



PetroSA

Project Mthombo

**A sustainable solution for South
Africa's liquid fuel industry**

Presentation to the Oil & Gas Indaba

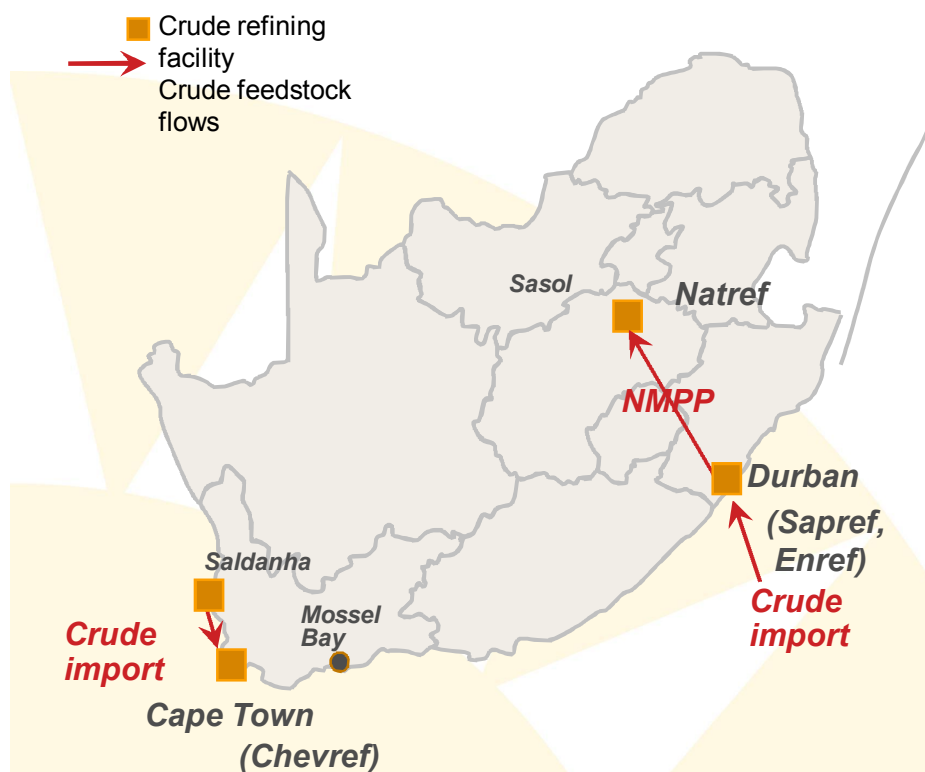
Bloemfontein 10 August 2010

Introduction – the context

- December 2005 major stock-outs across South Africa
- Cost to the country estimated at R1billion per day
- Government established the Moerane Commission
- Commission identified several structural weaknesses in supply
- The Energy Security Master Plan promulgated
- Recommended that preference be given to local manufacture instead of imports
- PetroSA, as NOC, tasked to develop and execute the Plan

Evolved into a structured planning process

Infrastructure Problem - threats to RSA national liquid fuels supply infrastructure



Global recession drives the next wave of refinery rationalisations - SA will be impacted

- Increasing product imports
 - 180 000bpd by 2020
 - 380 000bpd by 2030
 - not a long-term sustainable solution
- Congested existing supply ports
- High concentration of crude, refining capacity and product imports in Durban area
- Only one pipeline to major inland market
- Major investment decisions facing refinery shareholders. Need to evaluate asset sustainability. Costs for:
 - Configuration upgrade
 - Clean Fuels II
 - Changing HSE standards

Asset evaluation: NPV positive or negative?

PetroSA presents a sustainable solution

National challenges

- 1** Security of supply:
Existing refineries have limited expansion potential. A mega world-class greenfields facility provides long-term supply security, reducing import dependencies and diversifying crude supply
- 2** Fuels quality:
Mthombo will produce to Euro V specs and has the capacity to assist existing refiners to reduce their costs of compliance
- 3** Supply infrastructure:
Coega SPM and port, together with a second pipeline to Gauteng, will de-risk South Africa's future fuels supply logistics

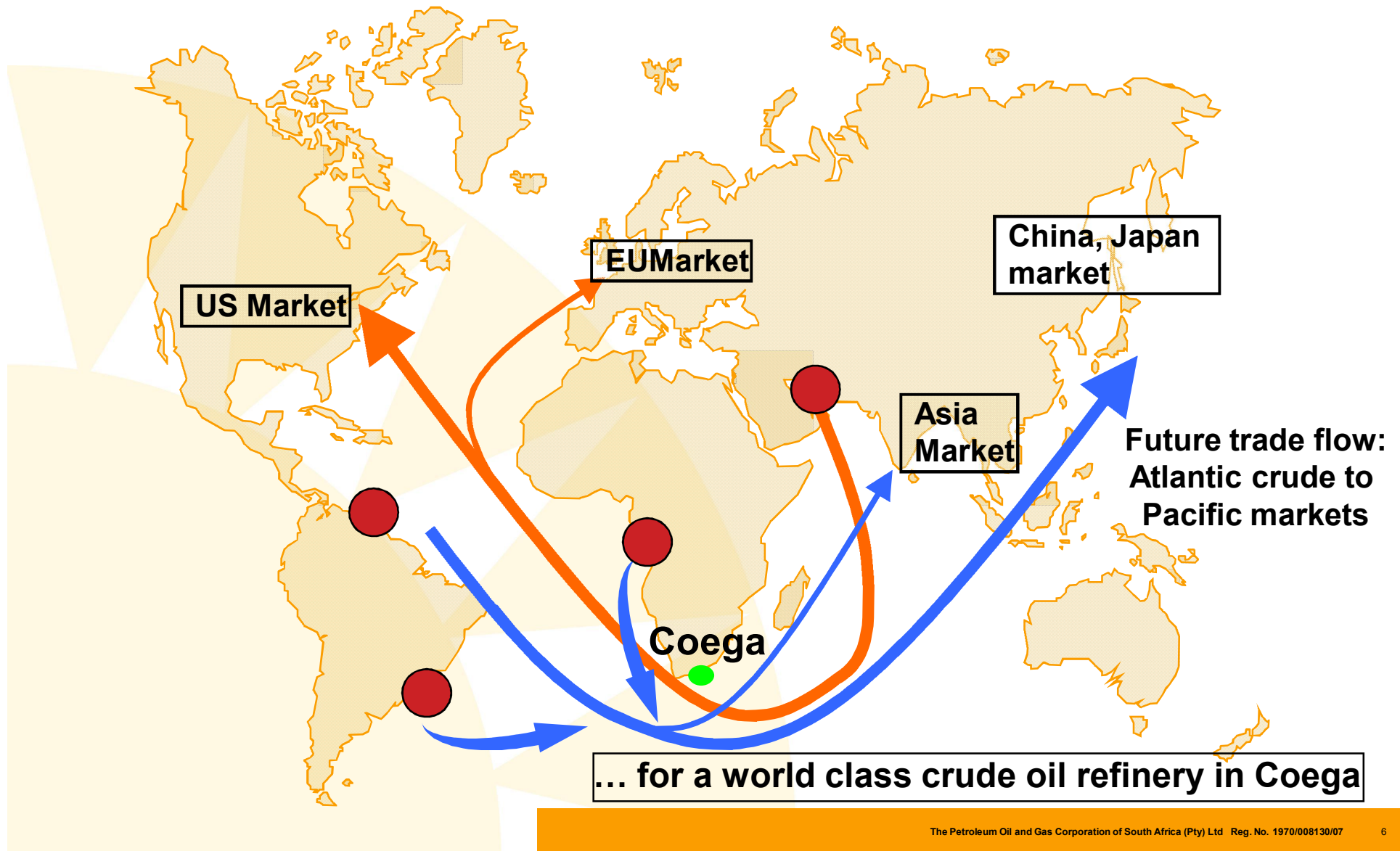
**Mthombo
360kbpd deep
conversion crude
refinery
producing to
Euro V standards**

**....first regional mover
advantage**

About Project Mthombo

....turning a threat into an opportunity

Project Mthombo: Leveraging a strategic location...





South Africa well positioned for a project financed mega infrastructure project

- Largest growth market in sub-Saharan Africa to anchor project
- Regulatory framework supports new refinery in SA
- Political stability with established democracy
- Excellent global credit rating supports access to global funding
- Established development banks (IDC, DBSA etc.)
- Significant existing refinery infrastructure – skills pool available
- Uniquely situated on global crude trade flows
- Coega has a modern deep-water port
- PetroSA as NOC will develop project and be anchor investor

The world class Soccer World Cup is clear proof that we can do it!

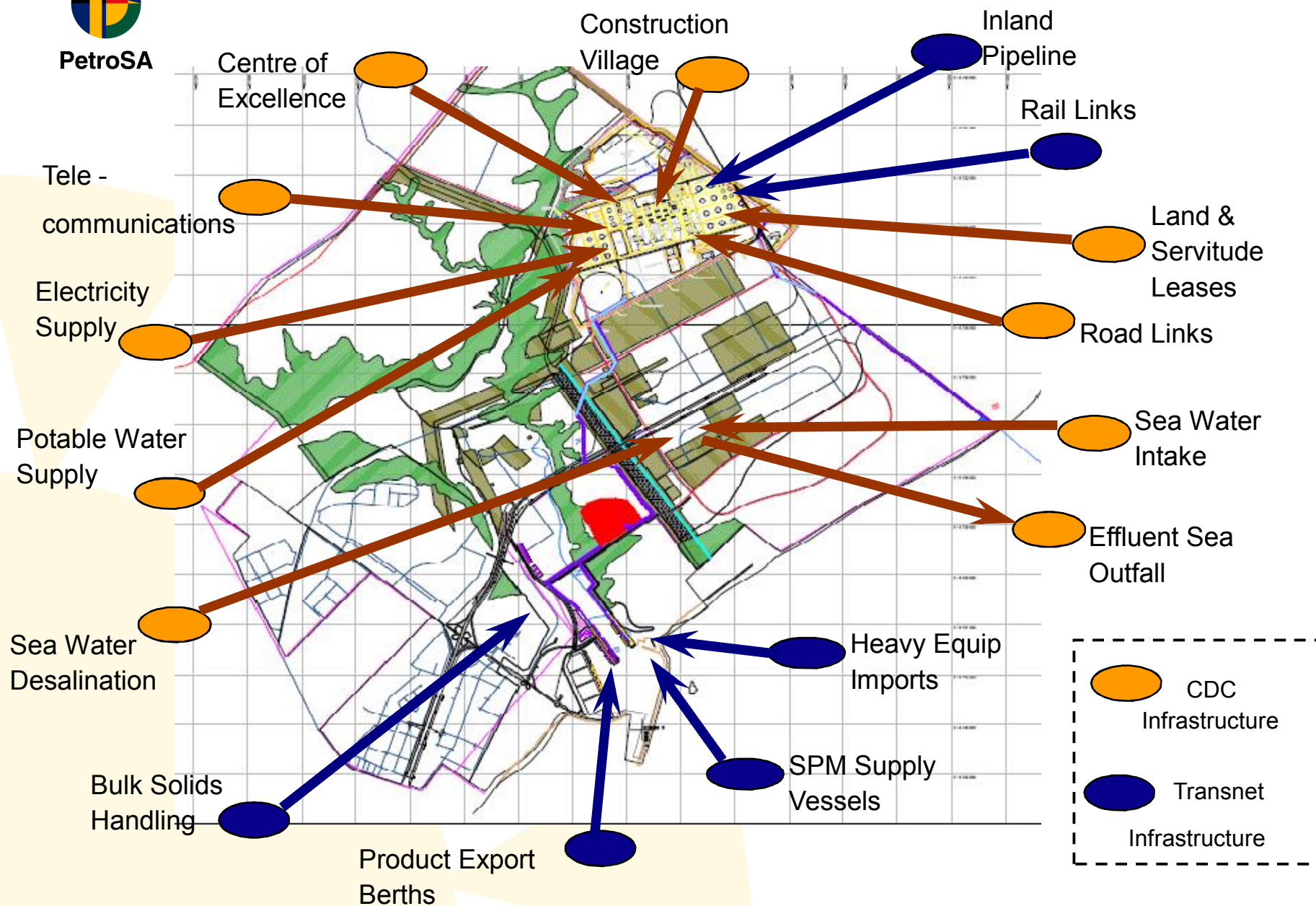
Coega Crude Oil Refinery: World Class

- Economies of scale capacity : 360 000 bbl/d
- Refinery will generate own power and own water in Utility Island
- Emissions/Water management: best global practice standards
- High conversion: Fuels yield 95%
- High diesel yield in line with future regional market requirements
- Heavy/sour/acid base crude – to maximise returns
- Proven technology to mitigate project risks
- World Class working practices – rigorous benchmarking
- Tailor made design to address SA liquid fuels challenges
- Open for phased petro-chemicals integration
- Project execution in line with global best practices



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Mthombo / Coega / Transnet Interfaces





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Project Mthombo: A Mega Project





Competitive Supplier Development Programme

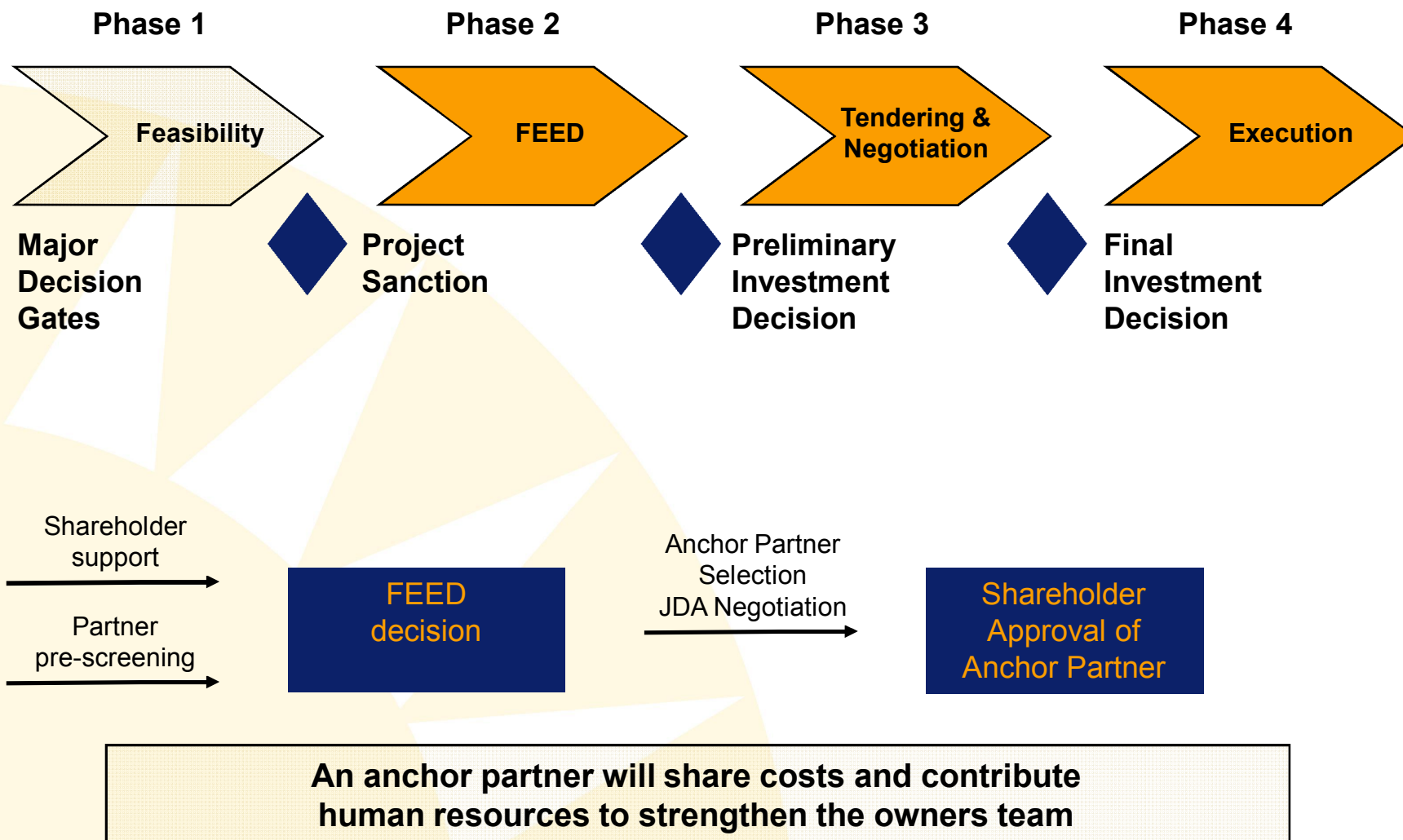
Overriding objectives of Project Mthombo's CSDP are:

- To maximise local content and build capacity
 - To support transformation (BBBEE) in the South African economy, specifically in the oil and gas industry
 - To implement CSDP initiatives without compromising the Project's success criteria, namely completing the Project within budget, on time and to world-class quality standards
 - To ensure sustainability of entities targeted for development, after the execution phase of Project Mthombo
 - To drive competitiveness in South African companies
- Target of 30% or \$3bn of Mthombo earmarked for spend by CSDP-qualified entities
 - Close liaison with business community and industry associations



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Project Phases & Path Forward





Coega refinery has many benefits for South Africa - support is justified

Security of supply implications

- Reduces reliance on imports
- New central distribution hub improves SA's supply logistics
- Relieves Durban congestion
- Diversifies crude sourcing
- Balancing refinery concept reduces strategic stock requirements

Macro-economic benefits

- Creates 27 500 construction and 18 500 operational jobs
- Unlocks region growth potential e.g. car industry; petro-chemicals
- Significant balance of payment savings
- Develops skills and technology
- Attracts foreign investors

Commercially Viable

- Lowest cost producer in Sub-Sahara
- Highest clean fuel standards
- Minimum environmental impact
- Full conversion to distillates
- Globally competitive against imports

Socio-economic benefits

- Alleviation of poverty
- CSDP has significant industrial impact
- Creates BBBEE opportunities
- Builds confidence in future
- Commitment to regional development





Project Mthombo received the KPMG Top Global Infrastructure Award 2010

- **“ an energy development initiative connected to a cross-sector infrastructure with an impact on the host country’s socioeconomic framework that far outweighs the base financial rewards available ”**
- **“ huge economic significance ”**
- **“ permanent job creation of 18,500 post-completion in a region beset with 50 per cent unemployment ”**
- **“ location on the Eastern Cape, where 67.3 per cent of the population live in poverty ”**
- **“ designed to create something out of nothing ”**
- **“ vital in modernizing South Africa’s energy infrastructure overall ”**
- **“ existing set of refineries that have not received a significant upgrade since they were launched almost 50 years ago and subsequently suffer from a lack of efficiency and negative environmental impact ”**
- **“ ... a regional trailblazer ”**
- **“ ... modernize South Africa into a continental energy sector powerhouse ”**