OIL AND GAS SECOND PAPER

Options analysis and Policy recommendations for the Oil and Gas Sectoral Strategy, focusing on the Upstream Clustering Opportunities

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Table of Contents

List of Abbreviations, Definitions and Acronyms

bbl	barrels
BOOT	Build, Own, Operate, Transfer – time sequence of development that culminates in the transfer of the ownership (or a significant potion thereof) of the asses to the host state (or designated company)
bpd	barrels per day
Bunkering	Bunkering means the physical transfer of marine fuels from one marine vessel to another marine vessel and usually relates to a refuelling concept
capex	capital expenditure
CoCT	City of Cape Town
COGSI	Cape Oil and Gas Supply Initiative, a clustering initiative of the DEDT
DC F	Discounted cash flows – the method of determining the current cost of a project in terms of future cash flows taking into account the cost of capital and earlier negative cash flows that need to be recovered. The critical determinants are the discount rate and the time period of the calculation. A longer project life cycle may attract a lower discount rate, however if there is significant long term country risk, the additional risk premium may wipe out any discount gains.
DEDT	Department of Economic Development and Tourism of the PGWC
DHA	South African National Department of Home Affairs
DME	National Department of Minerals and Energy, which owns amongst other SOEs, PetroSA
DOF	South African National Department of Finance aka the National Treasury
DOL	South African National Department of Labour
DOT	National Department of Transport
DPE	National Department of Public Enterprises, which owns, amongst other SOEs, ESKOM and Transnet
DPE	South African National Department of Public Enterprises
DST	South African National Department of Science and Technology
DTI	National Department of Trade and Industry
DWT or dwt	Dead Weight Tonnes - Deadweight = A measure of the total carrying capacity of a tanker (or other ship) in long tons of 2,240 pounds. Deadweight tonnage (dwt) of a tanker includes the weight of all cargo oil plus the weight of fuel, stores, water and crew. In most tankers, the deadweight capacity is within five percent of the actual cargo capacity.
E&P	Exploration and Production
EPC	Engineering, Procurement and Construction – a term referring to a form of contract issued by operators to contractors for turnkey project implementation. The contractor is not responsible for the installation of the facility in this case.
EPIC	Engineer(ing), Procure(ment), Install(ation) and Construct(ion) - a term referring to the contract that field operators issue to contractors for field development. The Installation aspect of the EPIC has additional risk associated with the contract as the operator now holds the contractors responsible for the overall management of the contract, but usually retains full approval control over key installation milestones.

EPZ	Export Processing Zone
FETs	Further Education Institutions
FPSO	Floating Production Storage and Offloading vessel.
GOG	Gulf of Guinea
GOM	Gulf of Mexico
IDC	Industrial Develop[met Corporation
INTSOK	INTSOK - the Norwegian Oil and Gas Partners - was established in 1997 by the Norwegian oil and gas industry and the Norwegian Government. The Norwegian equivalent of a national COGSI. http://www.intsok.no/PHP/index.php?categoryid=1
LFC	Liquid Fuels Charter
ME	Middle East
NOCs	National Oil Companies
NPA Report	The NPA commissioned Offshore Oil and Gas Report, completed and handed to the NPA in August 2004.
NRA	National Roads Agency mandated to maintain South Africa's road infrastructure.
NT	National Treasury, the operating name for the national Department of Finance
OGTT	The national Oil and Gas Task Team convened by the dti
opex	operational expenditure
pa	per annum
PAU	Pre-Assembled Unit
PetroSA	The Oil and Gas Corporation of South Africa, the South African National Oil Company
PGWC	Provincial Government of the Western Cape
PPP	Public-Private-Partnership
PSC	Production Sharing Contract – usually the critical determination of the share of the production from a well involving the operator(s) and the owner of the petroleum resource (national government of the oil producing country or private owner where natural resources are not state owned)
ROI	Return on investment – relates to the overall profitability of the project after the investment is paid off. This often related to the WACC and DCFs of other similar projects to determine whether to invest or not. This especially true where operators have a portfolio of assets and decide on an investment based on the overall impact of the return on investment on the entire portfolio of assist. This is often referred to as

[1] Suffice to say that at the large transnational operators, such as Shell or BP, this materiality test is played out as a bidding competition between the nationally based market development divisions pitching their best market development strategy with the internal but global petroleum commodity division which in turn puts the various bids forward to the global or regional head office for approval.

In Shell for example, Shell International Gas (SIG) has the responsibility for maximising the materiality of Shell's global gas portfolio, whilst Shell South Africa (SSA) is responsible for leveraging gas market developments in South Africa. Consequently for arguments sake, the Australian equivalent of SSA, Shell Australia (SA) will also pitch to SIG to show how its gas market development plan will produce greater material benefits to Shell's international gas portfolio. SSA and SA will then set about leveraging various gas market development projects which provide the maximum netback to the gas price that resulting in SIG getting the best price for its gas in the market. SIG however also has to decide on how the various field exploration and appraisal campaigns will provide the best security of supply and the lowest cost

	the 'materiality' concept.[1] Because projects compete 'globally' within a company, the entire spectrum of impacts on the ROI are considered. Consequently two projects may have the same return over time; however one is at greater currency risk and therefore gets shelved.
ROV	Remote Operated Vehicle – used to install deep under sea components of field development
SAA	South African Airways, the partially privatised air transport division of the Transnet Group of Companies.
SARS	South Africa Revenue Services, a division of the National Treasury responsible of collection of taxes and excise revues.
SARS	South African Revenue Services, a division of the National Treasury
SBOP	Subsea blow-out preventer – an integral part of well engineering and maintenance in the UOG
SDA	Supplier Development Agency, an implementation component of the SDP
SDI	Spatial Development Initiative
SDP	Supplier Development Programme
SETAs	Sector Education and Training Authorities, mandated with developing nation training curricula
SOE	State Owned Enterprise, such as ESKOM, or PetroSA
Terminalling	Terminalling is generally related to trading in liquid fuels and involves to core activities, namely sourcing and selling product, and physically storing it at a terminal. A third activity can develop as part of the service to source liquid fuels in one forma and selling it in another, namely primary beneficiation such as basic fractionation to yield fuel oil. Terminalling is in essence a form of supply chain or logistics management.
TISA	Trade and Investment South Africa
TPES	Total Primary Energy Supply
Transnet	Transnet is the bundled SOE responsible for the South Africa governments transport assets
ULCC	Ultra Large Crude Carrier more than 300,000 DWT – in excess of 400m in length, 60m in width and a draft of 20m. Very few ports can accommodate these vessels (non in the US and Europe) and they are generally loaded and unloaded via off shore moorings, such as the single buoy mooring off Durban.
UOG	Upstream Oil and Gas
UOGSC	Upstream Oil and Gas Supply Cluster as a national initiative in contrast to the COGSI, which has a regional identity.
VLCC	Very Large Crude Carrier - from 200,000 to 300,000 DWT or approximately 2 million bbl of crude oil – smaller than ULCCs, 300 - 400m in length, 50 - 60m in width and a draft of 14 - 20m
VLOC	Very Large Ore Carrier - from 200,000 to 300,000 DWT
WACC	Weighted average cost of capital – the real cost of borrowing money for an investor

before making its own pitch for project approval.

EXECUTIVE SUMMARY

1.1 Upstream Oil and Gas Services Value chain

COGSI identified four segments of the UOG services value chain as those to be pursued. They are the supply of services, the repairs and maintenance of offshore installations and vessels, and the fabrication of PAUs. Over a period of five years the non-fabrication activities account for a decreasing proportion of the South African share of the market until towards the end of the decade fabrication increases ten fold to account for 80% of the potential market share, or nearly R4 billion.

Market	2005 R'000	2006 R'000	2007 R'000	2008 R'000
Supplies & Services				
%	3	5	8	8
Exploration	162	270	432	432
%	3	5	10	10
Production	160	266	427	427
%				
Repairs & Maintenance	130	162	195	195
%	1	3	5	8
New builds	420	1 288	2 062	3 912
TOTAL	872	1 986	3 116	4 966

Source: COGSI Business Plan

Figure 1:The estimated African West Coast market share for South Africa

Consequently, the long term success of any service supply intitiative into the UOG off the West African coast should endeavour to leverage access to the fabrication market. However the UOG services sector is organised globally with sourcing and marketing being managed by sophisticated EPIC companies that provide turnkey solutions to operators. Operators have however over the past fifteen years managed to leverage most of the risk of failure into these EPIC contracts.

This has meant that the value chain is increasingly controlled by global players who apply sophisticated management techniques to strategically locate production globally and efficiently source components for integration and hook up through global supply chains. However the marketing of these activities essentially generates a track record or 'pedigree' that assures clients of consistently reliable delivery of goods and services (marketing), in time (sourcing), in spec (production) and in budget.

1.2 What is COGSI[2]?

It is the considered opinion of the consultant that in the context of the disaggregated global value chain, two distinct concepts of a hub and a cluster have become blurred. COGSI has been launched, according to the public officials interviewed, as a clustering intitive. However there are constant references, both verbally and in the COGSI Business Plan, to aspects of the strategic plan that imply promotion of a production hub. This is where the problem starts.

The UOG cluster could be successful with COGSI marketing the brand nationally and regionally. From a local perspective, the Western Cape has the locational advantage for a fabrication hub from a South African point of view. From there however, the analysis needs to separate the two and COGSI has to be seen in that context. It is the industries' (steel and engineering) that have to be guided/cajoled into getting the hub off the ground as the hub will have to address productive competitive issues. In terms of the value chain, the hub would be one component, whereas the leveraging collaboration around a cluster has more to do with sourcing and marketing. Consequently COGSI's role would be to leverage alignment between the supply, production an consumption aspects of the value chain.

1.3 Identifying competitiveness

The value chain has three distinct facets, namely production, sourcing and marketing. The first is self explanatory and relates to tangible competitiveness, the second relates to looking back along the supply chains to identify the logistical advantages and disadvantages that one has and finally

[2] During the preparation of the final version of Report Two, it became apparent that COGSI has officially achieved what the consultant had recommended in the First Paper and Draft Second Paper, namely change its name and brand to be more nationally identifiable and more nationally inclusive. The new name is the South Africa Oil and Gas Alliance.(SAOGA) Where possible a 'find and replace' has been conducted to effect this reality at the last moment, however where is has not been effected please be aware that the terms COGSI. NOGSI and UOGSC are synonymous with the new entity SAOGA.

the marketing is forward looking and relates to the reaching out to both the supply (sectoral facilitation and promotion) and demand (outward branding in the market) sides.

1.3.1 Production

In terms of the value chain above, the competitiveness in production would be driven by the total input cost of the good or service into the overall value chain. An UOG fabrication hub is essentially a steel and engineering hub where the fundamental costs relate to the cost of steel and cost of engineering services. Consequently the competitiveness of the production will relate to the steel costs and the technical efficiency with which the production hub is organised. Due to the huge capital/fixed costs involved in installing engineering capacity, managing the marginal cost of production is critical in achieving optimal utilisation of equipment/labour, which in turn impacts on the competitiveness[3]. But this is essentially a production matter and not in the scope of COGSI's mandate.

1.3.2 Sourcing

In terms of the value chain above, the competitiveness in sourcing relates to efficient supply chain management or the logistical coordination of the supply of inputs to the value chain. Competitiveness here generally relates to management techniques and efficient competitive transport links. Like production, the logistics hubs can be leveraged with competitive advantages, such as the Rotterdam and Seattle transhipment hubs. Transport economics is fundamentally driven by the ratio of fixed to variable costs and road transport has the highest variable to fixed cost ratio, consequently a global supply chain with a significant road transport component may be uncompetitive compared to one that does not.

Singapore prides itself on its 'competitive connectivity' with the markets, located at a trade route nexus with numerous port based fabrication sites. However, sourcing does not have to be located with production, and many supply chains are managed 'remotely', relying on dedicated managers and sophisticated planning and monitoring software. Once again, this is beyond the scope of COGSI

1.3.3 Marketing

Finally the intuitional organisation of the value chain is about those aspects of a cluster that are not at all geographically bound and relate to efficient alignment of production, sourcing and marketing. This requires a strong brand, strategic marketing thereof and consistent reliability of the brand which results in endorsement by powerful and/or influential clients. Coordinating the brand, marketing the reliability and publicising the endorsements all provide the ideal vehicle for suppliers and sourcing agents to market their goods and services. This, it appears, is where COGSI's scope lies.

1.3.4 Organising the value chain

COGSI as the only identifiable institution constituted formally to promote an UOG cluster also has both public and private sector networks that can be used to facilitate the alignment of the production, sourcing and marketing activities whilst not actually getting involved in the organisation of the production hub and sourcing supply chains.

In the final analysis, the organisation of the value chain need not involve commercial activities in any a particular component; however the organisers must be efficiently networked throughout the value chain in order to be able to manage the alignment. This involves information and knowledge management and sufficient access to decision and policy makers. There is another aspect that requires proactive networking, namely the public sector. Where policy decisions impact on the competitiveness of the cluster, the cluster promoters must be able to prove they have the leverage, and market that advantage.

The brief overview above provides the background for answering some fundamental questions related to the UOG services sector and the options facing the COGSI initiative. The questions are derived from the analysis above and answered from the assessment of the status quo delivered in

[3] FRIDGE study into employment creation and retention in the metals and engineering industry.

the first paper.

1.4 Is there an opportunity in the UOG sector?

The answer to the question is a qualified yes. As indicate above in Figure 1 above, the UOG opportunities are substantial; however long term success is contingent the achievement of an 8% new build fabrication market share over the next five years. The information is generic to both the NPA Oil and Gas Report and the COGSI Business Plan and from the documents appears to be a fairly accurate 'guestimate' of the value of the opportunity.

There is an assumed strategic advantage in relation to South Africa's location relative to the Far Eastern and American suppliers and the pockets of engineering competence that could potentially produce to the scale and quality of goods and services required by the UOG market. The reality is that the Western Cape is at a locational disadvantage relative to the Nigerian, and to a lesser extent Angolan, coastal sites and the presence of South African based engineering competence is no assurance of competitiveness. To date there is no concrete evidence that a comparative analysis of South Africa's steel and engineering sectors has been conducted by the DEDT prior to the launch of COGSI. Anecdotal evidence, acquired subsequent to the submission of the draft second report, points to some work done in this regard in the late nineties by the DTI. The outcome of the steel cluster analysis showed the South African steel sector had no competitive advantage at that stage. This would presumably undermine the competitiveness of the engineering sector with steel as a primary input cost.

However, when one assesses the implications of the COGSI intitiative from an institutional perspective, the competitive advantage is perhaps more obvious. As outlined above, the organisational aspect of the value chain alignment is extremely important as it has the function of ensuring that all components are optimally integrated to deliver goods and services forwards to the end-user and extract rents for the producers back through the value chain. In this regard, COGSI is the only formalised and functional entity currently focused on promoting the various South African components of the UOG value chain. This organisational role has merit, but one has to look at the analysis carefully to ascertain just how mush of advantage this is for COGSI and the Western Cape.

1.5 Is the Western Cape well positioned to deliver on the potential opportunity in 1.4?

From a production and sourcing perspective South Africa and more specifically the Western Cape does not immediately offer any advantages. Import parity pricing (IPP), uncompetitive domestic logistical networks and severe labour shortages all undermine the competitiveness of both the steel and engineering sectors. In other words, the Western Cape has no immediate advantage from a production or sourcing perspective with regard to the West African UOG services sector.

However, for better or for worse, COGSI exists. From an institutional perspective, this is the core of the Western Cape's competitiveness. Through COGSI, the Western Cape has the tactical first mover advantage of leveraging a comparative advantage with regard to the organisation of the UOG service supply value chain in relation to the West Africa market. It could be argued therefore that the Western Cape is in a position to promote a West African UOG services supply cluster. How well it is positioned, is debatable.

COGSI is currently a parochial Western Cape based cluster initiative with the production located elsewhere in South Africa, uncertain sourcing capacity whilst the market it is trying to penetrate is located in West Africa. The market is not South African and it will not come to the Western Cape. This is not necessarily a disadvantage, however if COGSI is institutionally weak, then its organisational role is undermined. In order to align this regional 'cluster', COGSI need to be extremely well networked within the private and public sector.

Currently the challenges facing the COGSI 'brand' are the urgent need to promote a regional cluster, facilitate the national organisation of production, and facilitate the unlocking of the sourcing potential and convince the market that it can deliver solutions to these challenges. Branding is

important to 'sell' the cluster, but the end-users (in the West African market) need to be exposed to the brand and what it offers. In short the brand has to assure the market it can deliver value to all market players. At present, COGSI advocates caution about rushing into the market with an uncertain offer/brand.

COGSI's challenge also involves convincing the South African production and sourcing components that the cluster can most efficiently facilitate access to the target market and finally but importantly that it can improve the efficiency of transferring the profits realised in the West African market back to South African suppliers of goods and services. However COGSI has to convince West African market players that it can deliver value in terms of the quality and reliability demanded by the operators and delivered by South African fabricators.

The potential cluster could be represented as a three legged table:

1. Leg 1 is optimally located fabrication hub supported by dedicated and purpose built infrastructure
2. Leg 2 is the competitiveness of the hub, in terms of the production (steel and engineering sectors) and the sourcing (transporting fabricated components from the inland to the coast and then on to the west African market)
3. Leg 3 is the regional alignment of the value chain with the regional sectoral and development trends in the West African UOG market in order to realise any competitive advantage through penetration into the target market – the 'NEPAD factor'.

Currently the table (a collaborative and competitive fabrication hub) has ***half*** of one leg (infrastructure), the other leg is ***assumed*** to be there (competitiveness) and, the third leg is ***missing*** which means the table will likely fall over without it. COGSI's primary role in the short to medium term should be building the missing leg and installing it. Should the assumption of competitiveness be proved incorrect as well, then we no longer have table!

1.6 Can COGSI organise the value chain into a marketable brand from a supply perspective?

Firstly as outline above, there is a distinction between organising production and organising the value chain. Furthermore, the marketing of the cluster distinctly different from either of the other organising functions. What does this mean for COGSI and the Western Cape?

COGSI represents the Western Cape's astutely leveraged comparative advantage from an institutional and geopolitical perspective. Secondly, COGSI has little scope to organise production or sourcing, however is well positioned to market the productive and sourcing capacity available. COGSI is therefore nothing more than a tactically launched institution with a potential brand that needs to market itself. It is not a production or sourcing hub intitiative, but first mover tactic designed firstly to promote the Western Cape in the UOG sector and secondly to leverage clustering by promoting South Africa's competence and capacity in supplying goods and services into the west African UOG market.

From a generic perspective, the facilitation of clustering and the organisation of the production and sourcing are not mutually exclusive from the branding of the cluster and its subsequent marketing. As the brand develops and market acceptance of the brand grows, strategic advantage of the institutional role of COGSI will be realised. COGSI is not and never will be a market player. However if the brand is successful, market players will benefit from COGSI's institutional capacity to organise the value chain. COGSI will never deliver goods and service to the market; however it will deliver value from an institutional perspective through its organisation of the value chain and marketing efforts.

However if COGSI is to draw in other stakeholders, it has to have a commanding and inclusive identity. The advantage of a national identity is that it sends a powerful message to the market that the intitiative has 'national' backing and also promotes an inclusive environment for various stakeholders to participate in the marketing process and therefore have the opportunity to achieve early or first mover entry into the market.

Whilst COGSI may not coordinate the production activities, it can play an important facilitation role in coordinating the marketing efforts of South African companies. South Africa has a well developed steel and engineering industrial base, however it is inland based, not organised to promoting itself into the UOG sector and even less so the West African market. This is even more important in SA where the production is dislocated from the market and efficient logistical coordination is required to provide competitive connectivity of the inland fabrication to the offshore market.

1.7 What needs to be done to sell the Western Cape's location as a West African production hub?

Quite simply the answer to this question is common sense - listen and learn. The more innovative aspect of this is how to generate and leverage opportunities to listen and learn in a collaborative environment which promotes information flow and knowledge sharing. The various stakeholders need to have a forum(s) where the pressing issues of the market can be deliberated transparently by all stakeholders.

The generic advantage that all successful fabrication hubs appear to have is their connectivity to the market and the efficient use of that sourcing advantage. The logistical coordination is critical in this regard, and essential components of the coordination is access to, and efficient flow of, data and information and sophisticated knowledge and information management systems that ensure the market is at the cutting edge of developments globally. The fundamental issue is that the benchmark in this sector is global and without a sophisticated comparative analysis of the South African (and regional for that matter) competitiveness, it is futile to allocate resources for market growth.

South African stakeholders need to take a global view on their competitiveness; however the regional stakeholders need to take a regional view on how best to allocate resources to exploit any regional advantages. Decisions as to whether infrastructure is located in South Africa or Nigeria should be based on the comparative analysis and in the best way to exploit regional competitiveness. South African stakeholders also need to acknowledge that they are proposing access to 'someone else's' national market in order to extract rents for themselves. If COGSI is to convince the 'owners' of that market that this in their interest it will require an inclusive and strategic negotiation process that undermines the perception that South Africa is the USA of Africa and the associated suspicion and resentment. In the context of Africa's history of fierce nationalism, this may be more of a challenge than initially presumed – NEPAD or not!

It is not suggested that COGSI have any broader marketing and facilitation mandate than it currently has. Private sector investors should identify and leverage commercial opportunities to enter the West African UOG market. Consequently the South African government authorities need to be firmly on board as investors will want comfort that their investments are secure. Government, both local and national, must indicate it has the political will to support the leveraging of those opportunities when they are pursued and any appropriate advantages to transform the opportunity into a successful reality.

1.8 How can this be achieved in terms of the regional value chain?

COGSI is a means to an end, not the end in itself. The three critical aspects of this trite statement are revealed in the following statement:

COGSI is the vehicle for *marketing South African expertise* in supplying goods and services *into the West African UOG market*, and the purpose is *to achieve market penetration* and the goal of all of

this is to *improve the turnover* and presumably the profitability of the producers involved. Consequently COGSI needs to broaden its marketing campaign to get closer to its market and feed the demands of that market back into the production and sourcing components of the value chain. The implication of this is that COGSI needs to rebrand with a national identity, bring in West African stakeholders and operators into regional 'clustering' process and promote the brand into the West African market.

A nationally branded cluster ('NOGSI') should aim to 'include' the national steel and engineering production components (and any competing clustering initiatives) and convince them that it is best positioned to leverage market access. 'NOGSI' would also need to facilitate the integration of supply chains that can deliver product to the Western Cape fabrication/sourcing hub (due to its locational advantage *vis e vie* the west African market) for reliable delivery into the West African UOG market. Secondly COGSI appears to be almost entirely excluded from the ongoing trade deliberations that are essential to leveraging access to the West African markets. The 'NEPAD factor' features widely in the marketing strategy of COGSI, however COGSI does not feature in the national government's regional and bilateral trade negotiations. It is clear from various interviews that this role of national government as regional political champion was incorrectly assumed.

These two aspects of the COGSI challenges have serious implications as they expose the critical success factors as the institutional strength and vision of COGSI to organise the value chain both nationally and regionally. COGSI does not have convincing data to determine the competitiveness of South African components of the value chain. Currently due to its apparent poor alignment with the national government and the virtually non-existent regional trade networking it cannot even be sure it can leverage access to the West African market. Both of these factors make creating a brand more difficult because at some time the brand has to deliver concrete value to both supply side and demand side stakeholders.

Recommendation 1: A comparative advantage or benchmarking investigation. The DEDT needs to urgently conduct a comparative competitiveness or benchmarking exercise to ascertain the real advantages South Africa steel and engineering sectors from both a production and sourcing perspective. The purpose of this is to provide decision makers and investors with accurate data to make less risky investments and to more efficiently and productively deploy human resources to pursue market opportunities. In order to know what skills and in what quantities and where they need to be located should not be driven by the parochial vested interests of stakeholders, but by the strategic needs of the market.

Recommendation 2: A high level national branding workshop. In order to realise the value of such comparative/benchmarking analysis will be realised when COGSI and the national government take the information and turn it into evidence to promote collaborative regional behaviour that will leverage mutually beneficial resource allocation throughout the region. In order to achieve this, COGSI or a facilitator needs to align the local, provincial and national authorities towards an end state where COGSI or its nationally branded successor has a standing invitation on trade delegations to West Africa. In reality, many bilateral trade negotiations are economic on transparency, but strong on success in leveraging access to markets. COGSI needs to get closer to this trade negotiation process in order to market these opportunities to its stakeholders.

Recommendation 3: A regional conference, including stallholders from the West African market. Whilst this political leverage role of government stakeholders will be critical to the success of COGSI, the market players can also be aligned through a COGSI initiated regional 'competitiveness/clustering conference' which provide both a forum and vital information for COGSI to establish the market linkages. Once the cluster is 'regionalised, then the purpose of such conferences would be to keep the region ahead of the developments to sustain its competitiveness.

Recommendation 4: Capacitate COGSI to deliver on these recommendations. The next six

months will be critical for COGSI. The above recommendations need to be delivered within the next 6 to 8 months. Three analysts should be contracted for 6 months to deliver on three areas, namely SA's competitiveness in production and sourcing, the institutional arrangements required to leverage the 'NEPAD factor', and to leverage infrastructure developments in the Western Cape.

The three analysts should be paid for by the sector/stakeholder that stands to benefit most form the area of work, consequently the PGWC should pay for the leveraging of infrastructure developments, the DTI should pay for the NEPAD institutional arrangements exercise and the industry should pay for the competitiveness analysis.

2 Introduction

2.1 Contextualising the MEDS Oil and Gas positioning study – the past

The first report ended with preliminary conclusions regarding the state of the COGSI initiative and some of the challenges facing both COGSI and the PGWC. The PGWC correctly identified the need to act swiftly in order to achieve some degree of first mover advantage in the UOG services industry. The presentation to the oversight committee included a slide titled "COGSI - great potential, substantial threats" which included a comment that the COGSI's strategy is robust, however the sectoral strategy appears less so.

Tactics seemed to have upstaged strategy and the consequent internal debates reflect to some extent the confusion as to 'where COGSI came from', 'what COGSI's role' is and 'what assistance COGSI requires' to get where it is supposed to be heading. The first aspect will be answered here and the remaining questions answered later. COGSI 'came' from a high level realisation that the West African UOG developments where growing rapidly and that South Africa was presumed to have some competitive advantages in this regard. It was presumed that if the competence of South African engineering sector could be focused to delivering prefabricated components for the UOG sector, then significant market penetration could be achieved with equally lucrative results.

Further north, Nigeria, and to a more limited extent Angola[4], have successfully leveraged commitments from the operators and EPIC managers to invest substantially in locating fabrication projects in yards located on the West African coast. Government sanctions have leveraged investments in a dedicated quay and back of port fabrication and lay down areas and promises of the creation of an EPZ in Nigeria. In fact the irony is that the construction contract for the port upgrade has been awarded to a South African company! The need for speed was thus emphasised by the developments in ports which already have a locational advantage.

Consequently, this task has essentially become a 'back to front' exercise in developing a retroactive strategy for an initiative that has already been launched. This raises some interesting contradictions as some of the pre-emptive options are now fait accompli and some of the realised risks are now exacerbated by the disjuncture caused by an intervention that was initiated with an ambiguous strategy which in many instances has been poorly communicated.

In this context, it is the consultant's experience that a few well strategised and high impact policy interventions tend to yield better results than a myriad of poorly strategised and unclear interventions. To this end, and in accordance with the generic terms of reference, this will be the thrust of this second report – focused recommendations that reflect the policy needs of the PGWC and COGSI, not a wish list of possible ideas or opportunities.

2.2 Contextualising the MEDS Oil and Gas positioning study – the present

In terms of the COGSI initiative and the way forward, one has to ascertain whether there is an opportunity in the west African upstream oil and gas sector or not. This is clearly articulated in the COGSI business plan, but far less enthusiastically so in the NPA Oil and Gas report although both documents provide convincing data[5] to suggest significant market opportunities in terms of market share and rents. An assessment of the global UOG sector and the supply of goods and services indicated that the collaborative behaviour, efficient information and knowledge management, various types of project management skills, competitive steel and engineering sectors and dedicated port fabrication infrastructure were all necessary for success. It is useful at this stage, to briefly summarise the conclusions of Report One:

[4] The full extent of the West African port and fabrication investments is captured in detail in the appendices for the NPA Oil and Gas Report. Nigeria and Angola are mentioned as they are the countries with the largest proven reserves (in West Africa) and hence have the greatest leverage. Nigeria and Angola also regularly emerge in literature and interviews regarding the west African locations where fabrication is 'happening'

[5] The data is essentially based on numbers available in the public domain, such as www.rigzone.com , however the aggregation in most cases is simply an extrapolation of cost and overheads against broadly benchmarked market related prices derived from anticipated fabrication demand for various types of facilities and PAUs. This is not to say the information is not broadly reliable, but rather that is untested by the rigour of a feasibility study.

- ☑ Critical Investments in dedicated and purpose built port infrastructure are critical and urgent,
- ☑ The rumoured Ferrostaal investment in a jacket fabrication plant and associated steel production facility could provide the 'big bang' critical mass for an UOGSC cluster in the Western Cape,
- ☑ Critical leverage for access to contracts/projects by promoting appropriate NEPAD and bilateral trade negotiations policy options
- ☑ 'New' builds or PAU fabrication is central to COGSI medium to long term success
- ☑ COGSI is currently not able to facilitate competitive turnkey solutions to west African UOG projects
- ☑ Critical threats often beyond COGSI's control – competitiveness = productivity and sourcing efficiency
- ☑ SA needs a national initiative – COGSI to NOGSI?
- ☑ IDZs – this may be a central government clustering tool that could be adapted to the COGSI initiative
- ☑ Stakeholders need to want to work together – Commercial players seem unwilling to share vital data necessary to fully assess the competitiveness of the steel and engineering sector from an UOG perspective.

The fabrication of UOG structures is globally distributed across a number of centres of excellence which are essentially steel beneficiation and engineering hubs. The cost factors impacting on the competitiveness of these hubs are related to those impacting in the input sectors, namely the steel price, engineering productivity and reliability which are in turn a function of technology, labour and utility costs. From a sourcing perspective, the connectivity of these hubs to the global value chain is driven by advantages derived from location, regulatory synergy, and supply chain management skills.

It is suffice to say that the shortcoming of the initial analysis (draft Paper Two) was that it focused on the first aspect – production. This was largely due to the emphasis in the COGSI business plan which identified fabrication (production) as the major source of turnover for the cluster and noted the possible financial constraints of Transnet to authorise port infrastructure investments as a severe threat to the initiative. Consequently the productive competitiveness of the steel and engineering sectors was paramount. It is now clearer that despite this analysis being accurate; is it relevant. Simply put – yes it is relevant within the context of the *overall value chain analysis*. COGSI's competitive advantage is however institutional and relates to the organisation, and subsequent marketing, of the of the value chain. ie a typical and potentially successful SERVICES cluster.

Due to the sophisticated and technical nature of the offshore facilities, and the global coordination required to bring PAUs together for integration and hook-up, the value chain requires sophisticated management and organisation. This is to ensure that suppliers of goods and services to work together to consistently deliver, reliable goods and services, in time, in spec and in budget. It is this competence and capacity to organise the value chain to ensure connectivity of the production to the market that is the hallmark of successful clusters.

The alignment of the value chain is not a unique concept, but a critical aspect of globalisation. With the advent of globalisation, the value chain became dislocated to various points of production were dispersed to take advantage of productive competitiveness nationally and internationally. Consequently it is critical that the value chain be logistically coordinated to ensure that various components can be delivered for assembly and final distribution to the target market(s).

Where that competence and capacity is institutionally formalised, the marketing of the cluster and its branding can be leveraged as a competitive advantage. In the final analysis, a tactical move to leverage control over the organisation of the value chain puts the first mover in a position of considerable influence in leveraging preferential access to the rents at a later stage. Consequently, the opportunity to penetrate the West African UOG fabrication market requires the marketing of a powerful South Africa services brand that will meet the exacting demands of the field operators. COGSI is well positioned to deliver on this advantage, however it faces some severe threats to its position and, in the light of developments outline in 2.1, time is not in its side.

3 South African competitiveness in relation to the UOG sector

3.1 The UOG value chain

The UOG fabrication sector is in fact little more than a collaborative specialisation of the steel and engineering sectors. The value chain is consequently closely related to the downstream steel beneficiation and steel machinery engineering value chains and the organisation of an UOG cluster requires similar data, knowledge and institutional arrangements.

The value chain has three distinct facets, namely production, sourcing and marketing. The first is self explanatory and relates to tangible competitiveness, the second relates to looking back along the supply chains to identify the logistical advantages and disadvantages that one has and finally the marketing is forward looking and relates to the reaching out to both the supply (sectoral facilitation and promotion) and demand (outward branding in the market) sides.

Consequently, competitiveness can relate to the production, sourcing or the marketing of a goods and services. So long as the production and sourcing are competitive, the branding/marketing of the COGSI service offer can be done 'remotely'. At the end of the day, the even with competitive production and sourcing strategies, the overall efficient organisation of the value chain is necessary. The organisation of the value chain involves the branding and marketing activities to promote the UOG services sector. This 'oversight' role provides the value chain 'organiser' with significant influence over the sourcing of inputs, the supply of goods and services and the distribution of the rents acquired from the sales.

3.2 Production

Competitiveness in the UOG sector relates to the cost drivers impacting on the steel beneficiation and heavy fabrication and machinery engineering sectors. The cost drivers are as follows:

a) The price of steel
b) The cost of labour
c) The cost of utilities, especially electricity

The steel and labour cost drivers are the most important and have not shown any sign of improving. Import Parity Pricing (IPP) has all but wiped out any competitiveness in the local heavy and machinery engineering sectors from a global perspective. Labour costs have risen steadily and the trend to outsourcing is causing a relative increase in the cost of labour and decrease in the job security and consequent loss of 'labour loyalty' to the sector.

The there are however comparative issues that fundamentally affect the competitiveness of the engineering sectors, namely the exchange rate and the fluctuation in demand. The impact of these comparative factors is the decreasing permanent employment in the sectors and the decreasing competitiveness in the global market. The South African engineering sector is renowned for its innovation, largely developed during the sanctions era. However there is insufficient government support for commercialising innovation, stifling improvements in technology which is further undermining South Africa competitiveness and resulting in a steady lag from an applied technology perspective.

The heavy fabrication sector has seen growth over the past few years; however the machinery sector has suffered a contraction and negative employment in permanent staff. Both sectors have outsourced the supply of labour to labour brokers for flexibility which has resulted in a significant drop in investments in skills development and upskilling. In a recent study, many respondents felt that labour brokers reduced the risk retrenchments costs however there was a loss of control over the quality and/or reliability of skills which impacted on the operational quality control. This has undermined the reliability of the engineering sector.

Labour sourced through brokers tends to be more expensive, which in turn undermines the competitiveness of the sector further. This is specially the case in the machinery sector which requires higher skilled labour, but is subject to severe fluctuations in demand for its services. The Catch 22 is that fluctuations undermine job security resulting in companies wanting greater employment flexibility and workers being less likely to give up permanent jobs in allied industries, thus

resulting in an increase in the cost of skilled labour in the sector. The fluctuating demand for labour in the South Africa heavy and machinery engineering sectors mirrors the situation in the global UOG sector.

The UOG sector is currently facing an unprecedented demand for crude oil, and with oil prices rallying around USD 50/barrel, exploration and production activities look set to be sustained for the near future. There are no doubts there is a shortage of appropriately skilled labour, however how to improve the situation is far less certain. It is already evident that when the series of refinery shutdowns occur in 2006[6] that there will be a shortage of coded welders[7].The critical issue facing development initiatives is not how to reduce unemployment so much as it needs to increase employability. The skill shortages identified by the NPA and COGSI are as indicated in the table on the left

- coded welders
- burners
- diesel fitters
- electrical technicians
- project managers
- quality inspectors
- marine surveyors
- riggers
- operators
- foreman
- estimators
- boilermakers
- marine fitters
- electricians
- marine engineers
- naval architects
- ndt specialists
- mobile crane drivers
- labourers
- pipe fitters
- chargehands
- hydraulics

No figures are available as to the numbers and levels of skill required, and most stakeholders consulted would not be drawn on the question, and believed that developments in the market would determine the supply of labour and appropriate skills. Clearly this is not acceptable as this *lasse faire* approach tends to rely on imported skills as the swing supply into the South African market in order to avoid the external cost of investing in skills and human resource development. However, forcing the training of all of the UOG sector's labour/skills needs nationally may no be the most cost-effective method of creating employment as the market may not be able to sustain the new entrants beyond the construction phase and they will be faced with premature redundancy.

It may be more advantageous to train a portion of the labour requirements, import the remainder for the short duration of the project and use the remaining resources to leverage imports of related technology which will generate new UOG or related engineering industries and alternative employment those excluded in the initial project. These types of scenarios can only be derived from accurate comparative or benchmarking data.

The reality about many of the skills required in this sector is that they are practical skills that require on the job training and the ongoing use of the skills to maximise the learning. The outgoing president of SEIFSA (the Steel and Engineering Industries Federation of South Africa) indicated that apprenticeships in 2003 reached a new low, further indicating a lack of market response to the need to invest in training. This is largely blamed on the worsening economic situation bought on by the appreciating Rand and the increasing labour costs.

The answer would be to determine the optimal number of trained people required to provide a mobile labour pool that can move from project to project and remain gainfully employed in a sustainable fashion, which is exactly what the global norm for the UOG sector is. Sustained accreditation would normally be essential to rapid employability which may not be possible/affordable during periods of unemployment. Consequently, a pool of mobile, skilled and accredited workers would optimise the price and employability of labour. Normal attrition would be countered by the ongoing training to keep the labour pool at optimal market absorption levels.

However, to reach that level of predictability requires detailed data that is currently not available or withheld by the labour brokers as it is in their interest to keep control over the labour market and

[6] All of the South African oil refineries (including the synfuel facilities) need to sequentially shut down to reconfigure the production process to meet the 2006 fuel specifications captured in the Petroleum Products Amendment Act of 2004 and the associated clean fuels strategy. Other routine maintenance will also be carried out during these shutdowns. Past experience indicates that any delays in bringing a refinery on-stream will have a negative impact on fuel supplies as the next refinery shuts down. Seamless shutdown and restarting of the various refineries will be essential if major fuel supply disruptions are to be avoided.

[7] Sasol has already obtained Labour Department approval for importing over 800 welders in this regard see story @ http://allafrica.com/stories/200504190172.html

where they are global players, be able to motivate sourcing labour internationally. So long as engineering firms rely increasingly on labour brokers, they will not feel the need to address the skills shortages proactively and looses a critical advantage from a reliability perspective, namely the ethical worker committed to producing quality goods. Though a collaborative effort such as a conference or workshop, one could, perhaps, most efficiently leverage that information directly from the sector thus bypassing the labour brokers.

The same FRIDGE study recommended that the drive to sell South African engineered exports would be the most effective way of creating jobs in the sector as the local demand was insufficient and unlikely to improve. In this regard, the COGSI initiative is right on the mark. However the same report also identified the appreciating Rand as a severe competitive disadvantage which threatened the high value added good (the machinery engineering) sector as the relative cost of imports fell.

The machinery engineering sector also felt that the asymmetry of information relating to market intelligence undermined the ability of the engineering companies to respond to market trends. This specifically referred to the dissemination of information from the DTI in relation to import penetration and how this was impacting on the sector. This undermines the sector's ability to manage its expansion and contraction proactively in relation to market trends. Consequently with the general perception that the industry is stagnant with excess capacity, most respondents believe they would be able to with any anticipated demand with current capacity.

In the final analysis, a contracting engineering sector with declining competitiveness would seem to have little for COGSI to offer the market, substantially weakening the COGSI brand and casting doubt over the viability of a fabrication hub in the immediate term.

3.3 Sourcing

Much of the production/fabrication in South Africa's heavy and machinery engineering sector is carried out in the Gauteng region. Production is thus potentially dislocated from the market in term of access to the West African UOG market. Efficient and coordinated sourcing could limit this disadvantage if it is also competitive. Unfortunately, the logistical sector in South Africa is inconsistence in its service offer. From an economic perspective, the transport sector is largely driven by the ratio of fixed to variable costs.

Transport is primary means to create place utility and the UOG places a high value to this as captured in the consultant's trite slogan on the front cover. Sourcing is the critical management of the supply chains between production and consumption. in other words, the purpose of efficient sourcing is to have the goods or services in the right place at the right time, on time. Consequently for land transport, excluding pipelines, rail should be the cheapest and road transport the more expensive.

However what does all this jargon means in the South African context? In South Africa, relatively speaking, road transport is cheaper when one takes account of the 'reliability' premium paid to offset inefficient and relatively expensive rail transport. The South African rail system is also undermined by bad 'safety' which results in damage to goods with a resulting opportunity cost to both the producer and consumer of the goods. For long distances and heavy loads, such as the transport of manufactured engineering products to the coast, rail should be preferable; however the preferred method of transport in terms of reliability and flexibility, is the road transport sector which has dominated since the late 1970s[8].

From a domestic perspective, this may not be such a large disadvantage as consumers pay the price of inefficiency with little recourse, however from a global perspective; it makes an inland engineering hub fundamentally less competitive as PAUs would need to be transported by road to a Western Cape based fabrication/integration hub. Despite the primary disadvantage from a cost perspective, South Africa has significant supply chain management experience that does improve the competitiveness of the road transport system relative to global benchmarks.

In the final analysis, COGSI would appear to be hamstrung in terms of both sourcing competitive

[8] Pienaar, WJ. 2003, Rail or Road? An overview, Civil Engineering, Sept/Oct 2003

services inland and delivering the final product to the coast competitively. Unfortunately no quantitative data was available to make a comparative analysis that might elucidate an optimal trade-off of strengths and weaknesses that may result in a net competitiveness for the engineering sectors.

At this stage it would be remiss of the consultant not to mention the potential R1-2 billion investment being considered by a large steel manufacturer in the Western Cape. This would overcome the logistical problem related to the optimal location of the fabrication hub, but if the rumours are true and a steel plate production plant is also envisaged, this could undermine the IPP environment thus bringing down the cost of steel into the fabrication hub, further improving the Western Cape's competitiveness[9]. In the South African context, this would provide the Western Cape with an almost absolute advantage for the location of the fabrication hub in the Western Cape and provide substantial leverage for the central production an sourcing components of the value chain to be organised locally.

3.4 Marketing

Marketing relates to the institutional organisation of the value chain. It involves branding of a cluster in order to develop an identity that is known in the market and associated with the goods and services produced. The branding is the packaging of the track record or 'pedigree' of the contractors into a collective sectoral offer. The UOG is an exacting sector that is unforgiving of poor quality goods or unreliable delivery. Consequently the offer must be backed up with concrete evidence of competence and capacity to deliver.

4 Organising the value chain

4.1 South Africa

In the table in Section 3, the market the value chain analysis identified areas where the Western Cape and COGSI might have a competitive advantage. To a large extent this related to the institutional aspect of organising the value chain. In order for COGSI to realise its potential from this advantage, it needs to be well positioned to leverage access to networks in both the public and private sectors.

The important aspect of this role is that it does not need to be geographically located near the production or the sourcing components of the value chain. Yet seizing the intitiative to organise the value chain can provide the COGSI with significant influence later in the distribution of the rents that pass back along the value chain. This could improve the efficiency of realising a return from any market penetration for South African companies in the West African market. It is important here to distinguish the cluster form a fabrication hub located in the Western Cape. There will likely be a number of fabrication hubs along the West African coast, in fact some have successfully launched whilst other are being developed currently.

COGSI's institutional role in the value chain alignment would provide it with additional organisational leverage to facilitate certain aspect of the regional market. For example South African might companies fabricate a series of PAUs which are then shipped to Nigeria for integration and hook up. The COGSI brand could market such project management skills as a trans-regional competence for the entire value chain's benefit.

For COGSI to be able to sell the South Africa services brand however it needs to be able to show there is competitive production and sourcing behind the brand. Consequently COGSI needs to be exposed throughout the value chain whilst not necessarily being commercially in the value chain at all. In order to realise any potential from this alignment, COGSI must maximise its connectivity and leverage with private and public sector decision and policy makers. At this stage, the public sector

[9] Clearly this would create an immediate demand for labour. PGWC would like to prepare for such a demand spike by investing proactively in training and upskilling for such a fabrication hub. The obvious action here would not to ask a consultant to make a guestimate as to how much labour is required and what skills would be needed, but rather to demand that those party to the scoping exercise and the current feasibility study provide the accurate numbers. It is unlikely that the potential investor of this magnitude will not have made its own predications about its infrastructure and labour requirements. It is imperative to overcome the asymmetry of information in this instance to demand transparency in accessing the data rather than running a parallel study to reach the same conclusion. Should this investment not take place, it is the considered opinion of the consultant that the labour demand would be derived from the Gauteng fabrication hub in the short to medium term in which case it would not be the PGWC's immediate responsibility to leverage human resource development.

component of this alignment, especially at a national and regional level is very weak.

Consequently, COGSI does not appear to be firmly on the national agenda, and even more worrying from a trade perspective, COGSI has no profile in the ongoing regional and bilateral trade negotiations that leverage South Africa's role in the African continent, especially from a NEPAD perspective. Yet the 'NEPAD factor' features strongly in the COGSI business plan and was the one identifiable strategic aspects of the decision lo launch COGSI in the first place. Yet the 'NEPAD factor' seems to be virtually ignored at this stage.

4.2 Regional – West Africa

The market to be accessed is the West African UOG market and the value chain will have to be organised as such. Organising production and sourcing in South Africa will be of little use if the supply of goods and services cannot be sold into the target market. Consequently the lack of evidence of any proactive marketing of the COGSI brand into West Africa is worrying. The market is 'nationally' located with Nigeria and Angola being the largest national players. The governments of both countries are leveraging investments though local content regulation. The market will not come to the Western Cape, hence emphasising the need for urgent outreach marketing to the region. This has been delayed up to now by the recently resolved debate about the national identity of the COGSI brand.

South Africa is proposing leveraging access into these national markets where fiercely nationalistic state owned enterprises and leveraged private sector companies are demanding increased access to the rent from the upsurge in the UOG exploration and production, with specific attention to the field development EPIC subcontracts. South African companies are intending to leverage market share away form theses players. It is the consultant's personal experience that South African companies are viewed with suspicion and resentment in sub-Saharan Africa and South Africa is anecdotally referred to as the USA of Africa.

COGSI has to overcome this perception problem and convince the 'owners' of these markets that access by South African countries is in the interest of the region. The region benefits from optimal allocation of resources and regional industrialisation which will offset the so-called resource curse of underdevelopment in the context the oil commodity boom in affected countries. The implication is that COGSI's next step is the regionalisation of the brand. It will not be good enough to simply sell the brand into the west African market, as the national stakeholders need to feel they own the brand as well in order to be convinced that the south African companies behind the brand justified in levering market share away from the local players.

COGSI needs to capitalise on the 'NEPAD factor' by showing that the leveraging of market share can be optimised to compete with non-African contracts such as US and European subcontractors.

4.3 The role of the DEDT

As the national identity of the COGSI brand develops, there will be increasing need for the DEDT to strategise and promote the leveraging of investments into the fabrication/sourcing hub located in the Western Cape. Whilst COGSI should concentrates in the branding and marketing of the South African components of the value chain, the DEDT is better equipped to package an investment offer, as it has direct leverage over such incentives as local rates and taxes, national government levers such as tax incentives and the access to national departments to resolve issues of suboptimal synergy such as poor regulatory harmony. The NPA report exposes the current incompatibility of SARS's customs and excise requirements for import and export which limit contactors to normal busies hours. The analogy would be that whilst COGSI forges ahead, DEDT would ensure the branded production and sourcing services actually do get organised on the ground. DEDT would be informed by COGSI's market intelligence in term of practical interventions to leverage alignment whilst COGSI would able to be sure its offer was realistic and did not overstretch the south African production and sourcing capacity.

5 Conclusion

5.1 COGSI needs to strike out – "to boldly go where no-one has gone before!"

5.1.1 COGSI has an institutional competitive advantage

COGSI can use this to leverage first mover advantage to facilitate the organisation of the South African based production and sourcing in order to grow the 'COGSI' brand. Then subsequently organise the regional value chain through a powerful and well coordinated marketing campaign.

5.1.2 COGSI therefore needs to pursue a service driven strategy

As outline in 5.1.1, this involves coordinating the alignment of the value chain behind a powerful and respected brand, which then needs to be hard sold into the West African market.

5.1.3 There three key drivers to COGSI's success – INCLUSIVE, INCLUSIVE and INCLUSIVE!

COGSI needs to build a national cluster which is sensitive to, but not determine by local parochial interests. This national cluster needs to be 'regionalised' in order to provide an inclusive environment in to which the 'COGSI' brand is sold. The regional organisation of the value chain should promote integration that will leverage collaborative behaviour throughout the region paving the way for the promotion of SA companies and fabrication sites within the regional 'cluster'.

In this instance the nationally identifiable brand is a step in the right direction and the next step must be a regional drive to raise awareness about the brand. In this process, COGSI can collate data to inform the comparative analysis of the competitiveness of the South Africa engineering sector.

COGSI has correctly identified the fabrication market as extremely desirable for SA; however it does not have any apparent marketable advantage in terms of production and sourcing at this stage.

COGSI must stick to the marketing of its strategic plan and its vision to develop and subsequently market a valuable brand which has the backing of a regionally respected and recognised cluster which includes organised production and well coordinated supply chains.

5.2 The DEDT must step in and leverage the development of the hub

The DEDT needs to play a greater role in levering national political championship of the UOG brand. National government can then be more proactive in leveraging market access through the regional and bilateral trade negotiations.

In this regard, DEDT can leverage the organisation of the production and incorporate the marketing aspects into COGSI's strategic marketing plan as and when appropriate. ie COGSI focuses on rebranding the intitive to give it more national appeal and DEDT sets about levering the local advantages that would attract production and sourcing capacity to the Western Cape in order to promote the development of a fabrication hub in support of the COGSI national brand.

The DEDT needs to play a greater role in assisting COGSI to galvanise the hub (as distinct from the cluster) as this should be based in the Western Cape. It will be COGSI's task to market the location of the fabrication hub in the Western Cape as part of the brand development.

5.3 DEDT needs to leverage investment in production

From an investment perspective, DEDT can directly leverage incentives which COGSI cannot – the PGWC however needs to know the incentives will generate value (economic growth and job creation) in the long run. Consequently DEDT needs to conduct an urgent comparative/benchmarking analysis so that it can be sure of two things:

a) It puts its money where its mouth is – makes informed decisions that demonstrate the political will to support to the fullest any appropriate production initiative that has a competitive advantage and commercial interest from the private sector
b) It has reasonable assurance that its mouth is in the right place - make sure to promote the hub around the correct components in the first instance – ie. Those that have a comparative advantage or at least will be able to leverage the same in the near future.

It is believed that the sophisticated integration of the cluster (marketing and sourcing) and the fabrication hub (production) and the definition of the roles of COGSI and DEDT in this that will be critical to the overall success of coordinating this intitiative.

5.4 Necessary policy actions required to support COGSI – See Appendix 3 for stakeholder options analysis

5.4.1 Steel price – engage DTI in revealing the status quo

In the short term, COGSI needs to immediately engage with all stakeholders to address the steel pricing concerns that constitute the primary cost input into any steel fabrication cluster. The DTI has been tight lipped in this regard and the PGWC needs to urgently engage with the DTI to obtain an update. There is a rumour that Ferrostaal may invest in a steel production plant, which will introduce a market driven competitive challenge to Mittal. If national government does not wish to meddle in the market and force a regulatory resolution of the import parity pricing issue, then the PGWC needs to know that in terms of its long term strategy in relation to any steel driven value chain.

5.4.2 Verify competitiveness – conduct a benchmarking study

Regardless of the pace of the COGSI cluster development, the PGWC needs to urgently implement a comparative advantage investigation of the South African steel and engineering sectors to ascertain competitiveness in production. There is also a need to verify South Africa's sourcing capacity and competitiveness from a supply chain management perspective. The purpose being to ensure efficient promotion of immediate competitive advantages and strategic leverage of long-term comparative advantages for the UOG service and supply sector's sustainability and ultimately support the COGSI brand. The conclusions should be available before the end of 2005.

5.4.3 COGSI to market a nationally identifiable brand for the UOG sector

Rebrand the initiative from a national perspective to provide a more inclusive vehicle for promoting South Africa's competitiveness where it exists and also to make a powerful statement to the market about the national brand and the support it has from all components of the value chain. This will create the perception of reliability obtained from national coordination of the value chain that might be feared missing from a local intitiative. This recommendation has been left in despite the recent realisation thereof in order to add credence to the strategic analysis delivered in this report that has already shown success.

It also provides the reader with an example of how a pre-emptive strategy may have identified the national identity issue and the initial COGSI launch may well have bee a 'national' launch rather than a 'western Cape' launch which would have had a more inclusive image and brand from the start.

5.4.4 'Regionalise' the initiative through a regional conference

In order to promote information flows and to build collaborative behaviour, the PGWC should endeavour to convene a Clustering/EPC 'Competitiveness' Conference early in 2006. The purpose will be to share information and to elicit inputs from stakeholders that would otherwise not have been forthcoming ie. Facilitate and promote collaborative behaviour resulting in a 'regional clustering'.

Both the competitiveness study and the EPC Competitiveness Conference should highlight the policy actions required for success, these are likely to relate to cost implications in terms of steel pricing, labour implications in terms of skills shortages and training requirements and the role of government in facilitating clustering through policy interventions. West African stakeholders should also be invited to obtain broadest exposure and broadest opportunities for collaboration. A Nigerian company that returns home with investment opportunities involving SA based fabrication will have significant leverage to convince the Nigerian government of the advantages of preferential trade arrangements.

South African stakeholders need to take a global view on their competitiveness; however the regional stakeholders need to take a regional view on how best to allocate resources to exploit any advantages. Decisions as to whether infrastructure is located in South Africa or Nigeria should be based on the comparative analysis and in the best way to exploit regional competitiveness. South African stakeholders also need to acknowledge that they are proposing access to 'someone else's' national market in order to extract rents for themselves. If COGSI is to convince the 'owners' of that market that this in their interest it will require an inclusive and strategic negotiation process that

undermines the perception that South Africa is the USA of Africa with its associated suspicion and resentment. In the context of Africa's history of fierce nationalism, this may be more of a challenge than initially realised – NEPAD or not!

5.4.5 Support COGSI to deliver on the recommendations

There is no point in duplication institutional structures, so it would make sense for stakeholders to provide capacity to COGSI to deliver on the recommendations despite them being made to the PGWC. This will prevent and capacity burden within the DEDT and yet provide dedicated capacity to COGSI to conduct studies it needs to anyway for its success.

The next six months will be critical for COGSI. The above recommendations need to be delivered within the next 6 to 8 months. Three analysts should be contracted to COGSI for 6 months to deliver on three areas, namely SA's competitiveness in production and sourcing, the institutional arrangements required to leverage the 'NEPAD factor', and to leverage infrastructure developments in the Western Cape. The three analysts should be paid for by the sector/stakeholder that stands to benefit most form the area of work, consequently the PGWC should pay for the leveraging of infrastructure developments, the DTI should pay for the NEPAD institutional arrangements exercise and the industry should pay for the competitiveness analysis.

5.4.6 The Policy Matrix – a proactive policy action tool

In many instances, policy makers need to make decisions which may not be implemented by their own supporting line functionaries. In fact it may require a number of line departments/agencies/SOEs to achieve the intended policy goal. The policy matrix (Appendix 3) enables the policy maker to quickly see where efforts will be directly or indirectly implemented and to be prepared for internal resource allocation and where this must be complemented by alignment with external persons or entities. The policy matrix allows the implementers to have insight into the 'critical policy path' and to see where process milestones need to be aligned for maximum efficiency and ownership – especially if this will involve establishing a temporary Special Projects office.

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7 Oil Terminalling and bunkering

7.1 Terminalling activities

Rest of World – mature industry	Applicable to SA – infant industry	Opportunities for Terminalling/bunkering
1. **Necessary Condition for Success**: Terminalling: Proximity to refining and/or petrochemical markets	1. South Africa is not close to industrialised markets, but is close to developing and emerging markets such as Africa and South America.	A terminalling hub could add to the synergistic opportunities for the refineries in South Africa, where product is transported to the end user markets in Africa, South America and Australia. South African refineries already export excess production.
2. **Necessary Condition for Success:** Bunkering: Proximity to shipping lines and/or maritime transport hubs such as container transhipment hub, fishing hub etc.	2. South Africa has significant expertise in this regard with three coastal refineries involved in heavy fuel oil bunkering at the ports. However Cape Town has bunkering facilities and duplication of facilities at Saldanha would not be commercially viable.	Saldanha has no bunkering facilities to service the ore and crude carriers that load and discharge cargoes respectively and consequently
3. Sufficient supply of product on the routes leading to the terminalling hub	3. Currently 32.3% of West Africa's and 23.7% of the Middle East's crude exports (amounting to approximately 249 million tonnes in 2004) pass the Western Cape,	Saldanha is on the 'correct side' of Africa to provide terminalling services to the industrialised markets of Europe, and the east coast of North America. From the crude oil supply routes alone, up to 1000 VLCCs or ULCCs could be serviced at a terminalling/bunkering hub
1. Deep berth offshore loading and unloading facilities for VLCCs and ULCCs	1. Saldanha does not have an off - shore SBM	An EIA has been conducted, which finds that's despite environmental concerns, stringent and enforced environmental management controls should mitigate any risk Promote the extension of the breakwater to NPA Promote installation of SBM
2. Deep berth quayside for bunkering and refined product	2. Saldanha has deep berth facilities for both liquid and dry bulk loading and off loading	The Caltex refinery (or Calref) is under increasing pressure to be moved or shut down. A terminal that could handle refined product would provide an alternative to the capital cost of establishing another refinery in the short to medium term. Promote the extension of the breakwater to NPA Promote installation of SBM
3. Sufficient and efficiently designed storage for both crude and refined products.	3. Sufficient crude storage is available, but additional refined storage would be required. There is additional storage in Milnerton approximately 70km south, but the logistical cost may outweigh the option.	An EIA has been conducted, which finds that's despite environmental concerns, stringent and enforced environmental management controls to prevent soil spills and discharging of ballast into the bay would mitigate most of the risk and make a terminalling hub compatible with the ecology of the area.
4. Proximity to VLCC and ULCC repair and maintenance yards to exploit synergies with bunkering and ship repairs, especially for vessels in ballast	4. Saldanha does not have dedicated and purpose built ship repair and maintenance infrastructure that can accommodate VLCCs and ULCCs	Saldanha already has bulk cargo handing facilities.
5. Appropriately skilled /trained labour to fulfil the variety of functions outlined above.	5. South Africa has sophisticated pipeline operations and laboratory services	Petronet is ambitious to become the primary terminalling and blending operations manager in South Africa.

7.2 Policy recommendations

The principle issue from a policy perspective is that the consultant was misinformed initially and would like to correct previous assertions regarding Saldanha's bunkering capabilities. Currently, Saldanha does NOT have bunkering facilities, and ships requiring fuel oil must exit port and sail to Cape Town to bunker fuel.

This undermines the original competitiveness of the port in terms of bunkering services. It is likely that should the port develop a greater movement of vessels, that investment on

bunkering facilities might become attractive.

At this stage, the most important condition necessary for success is the location advantage of being close to trade routes where regular loading and off loading of broken bulk cargoes is synergistic with market requirements for smaller loads and blended crudes to meet refinery specifications. Saldanha does not enjoy such locational advantage and is not situated close to a large enough refinery sector to warrant an entire hub locally.

West African UOG operations are making increasing use of FPSOs that can load crude directly into VLCCs and ULCCs or transport to European and American markets further reducing the need for a terminalling service in Southern Africa.

There is also an essential policy driver that would have to be aligned with an investment initiative, namely that in terms of the Petroleum Products Amendment Act [No. 58 of 2003], no crude or refined product may be imported without permission of the Petroleum Controller based at the DME. Consequently a terminalling hub would be tightly regulated from a domestic market perspective. Most terminalling hubs have a significant proportion of their capacity reserved for servicing the domestic market.

To fully evaluate the potential for a terminalling and bunkering operation in Saldanha, a thorough investigation of the demand for various crudes, the portion of the required crudes using Cape trade routes. It is not recommended at this stage that the cost of such an investigation will enhance the PGWC's investment options. Also the local/national policy alignment would require significant and lengthy negotiations as the control of petroleum products has national interest imperatives that would probably be non-negotiable in terms of leveraging local waivers of restrictions.

It would however be worthwhile to convince Petronet or PetroSA to perhaps address the issue and share the outcomes from an investment perspective.

8 Supplier Development – building capacity – entrenching empowerment

8.1 Table 1: SDA/COGSI synergy

Rest of World – mature industry	Applicable to SA – infant industry	Opportunities for SDA/COGSI
1. Market principles to determine accreditation and subsequent sustainability	1. Leverage is seen as potentially increasing the transaction costs.	SDA has national championship and industry buy in which COGSI can use to leverage similar commitments in the UOG sector where appropriate
2. There must be sufficient skilled capacity to take advantage of the opportunities accessed	2. The SDP has already identified serious skills and capacity gaps in this regard.	COGSI could start negotiations with stakeholders to access skills levy contributions to place learners in operational/vocational training in anticipation of an increase in demand for labour in the UOG sector. However, the COGSI business plan outlines the need to conduct a skills audit to ensure cost effective spend in this instance.
3. Start up funding	3. SDA has funding commitments from the industry and the DME	COGSI has already identified supplier development but has no funds. COGSI could piggy back on this and already start delivering on skills development.
4. Efficient knowledge and information management	4. DME recognised this driver and the SDA has a mandate to fasttrack the development and adaptation of existing databases in this regard	COGSI could start negotiations with the SDA to share databases and information in this regard. Registration of suppliers is a fundamental prerequisite to accreditation.
5. Critical mass of investment and employment opportunities from allied initiatives	5. current delays with regard to COGSI and resistance from the downstream sector creates uncertainty regrinding opportunities	COGSI and terminalling hub both provide synergies and alternatives for employment and investment opportunities

8.2 Policy recommendations:

The SDA is currently being established. However a number of lessons have been learned in terms of aligning industry players around an initiative that could boosts their competitiveness in terms of cost containment, but requires them to share information that is feared could undermine their competitiveness. Many of the players in the downstream liquid fuels sector are the same multinational operators being encountered in the upstream, and lessons leaned can be shared accordingly.

The DME should be consulted and a proactive working relationship promoted that will keep COGSI up to speed with the implementation issues during the SDA establishment and also to from the beginning take advantage of synergies with regard to engineering services procurement and supplier development in the liquid fuels downstream sector.

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
Necessary conditions for success							
Alignment of infrastructure investments decisions	HIGH	LOCAL: The launch of COGSI, notwithstanding the ensuing tension, has elevated the UOGSC initiative onto the national agenda COGSI business plan has already identified this condition for success	PGWC/COGSI needs to play a more decisive and proactive role on the OGTT – share and exploit first mover advantage and leverage championship of COGSI and the infrastructure investments needs to support the cluster	An urgent and thorough analysis of the comparative advantages that the Western Cape can exploit and detailed competitiveness analysis of the COGSI initiative	Comparative advantages are dynamic; therefore the timing of interventions is critical to achieving first mover advantages. Commercial realities dictate the pace at which COGSI must generate clustering interventions however COGSI has to stay ahead of the market, and any loss of first mover advantage will undermine COGSI's ability to harness collaborative momentum and associated critical mass	UOGSCs are located in ports which are generally under the jurisdiction of local authorities (LAs). Local authorities are critical in leveraging comparative advantages such as rates and taxes and provision of services such as water, electricity and sewerage etc.	Public: Conduct a comparative advantage investigation to determine what incentives can be used to appropriately stimulate competitiveness in the UOG services market Private: Identify options where local authority support will leverage competitive offers into the west African market, and *communicate these effectively to the LA and COGSI*.
	CRITICAL	NATIONAL: COGSI business plan has already identified this condition for success COGSI business plan provides a very comprehensive resource for challenging all domestic stakeholders on the investment opportunities in COGSI	Whilst the COGSI business plan and subsequent workplan for the clustering activities is strategically sound, the PGWC broader sectoral strategy as to how COGSI fits into the broader national UOGSC initiative is far less obvious	Catch 22 – investors need infrastructure commitments to trigger back of port fabrication investments; however SA has a very poor competitiveness (NPA report) rating in terms of the major income generating activities such as fabrication and refits, which in turns makes NPA uneasy about the investment in infrastructure.	There appears to be a disjuncture between national political imperatives and national decision makers within the Transnet Group. Transnet decision makers have access to powerful political policy makers and any disjuncture between Transnet and National interests will result in inertia, bad timing and loss of first mover advantage in a highly competitive sector NPA needs to leverage maximum utilisation of Coega and may be persuaded to locate its resources to developing the back of port infrastructure at Coega.	Utility and infrastructure providers are increasingly expected to be profitable and consequently take cognisance of commercial imperatives when investing. In order to improve the rate of return, governments often invest at a utility rate of return that improves the overall risk profile of an infrastructure project - hence the reference to PublicPrivatePartnerships in Paper One	Public: Ensure that the UOGSC interests are on the agenda during NEPAD and bilateral trade negotiations. Private: Identify options which could benefit from national government leverage, and *communicate these effectively to the DTI and DME and COGSI*.

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
	CRITICAL	REGIONAL: COGSI business plan has already identified this condition for success No apparent achievements have been made	COGSI business plan relies specifically on the need for NEPAD leverage of access to regional UOG markets and to date this aspect does not seem to have been prioritised in terms of bilateral or regional trade negotiations	COGSI has either assumed or relied on the OGTT to address this aspect. The is not an unreasonable situation, except that the OGTT seems weakened in terms of 'commitment fatigue' and capacity constraints that have delayed the adoption of the Terms of Reference of the OGTT. COGSI needs to engage with the DTI and DME in this regard to fast track the political interventions from a NEPAD and bilateral trade negotiation perspective	Local content initiatives in all African west coast oil producing nations have leveraged significant commitments from operators and EPIC contractors in terms of infrastructure investments and training and skills transfer programmes to the exclusion of any significant South African involvement. Investments in infrastructure are not frictionless and any misallocation of resources in this regard will create significant barriers to exit for investors and to entry for any late movers – regional trade partners have to be convinced of the long term astuteness of spreading the supply services and engineering solutions throughout the region to achieve optimal efficiency from a comparative analysis perspective.	Bilateral trade negotiations are increasingly becoming 'horse trades' where national governments leverage mutually beneficial investments in the interest of national policy imperatives. US energy policy dictates that ever increasing amounts of oil are sourced from Africa. Consequently, US companies are leveraging preferential treatment in the awarding of contracts[10].	Public: COGSI needs to be represented on the OGTT. Ensure that the UOGSC interests are on the agenda during NEPAD and bilateral trade negotiations. Private: Identify options which could benefit from national government leverage, and *communicate these effectively to the DTI and DME and COGSI*.

[10] Halliburton has opened a West African office in Nigeria, but redirects many of the FEED and fabrication projects to its global subsidiaries and partner companies.

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
Transparent shared and common goals	CRITICAL	Institutional relationship development within the commercial sector is progressing well Local stakeholders are excited about the prospects although they are more circumspect about the outcomes.	PGWC is perceived as 'running ahead of the pack'. PGWC needs to be more transparent in its planning and high-level interventions to avoid 'surprising' other stakeholders	PGWC/COGSI needs to play a more decisive and proactive role on the OGTT – share and exploit first mover advantage and be seen as 'running within the pack'	Other initiatives leverage 'political' championship away from COGSI, such as the KZN Initiative	Global operators are often simply promoting their 'national interests' in terms of the E&P contracts and consequently the energy polices of national governments are increasingly influencing the outcomes of leveraged award of E&P related contracts.	Public: Ensure that the NOC, PetroSA, is capacitated and funded to leverage access to E&P contracts. This is not perceived to be a local government priority, but included for reference purposes All initiatives should be coordinated nationally to prevent unnecessary competition for resource allocation.[11] GEDA, TIK and WESGRO should be aligning their efforts with regard to the UOG sector. Private: SASOL should be engaging with government and vice versa to optimise commercial goals with national government leverage, and *communicate these effectively to the DTI and DME and COGSI*.

[11] Gauteng Economic Development Agency - GEDA is an investor's first port of call for developing business relations in Gauteng and the rest of Africa. GEDA is Gauteng's official economic, investment and trade promotion agency and its mission is to promote the economic growth and development of the province. Trade and Investment KwaZulu-Natal -Trade and Investment KwaZulu-Natal (TIK) aims to identify and package investment and export trade opportunities in the province, provide a professional and comprehensive service to potential and current investors and exporters, and to ensure easy access to investment and export trade opportunities and sustained aftercare. Western Cape Investment and Trade Promotion Agency (WESGRO) – WESGRO is the official Trade and Investment Promotion Agency for the Western Cape Province of South Africa. It is the first point of contact for foreign importers, local exporters and investors wishing to take advantage of the unlimited business potential in the Western Cape.

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
	HIGH	COGSI database of over 500 companies expressing interest n the cluster initiative	COGSI's necessary independence as the cluster promoter is undermined by close relationship with PGWC, especially in the context of the adversarial developments between PGWC and NPA.	OGTT has to be the strategic forum for championship of the UOGSC, whist COGSI has to be recognised as the geographical output of that strategy.	NPA, national government and PGWC all seem to be talking the same language, but acting independently.	UOG services stakeholders are collaborating closely around mutually beneficial matters such as innovation and skills training.	Public: Nationalise COGSI COGSI can learn a lot from the Chamber of Mines in this regard. Spin these initiatives off to the appropriate entities such as the trade and industrial policy (TIP) implementation vehicles such as WESGRO. Private: Identify options which could benefit from national and local government leverage, and *communicate these effectively to the DTI and DME and the DEDT and COGSI etc*.
Early involvement of contractors in field development decisions	HIGH	LOCAL/NATIONAL COGSI database of over 500 companies expressing interest n the cluster initiative	Not clear at this stage	PGWC needs to promote a broader entity than the OGTT to coordinate UOGSC outputs, or promote extension of the OGTT on a regular basis to bring in private stakeholders – every 3rd month?	Contractors will take on unacceptable risk which results in failures and delays which undermine the image of South African companies from the perspective of the UOG standard of delivering consistently reliable goods and services in time, in spec and in budget.	EPIC contactors are usually only engaged once the field development sanctions have been issued. Consequently the FEED process will optimise the management of risk by passing it on to subcontractors who are in turn often only engaged once the FEED is completed. Policy interventions that reduce risk for subcontractors based locally generate comparative competitiveness that could improve the overall service offer	Public: COGSI needs to be represented on the OGTT. At this stage the establishment of the cluster is the issue and the private sector stakeholders need to be engaged by government beyond the scope of COGSI. Private: Identify options which could benefit from national and local government leverage, and *communicate these effectively to COGSI*.

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
	CRITICAL	REGIONAL Field development decision making takes place beyond the control of the SA contracts and COGSI needs to urgently establish a working relationship with other organisation representing contractors	Delays in getting COGSI marketing of the ground and capacity shortages mean these time intensive activities are currently deprioritised to make sure the marketing is aligned with available service offers	A regional UOG investment summit under the auspices of the NEPAD if appropriate	Local content initiatives in all African west coast oil producing nations have leveraged significant commitments from operators and EPIC contractors in terms of infrastructure investments and training and skills transfer programmes to the exclusion of any significant South African involvement.	Policy interventions that reduce risk for subcontractors based locally generate comparative competitiveness that could improve the overall service offer.	Public: COGSI needs to be represented on the OGTT. At this stage the establishment of the cluster is the issue and the private sector stakeholders need to be engaged by government beyond the scope of COGSI. Private: Identify options which could benefit from national and local government leverage, and *communicate these effectively to COGSI*.
Policy Clarity – alignment of local and national interests	CRITICAL	COGSI business plan has already identified this condition for success PGWC has correctly recognised the need to exploit first mover advantages in a competitive sector.	Tension between COGSI and NPA Limited consultations have exposed an alarming dynamic whereby an national upstream supply initiative is perceived as having been 'hijacked' by the local and provincial authorities in the Western Cape	Lack of coherent national support for COGSI detracts from the necessary statement of intent a national government minister could give from a global perspective. PGWC needs to appoint a dedicated negotiator for six months to resolve this and get the infrastructure strategy aligned with the market needs. **Six month window of opportunity**	COGSI, as a PGWC initiative, is caught in the middle and has to woo investors on sound and transparent commercial criteria, whilst being kept on a fairly tight political leash. Any delay in implementing the COGSI mandate will disadvantage the western cape in relation to developments in west Africa.	Countries with generic 1º and 2º synergies with UOG have ascended to service dominance - shipbuilding (South and SE Asia), deep water ROV (Norway/USA), domestic UOG – (Norway/USA) In most countries, 1º and 2º sectors of the economy are often supported proactively by governments, especially during the initial market development phases. Government support has been critical to success of UOGSCs globally	Public: COGSI needs to be represented on the OGTT. At this stage the establishment of the cluster is the issue and the private sector stakeholders need to be engaged by government beyond the scope of COGSI. Private: Identify options which could benefit from national and local government leverage, and *communicate these effectively to COGSI*.

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
Unhindered flow of information	HIGH	COGSI business plan provides a very comprehensive resource for challenging all domestic stakeholders on the investment opportunities in COGSI The COGSI Newsletter should provide a regular mouth piece for the initiative	Commercial players seem unwilling to share vital data necessary to fully assess the competitiveness and comparative advantages that need to be promoted	Establish an UOG industry association to coordinate the collation of commercially sensitive of information and generic industry indicators	Clustering requires sharing of industry wide information in order to make interventions that will offset competitive disadvantages by intervening and promoting comparative advantages and appropriate interventions	Global market concentration has resulted in the internalisation of information flow where merged companies streamline their information flow (often with the aid of software) to improve the quality and efficiency of decision making	Public: Promote the development of innovation hub(s) which can channel competitive technology advance into the SA cluster. Private: Leverage some M&As to strengthen smaller players into larger stakeholders. Establish an UOG industry association to coordinate the collation of commercially sensitive of information and generic industry indicators
Alignment of regional trade goals with the UOGSC strategy	CRITICAL	none	COGSI seems complete excluded from bilateral and regional trade negotiations	Globally, trade negotiations involve the private sector associations in order to ensure alignment of techno-economic imperatives with trade promotion	The COGSI strategy is virtually hinged on the ability to leverage trade advantages from NEPAD networks and trade negotiations NEPAD fails	Regulatory frameworks in developing countries have influenced the access of operators and EPIC contractors into UOG markets where local content and employment commitments are becoming increasingly important. However, where undue influence is applied, projects have been delayed at great cost to the operator (lost profits) and the host government (lost revenues)	COGSI needs to be represented on the OGTT. At this stage the establishment of the cluster is the issue and the private sector stakeholders need to be engaged by government beyond the scope of COGSI. Private: Identify trade options which could benefit from national and local government leverage, and *communicate these effectively to COGSI*. This could for example be the inclusion of COGSI and/or its members on trade delegations.
Sufficiently aligned cost related conditions for success							
Comprehensive Steel costs	CRITICAL	For fabrication, harmonisation of the Steel price and NB the quality – National government has initiated discussion with Mittal Steel	Misalignment of local and national imperatives	Provincial Government could lobby for reduction or removal of tariffs for fabrication in the sector.	Continued import parity pricing is anti-competitive and undermines the competitiveness of South African fabrication efforts	Global steel production is becoming increasingly concentrated and globalised. Steel cost are rising sharply and	Public: Support the introduction of a locally based competitor, even it means providing enabling support to a

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
		(formerly Iscor) in this regard				global demand is putting upward pressure on SA prices especially when import parity pricing is applied by Mittal Steel	vertically integrated investment deal to formalise the forward linkages to any fabrication facilities as an anchor market for the steel off take Private: Engage government and steel producers to address the uncompetitive nature of import parity pricing. Commit to support any competitor that can produce *appropriately graded steel competitively*.
Labour costs	HIGH	LOCAL/NATIONAL COGSI business plan has already identified this condition for success. REGIONAL From a regional coordination perspective, achievements have been dismal	DHA will be essential in smoothing the way for importing labour in the first instance. Failure to include the DHA early on may result in bureaucratic delays beyond the control of COGSI Global shortage of appropriately skilled labour means that COGSI stakeholders will already be competing with west African stakeholder for the same labour	National government has launched supplier development initiatives in the downstream that could have synergies with the COGSI initiative Use SETAs to start prepping skills training as matter of urgency in order to pre-empt the skills shortage and be able to promotes availability of suitably qualified labour as a comparative advantage making the COGSI competitive	Domestic skills development fails to deliver required skills on tome expensive imported and scarce local labour undermine the competitiveness of the COGSI initiative Drastic labour shortage pushes up the price of labour and generating a regional labour crisis that could result in serious delays that undermine all stakeholders resulting fabrication work reverting to established global players yards of choice	Labour must be: ☑ Appropriately skilled ☑ Experienced ☑ Competitively priced ☑ Mobile ☑ Available on short notice	Public: Promote information sharing forums for the industry – eg. Steel and Engineering EPC challenges conference From the information gathered, engage the SETAs to develop training and qualifications Private: Engage with the Supplier Development Programme in order to engage with other steel and engineering sub sectors serving the downstream petroleum sector. Where labour has the basic skills, the private sector must invest in upskilling
Sufficiently aligned policy related conditions for success							
Infrastructure development risk	CRITICAL	COGSI business plan has already identified this alignment for success.	COGSI's necessary independence as the cluster promoter is undermined by close relationship with PGWC, especially in the context of the adversarial developments	NPA has critical role to play – PGWC can leverage alignment through national government – DPE is the shareholder Investments in port	There appears to be a disjuncture between national political imperatives and national decision makers within the Transnet Group. Transnet decision makers have access to powerful policy makers and any disjuncture between Transnet and National interests	Utility and infrastructure providers are increasingly expected to be profitable and consequently take cognisance of commercial imperatives when	Public: Conduct a comparative advantage investigation to determine what incentives can be used to appropriately stimulate

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
			between PGWC and NPA	infrastructure by NPA would provide comfort to fabrication and service supply investors that the commitment by the national government mitigates long term country risk	will result in inertia, bad timing and loss of first mover advantage in a highly competitive sector NPA needs to leverage maximum utilisation of Coega and may be persuaded to locate its resources to developing the back of port infrastructure at Coega.	investing. In order to improve the rate of return, governments often invest at a utility rate of return that improves the overall risk profile of an infrastructure project - hence the reference to PublicPrivatePartnerships in Paper One	competitiveness in the UOG services market Private: Identify options where local and national support will leverage competitive offers into the west African market, and *communicate these effectively to COGSI*.
Country risk	HIGH	Recent high profile mega projects such as MOZAL, the Mozambique Natural Gas project and the PetroSA gas filed and GTL benefaction plant have provided useful exposure of south Africa to the international community in terms of the stability in the region	Continuing instability in Zimbabwe ad DRC create a serous misconception of the stability of the region which undermines South Africa's comparative advantage of being the 'big safe bet' in southern Africa.	It the Irish development agency can convince investors to invest in Dublin, one hundred and sixty kilometres south of Belfast during the height of the northern Irish troubles, then PGWC, COGSI and WESGRO should be able to convince investors that Zimbabwe, 2000 kilometres to the north is not a threat!	Global economic slow down causes a drop of in demand fro crude and marginal or risky frontier E&P plans are put on hold, resulting in stranded assets in the fabrication hub.	Country risk is generally reflected as a premium in the financing of UOG projects. Where the risk premium is to high, the project will be deemed to be unviable, usually in the medium to long term – this usually relates to socio-economic stability and nationalisation of assets	Public and Private share the same reasonability to promote a positive image for South Africa and highlight regional stability and projects that have benefited from the same – MOZAL, the Mozambique Gas Pipeline Project etc.
Trade and Industrial Policy	HIGH	No achievements at this stage	National government already has the IDZ model and therefore better to start by intimating negotiations with DTI for IDZ registration/licence than trying to get concessions from scratch	MOUs with IDC, DBSA etc – PGWC can leverage these MOUs	Competitors such as Nigeria and Angola are developing very competitive trade and fiscal policy packages to enable local content commitments to be viably implemented	The fabrication and engineering value chain is globalised, so trade and industrial policy incentives are fundamentally comparative and any advantages will be attractive to investors	Public: Package the available and/or leveraged incentives appropriately for the UOG sector Private: Use incentives to promote the cluster and promote the incentives where they can leverage competitive working relationships with investors
Fiscal Policy	CRITICAL	No achievements at this stage	SARS do not appear willing or able to address the shortcomings of the current customs and excise regulations that make 24/7 operations impossible as fabrication and repairs operations	COGSI needs t urgently set up negotiations with SARS. The assumption is that the representation of SARS on the OGTT would resolve this, however SARS have not been	The hassle factor premium is too high and EPIC contractors seek subcontractors with more flexibility. West African authorities have shown remarkable innovation in accommodating regulatory adjustments to achieve investment and regulatory synergy. This willingness to assist investors is fast becoming a comparative advantage of west	The fabrication and engineering value chain is globalised, so fiscal policy incentives are fundamentally comparative and any advantages will be attractive to investors	Public: Package the available and/or leveraged incentives appropriately for the UOG sector Private: Use incentives to promote the cluster

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
			cannot involve 'after hours' 'export' or 'import' of items at this stage Daily opex can run into hundreds of thousands of US dollars and a day or two delay due to regulatory bureaucracy will simply result in diversion of urgent repairs to other centres	attending OGTT meetings since late 2004, Direct negotiations may be more appropriate	African governments that is not being followed by South Africa if current investor complaints are valid.		and promote the incentives where they can leverage competitive working relationships with investors
Sufficiently aligned investment related conditions for success							
Infrastructural Advantage	CRITICAL	COGSI business plan has already identified this alignment for success.	The recent NPA offshore oil and gas report identifies significant risk which probably explains NPA inertia at this stage	Investments in port infrastructure by NPA would provide comfort to fabrication and service supply investors that the commitment by the national government mitigates long term country risk	Local content initiatives in all African west coast oil producing nations have leveraged significant commitments from operators and EPIC contractors in terms of infrastructure investments and training and skills transfer programmes to the exclusion of any significant South African involvement. Investments in infrastructure are not frictionless and any misallocation of resources in this regard will create significant barriers to exit for investors and to entry for any late movers – regional trade partners have to be convinced of the long term astuteness of spreading the supply services and engineering solutions throughout the region to achieve optimal efficiency from a comparative analysis perspective.	Infrastructure investments are generally located where the backward (inputs, such as affordable quality steel) are competitive and forward (fabrication and engineering services) linkages will maximise utilisation.	Public: Conduct an in depth comparative analysis investigation Should results show COGSI to be competitive, leverage appropriate investment decisions from the relevant stakeholders Private: Provide constructive inputs to COGSI as to what infrastructure investments are required – COGSI urgently needs solutions to be offered, not problems
Policy Advantage	CRITICAL	COGSI has achieved membership of the national government on its board, providing clear implied support COGSI has identified the need to 'go national' and has been in discussions with other initiatives in this regard. A national marketing strategy is ready for implementation which will firmly establish a 'NOGSI'	The fact that NPA is only an observer gives bad signals as to the policy/investment disjuncture. Investors are not going to be impressed by the lack of tangible support for COGSI form the only player mandated to invest in port infrastructure. COGSI initiative in moving forwards is perceived to be upstaging the national initiative and the OGTT	Synergies with national government initiatives in the procurement sector needs to be identified and exploited – the Supplier Development Programme (SDP) launched by the DME and the SD Agency.	Inertia with the OGTT has delayed any real progress since late 2004. PGWC either has to play a more meaningful role at the OGTT or establish firm commitments from national office bearers for support for COGSI. PGWC absence from the OGTT antagonises national decision makers and retaliatory measures delay COGSI and undermine its role in the market.	Interdepartmental and intergovernmental policy alignment is essential to mitigate risk and provide investors with comfort that long terms returns will be sustainable – project in Nigeria and Angola have been delayed where policy risk has been to high	Public: Perception is reality and while there is a perception of misalignment between the local and national government and the SOEs on these policy matters, no amount of internal assurances will change the perception.

Conditions for success assessed	Priority	COGSI/PGWC Achievements	COGSI/PGWC Shortcomings	Gaps	Threats	Global Market trends	SA Stakeholder options
Cost Advantage	CRITICAL	Negotiations through the DTI with Mittal Steel are progressing. A positive outcome in term of relaxing the import parity pricing to fabrication contractors would be extremely advantageous. Recent information regarding Ferrostaal looking favourably at locating a large steel production and fabrication plant n Saldanha would provide competition to Mittal and reduce the logistical component of transporting PAUs from the inland engineering works to the coast	Failure to achieve steel pricing competitiveness will remain a critical shortcoming to date. A cluster initiative should be able to have the clout to pull off major negotiations such as this in order to show COGSI's stakeholders that it can deliver at a fundamental level to improve competitiveness for all stakeholders in a win-win outcome.	COGSI should do all in its power to engage with Ferrostaal and smooth the way for a positive investment decision. Mittal has no interest in the national interest and neither does Ferrostaal, so play the game and offer the best deal to get the best deal. Mittal cries national interest when its monopoly status is challenged, but gives nothing in return when its business practices fundamentally undermine the national interest	Long term lack of competitiveness with regards to fundamental cost inputs such as steel, augmented by the strong ZAR will likely result in a structural collapse of the UOG market in South Africa with a flight f capital and investors to other locations closer to the action where overall project economics are aligned with sectoral demands and hard work pays off	Steel, labour and utility costs are critical, but have to been calculated in the context of the premium that operators are prepared to pay for reliability and quality of production	Public: Government can try to leverage commercial improvements (Mittal), directly influence SOEs (Eskom) and where appropriate apply competition legislation to open markets and make cost inputs competitive. Eg. Afrox monopoly in LPgas and other industrial gases in the Western Cape. Private: Challenge monopoly pricing through the Competition Commission on the basis of national interest
Technology Advantage	IMPORTANT	Recent high profile mega projects such as MOZAL, the Mozambique Natural Gas project and the PetroSA gas filed and GTL benefaction plant have provided useful exposure of south Africa to the international community in terms of the available technology	Significant 'learn by doing' skills transfer happens with each project, however the 'down time' between project results in attrition of skills to other sectors, which often do not return as the new sector is more secure.	Compare with other projects, such as the Mozambique Gas Project where steel and fabrication companies had to be accredited. Use this knowledge to publish global standards and give direction for stakeholders to prepare for COGSI success.	American and Singaporean yards have developed competitive PAU process management tools whilst US and Norwegian firms are leaders in subsea instillations – in both cases (which have been identified by COGSI as opportunities) dedicated purpose built yards have been established in the US and Singapore	Increasing reliance on more expensive technology – ROVs (cost) and 'untested' project specific innovation (risk) in relation to high risk new frontier E&P such as off the African west coast. Promotion/facilitation of centres of excellence/ innovation hubs to service UOG industry – Stavanger, Singapore, Houston	Public: Establish an UOG innovation techno-park/incubator/training institute in Western Cape Learn from the Innovation Hub establishment at CSIR/ University of Pretoria and the fledgling incubator park at Stellenbosch University Elucidate the reason for the lacklustre performance of the Upstream Training Trust Private: Investigate measures to introduce efficient engineering process management that will elevate the current project management approach to PAU and jacket fabrication. Leverage government support for such investments.

APPENDIX: 4 The Policy Matrix

The table below refers to the distinction between line departments or agencies that champion issues, those that support or facilitate in the roll-out and those that are responsible or mandated to actually implement the issues or action required. For example, DEDT (PGWC) may be the champion of COGSI, however Wesgro/TISA would be useful facilitating agencies, however with regard to obtaining approval for port infrastructure developments, NPA and DPE (Transnet) would be the implementing agencies in this regard. Consequently, **L** = **Lead**/Championing agency, **F** = **Facilitating**/Assisting Agency and **I** = **Implementing** Agency

Required Action	Government Department or Agency														
	PGWC	COGSI	DTI	TISA	IDC	DPE	NPA	DOL	SETAs	DHA	NT	SARS	DST	DME	PetroSA
Necessary Conditions for success															
Infrastructure investment decision	L	F	F	F	F	F	I	-	-	-	-	-	-	F	-
Institution/relationship building - facilitator	L	F/I	F	-	-	F	F	-	-	-	-	-	-	F	F
Promotion of UOGSC in NEPAD and bilateral trade negotiations	L	F	I	I	-	-	-	-	-	-	-	-	-	I	I
'Nationalisation of COGSI'	L	F	I	F	-	-	-	F	-	F	F	-	-	F	F
Policy alignment - Visible national championship	L	F	I	F	-	F	-	F	-	F	F	-	F	F	-
Trade and industrial policy															
Comparative advantage investigation	L	I	F	F	F	-	F	F	F	F	F	F	F	F	F
EPC Competitiveness Conference	L	F	I	I	F		F	F	F	F		F	F	F	F
Counter trade credits/local content	F	F	I	L	F	F	F	-	-	-	F	F	-	-	F
Local/national incentives harmony – rates/taxes etc.	F	L	-	F	-	-	-	-	-	-	F	I	-	-	-
Ongoing policy interventions															
Promote Collaborative behaviour	F	L/I	F	F	F	-	F	F	F	F	-	-	-	F	F
Promote Competitive behaviour	F	L/I	F	F	F	-	F	-	-	-	F	-	-	F	F
Spatial integration and clustering	F	L/I	F	F	F	-	F	-	-	-	-	-	-	-	F
Incentivised centres of excellence/innovation	F	L	F	F	-	-	-	-	F	F	F	-	I	-	F
Labour and Critical Skills synergy	F	L	-	F	F	-	F	F	I	F	-	F	F	F	F