Manganese mining in the Kalahari basin

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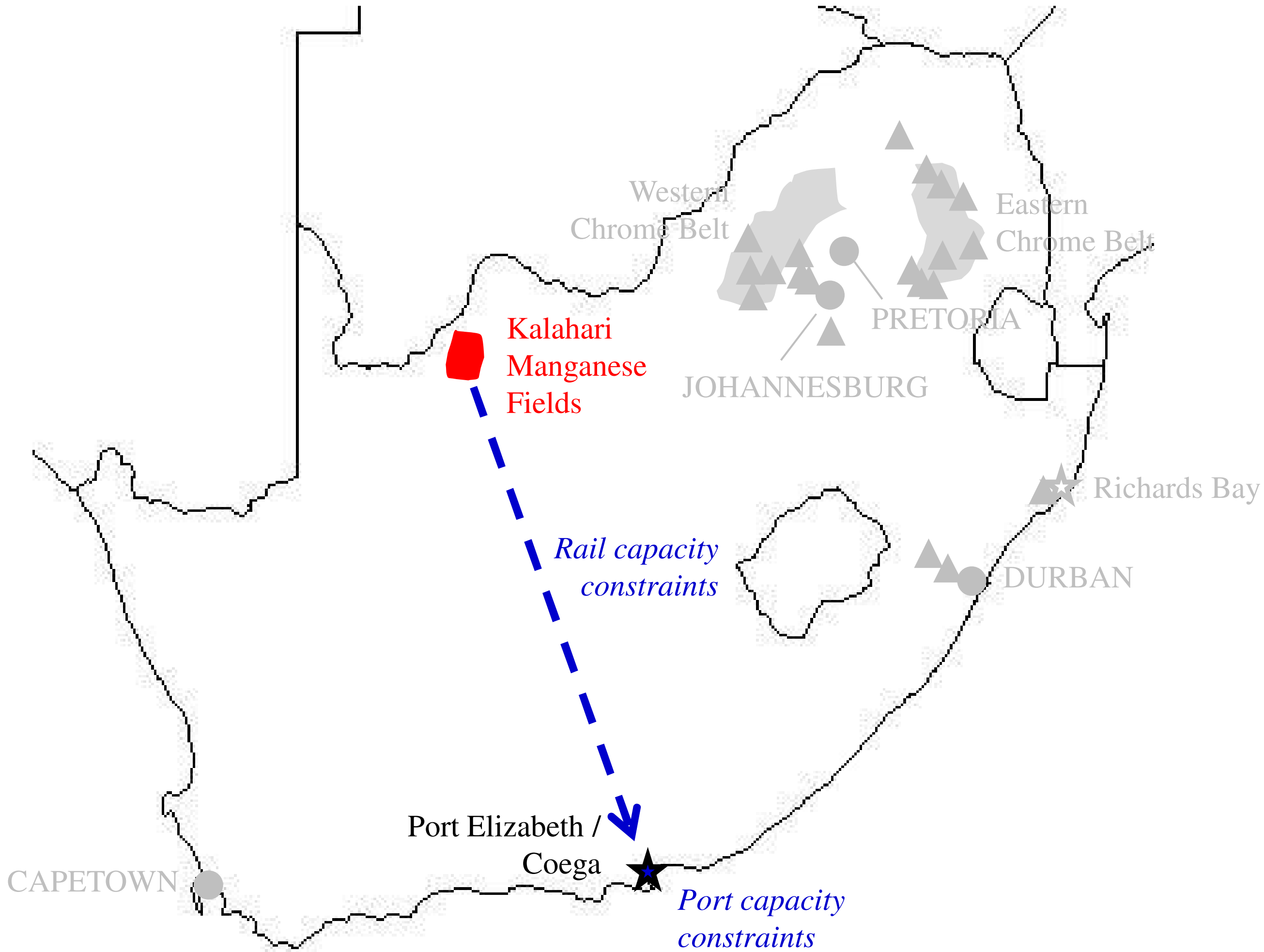
Manganese ore exports from South Africa are constrained by rail and port capacity



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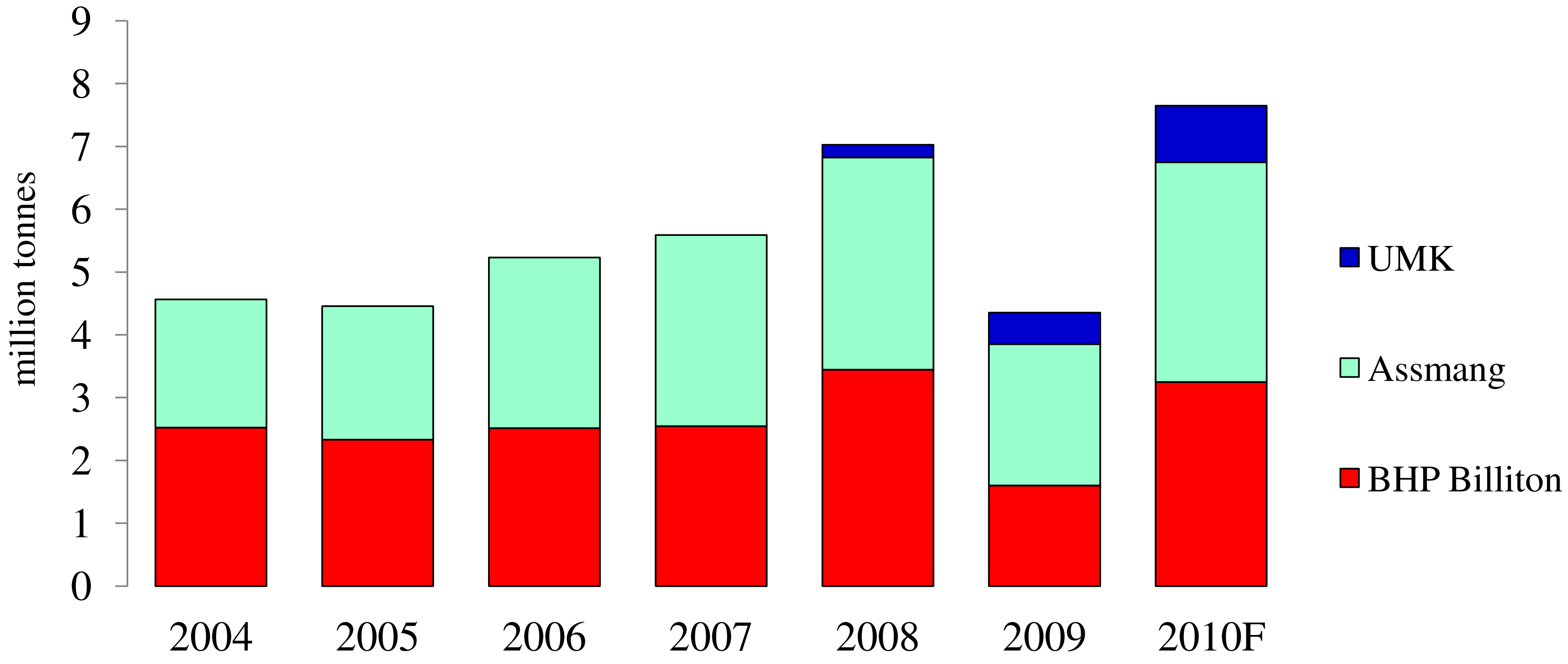
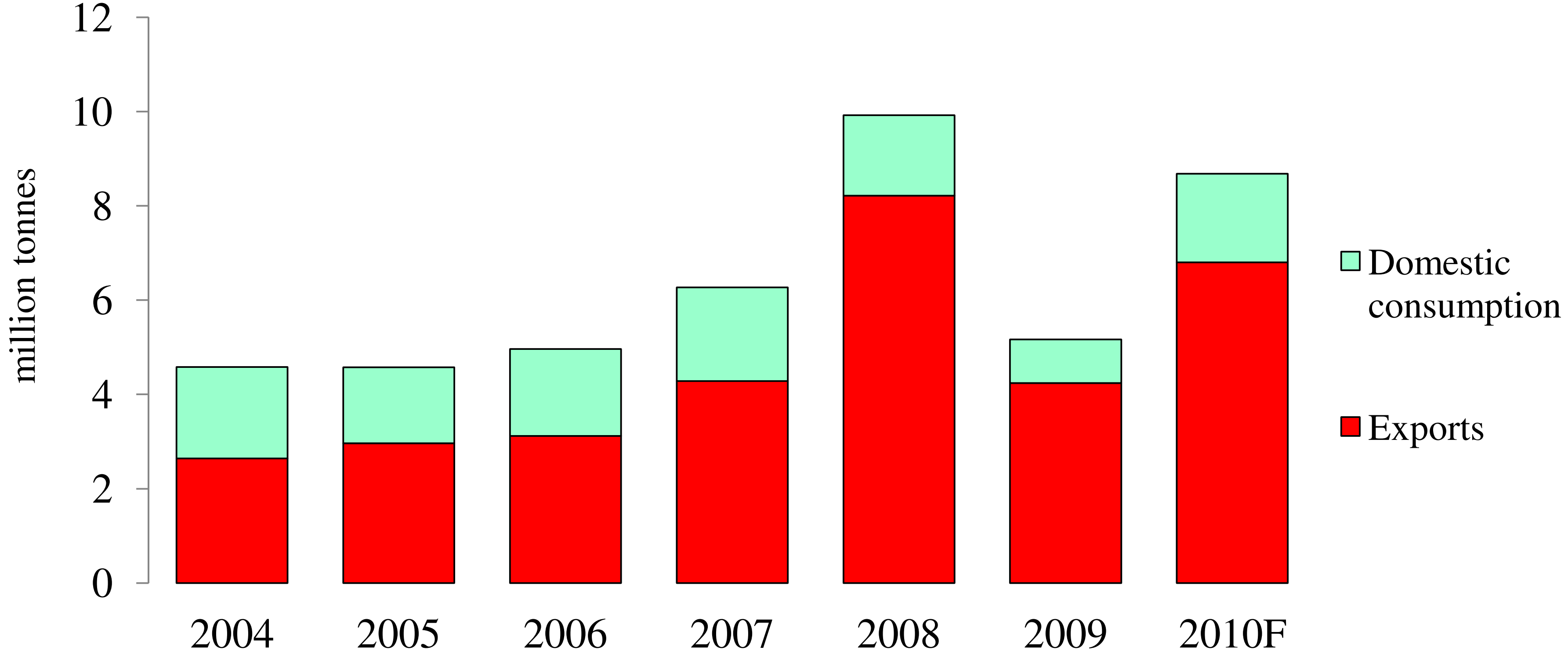
South African manganese ore output has risen to around 7.5 million tonnes per year

South African manganese ore production (gross weight basis):



South African manganese ore exports have been at or above Port Elizabeth effective capacity (4.5Mtpa)

South African manganese ore shipments (gross weight basis):



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South African manganese ore exports have been at or above Port Elizabeth effective capacity (4.5Mtpa)

- Manganese ore exports already exceed current rail capacity by >1 million tonnes per year. Material is being trucked to port
- Growth in world demand (conservative forecast) will require extra ~5 million tonnes of Mn ore from South Africa by 2020
- Forecast 2020: SA production 13 million tonnes, exports 11 million tonnes
- Port Elizabeth current capacity of 4.5-6.0 million tonnes per year will be grossly inadequate
- Short/medium term issue of how to allocate capacity of new entrants (UMK, Khalagadi, AML...) vis a vis established players

Conclusions from discussions yesterday...

- Plans to move manganese export terminal in 2017/18
- Prior to that, the industry will largely have to live within existing constraints
- Extensive trucking of Mn ore seems unavoidable, requiring a price high enough to justify this
- Fierce competition for rail paths
- Power constraints make expansion of Mn alloy capacity problematical, except for conversions from other alloys (FeCr)
- Higher tariffs to pay for investment?