2004)



Dynamic recovery quote = 56%
($\Delta t = 12$ years, 2000-2004)

the PGM-automobile chain



© Reiner de Man - sustainable business development



three major issues

1. ecological and health effects of PGM mining and production in Russia
 2. loss of strategically important resources because of open PGM cycle
 3. potential risks of worldwide dispersion of PGM
- *Today: focus on first two issues*



Part C

today's program



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 - presentation RdM
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