Industrial participation (IP) programmes are often used in the defence trade to offset the costs of unusually large arms purchases by requiring a percentage of the contract value to be invested in the economy of the purchasing country. This investment can include participation of local companies as subcontractors in the main project, export of related or other industrial goods, or investment in plant, facilities, or people, thereby stimulating economic activity. In South Africa, Armscor has been applying the offset principle since 1989. In terms of Armscor’s policy, a Defence Industrial Participation (DIP) obligation of up to 100% of the contract value applies to all purchases with an imported value above $2 million, and focuses on strategic business within the defence industry.

On 1 September 1996 the South African Cabinet formally adopted the National Industrial Participation Programme (NIPP). The programme is obligatory and applicable to all government and parastatal purchases with an imported value exceeding $10 million. The NIPP obligation is 30% of the imported value of the contract. A penalty of five percent applies in the event of non-performance, secured by a bank guarantee.

Thus all substantial arms purchases are subject to both DIP and National Industrial Participation (NIP) obligations. In accordance with current Armscor policy, DIP obligations apply to purchases exceeding $2 million but less than $10 million. Above $10 million the total required IP commitment remains at a value at least equal to the value of the contract, but typically split equally between DIP and NIP.

The Strategic Defence Package contracts were signed in December 1999. The contracts represent the largest arms procurement purchase in South Africa’s history. The total value of the package was approximately $3.9 billion and includes four corvettes, three submarines, 28 Gripen fighters, 24 Hawk jet trainers and 30 light utility helicopters.

The stated tender requirements for offsets set by the South African government were that DIP and NIP should at least equal the value of the purchase contract. The interest among tenderers was so high that IP became a key differentiating issue, and the agreements that were eventually signed were for DIP of $2.4 billion (60% of the contract value) and NIP of $14 billion (350% of the contract value), totalling more than four times the value of the signed contracts. However these benefits have not been visible and while this paper reviews the substantial progress made in the realisation of the DIP and NIP obligations, there is a concern that the most achievable and high value projects have been started now and that it will become progressively more difficult to find acceptable projects. Thus the industrial participation element of the SDP must be kept under review to ensure that South Africa benefits from the full extent of these commitments.

The joint task team that investigated the Strategic Defence Package on behalf of the Standing Committee for Public Accounts of the South African Parliament surveyed counter-trade practice in 13 other countries, and found that the South African policy compares favourably with international practice, although most countries have a somewhat lower threshold, in some cases as low as $1 million.

**THE NATIONAL INDUSTRIAL PARTICIPATION PROGRAMME**

The mission of the NIPP is to leverage economic benefits and support the development of South African industry by effectively utilizing government procurement. Its objectives include sustainable economic growth, establishing new trading partners, foreign investment, increased exports of goods and services, research and development (R&D) collaboration with South African industry, job creation, human resource development, technology transfer, and economic promotion of previously disadvantaged...
The objectives are therefore much broader, and more clearly defined and directed than merely offsetting the effects of large outflows of money associated with military purchases. Properly directed, the NIPP can be a powerful tool for directed industrial development.

A NIPP obligation arises for any contract or related series of contracts that have an imported content with a value exceeding $10 million. The obligation is to create economic activity generating credits exceeding 30 percent of the contract value over a fulfilment period of seven years. Thus projects tend to be relatively long term, and credits are only earned as the economic activity actually occurs, and not at the time of making the commitment. A penalty of five percent of the IP obligation can be levied for non-performance and a performance bond is required.

A number of important principles apply to ensure that true benefit accrues from the obligation:

- **No increase in prices**, (i.e. the economic activity must be truly economic and must not increase the cost of doing business);
- **There must be mutual benefit** for the seller as well as national economic objectives;
- **Additionality**: all proposals must generate new business. In order to qualify for credits, investments may be in new facilities or the expansion of existing facilities, but the additional benefit must be shown beyond doubt, besides the mere increase in output. Exports must be for new products or for new markets.
- **The projects must be economically and operationally sustainable**. The objective is to create businesses that will survive, and changes to the business plan may be required to adapt to changing circumstances.
- **Causality**: The proposal must result from the purchase contract. The IP proposal would not have been initiated had it not been a condition of the purchase contract. Furthermore it means that each project submitted, resulted from an action by the seller as a result of an IP obligation, or that the seller’s involvement influenced the project to occur within a shorter time frame than would otherwise have been the case.
- **The fulfilment** of any obligation is the sole responsibility of the seller. When other parties are involved in the execution, the responsibility remains with the seller.

The principles of additionality and causality are very important, as one of the main criticisms of IP programmes generally is that many of the projects offered as part of contracts would have happened anyway or were already in progress. Skilled and knowledgeable people are therefore required to evaluate proposals to ensure that this is not the case.

To ensure that the process is properly managed, an IP Secretariat was created within the Department of Trade and Industry, headed by a Chief Director. The Secretariat organization is shown in Figure 1.

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**Figure 1: Industrial Participation Secretariat**

- SIPHO ZIKODE 
  CHIEF DIRECTOR: INDUSTRIAL PARTICIPATION
- PAUL WILLIAMS 
  UK GOVERNMENT ADVISOR
- PERSONAL ASSISTANT
- SIPHO ZIKODE 
  DIRECTOR: DEFENCE PORTFOLIO
- MASIZAKE ZIMELA 
  DIRECTOR: NON-DEFENCE PORTFOLIO
  3 PORTFOLIO MANAGERS
- PATRICIA KHUMALO 
  TEAM ASSISTANT
- ELIAS MALAPANE 
  PORTFOLIO MANAGER: BAE/SAAB
- CHANDRIKA JOGESSAR 
  PORTFOLIO MANAGER: AGUSTA/THALES
- TERESA DE RISI 
  PORTFOLIO MANAGER: THYSSEN, FERROSTAAL
The Secretariat:
• keeps track of all relevant transactions in South Africa which have IP potential;
• assists, guides and advises sellers in the fulfilment of their obligations;
• makes recommendations to the Industrial Participation Control Committee (IPCC) for its approval;
• concludes IP contracts;
• administers, reviews and audits performance of all ongoing projects;
• prepares reports for the IPCC supporting/not supporting allocation of credits or penalties; and
• prepares periodic status reports.

The IP Control Committee (IPCC) is made up of representatives of the Departments of Trade and Industry, Finance, Foreign Affairs, Defence, and the purchaser (if not one of the above). The IPCC:
• provides strategic guidance and approves guidelines for the NIPP;
• ensures that all government departments and parastatals comply with the policy;
• reviews recommendations made by the IPS for acceptance of proposals, awarding of credits, or application of penalties; and
• reviews the performance of the IP Secretariat.

The process followed is that after issuing a tender, potential tenderers liaise with the IPS and submit business concepts. Should the tenderer be successful, a full business plan is submitted which is discussed and negotiated with the IPS. Once the IPS is satisfied that the proposal meets the requirements, it is submitted to the IPCC. On approval, a contract is concluded between the seller and the government. Only then does the IPS authorize the purchaser to conclude the contract with the seller. Industrial participation is a precondition but not a factor in the adjudication, unless all bids are relatively close. This process puts considerable time pressure on the parties and the business plans are therefore made in considerable haste and often subsequently require revision.

Credits in fulfilment of obligations are earned over time as and when the projects generate actual economic activity. Obligors (persons bound to another by contract or other legal procedure) have to submit full accounts in support of their applications for recognition of credits.

The IPS remains in constant touch with obligors to, among other areas, monitor progress, evaluate change proposals and assess the credits claimed. In the case of major projects, such as the Strategic Defence Package, where the contracts themselves can vary over time, it is convenient to conclude Strategic Partnership Agreements (SPA), which allow flexibility, but also impose a requirement for periodic review, usually through six-monthly liaison meetings. Strategic Partnership Agreement’s are export biased, requiring that 60 percent of revenue must be from export business.

Projects can include investment, joint ventures, subcontracting works, licensee production, export promotion, sourcing arrangements for export markets, or R&D collaboration. Credits are awarded for various categories and weighted to reflect government priorities by multiplying the economic value by an appropriate factor. Table 1 illustrates the application.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Calculation for credits awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable economic growth</td>
<td>Revenue over fulfilment period</td>
</tr>
<tr>
<td>Export Promotion</td>
<td>Export revenue × (1 + local content%)</td>
</tr>
<tr>
<td>Job Creation</td>
<td>Payroll costs over fulfilment period</td>
</tr>
<tr>
<td>Training &amp; development</td>
<td>Cost over the period</td>
</tr>
<tr>
<td>Small and medium enterprise (SMME) promotion</td>
<td>Value outsourced to SMME × 2</td>
</tr>
<tr>
<td>Historically Disadvantaged Individuals (HDI)</td>
<td>Value outsourced to HDI SMME × 2</td>
</tr>
<tr>
<td>Investment</td>
<td>Capital outlay or injection × 2</td>
</tr>
<tr>
<td>R&amp;D expenses</td>
<td>All R&amp;D costs × 2</td>
</tr>
<tr>
<td>Technology transfer</td>
<td>Calculated on case-by-case basis.</td>
</tr>
<tr>
<td>Export promotion (not from investment)</td>
<td>Value of exports × LC% × 2</td>
</tr>
<tr>
<td>R&amp;D collaboration with SA partners</td>
<td>All direct costs × 2 or all revenues generated × 2</td>
</tr>
</tbody>
</table>

The table illustrates that credits to the value of the obligation can be earned for a value of business considerably less than the value of the obligation. Export turnover is multiplied by one plus the value of the local content value of the export. Thus for 100 percent local content, credits for double the turnover can be earned. Costs that are normally recovered in the value of sales generate additional credits (e.g. payroll costs, training costs, outsourcing to SMMEs and SMMEs owned by Historically Disadvantaged Individuals, capital investments, R&D expenses and the cost of technology transfer).

As a simple illustration, let us assume an operation is set up where 100 percent of turnover is exported. The typical local content is 60 percent, and of that 60 percent, as much as 40 percent is spent on qualifying items. So on export turnover of R100, credits are earned of R160. On the input side, R40 of cost earns credits of say R40 × 1.5 = R60. Total credits therefore...
reach R220. On the other hand, for most projects the economic benefits continue beyond the formal fulfilment period, increasing the returns over time.

In essence the scheme is designed to encourage the economic objectives of the government, and the levels of obligations can be set on a case-by-case basis to achieve the desired “offset”.

THE DEFENCE INDUSTRIAL PARTICIPATION PROGRAMME

The Defence Industrial Participation (DIP) Programme follows principles very similar to the NIPP. “The objectives of all DIP programmes are, in addition to the National Industrial Participation objectives, addressing specific defence industry objectives such as:

• the retention, and where possible, the creation of jobs, abilities and capabilities;
• the establishment of a sustainable defence industrial and economic basis, with strategic logistic support capabilities;
• the promotion of defence exports of value-added goods;
• the promotion of like-for-like technology transfer and joint ventures;
• the maintenance of skilled indigenous design, development and manufacturing capabilities; and
• the provision for a sustainable local defence industry capacity.”

The principles of price, mutual benefit, additionality, sustainability, causality and responsibility are retained. All proposals are, in addition, evaluated for their potential benefit against the stated strategic requirements of the Department of Defence (DoD) and the local industry. These are formulated in terms of the strategic needs of the South African National Defence Force (SANDF), as identified in the Defence Review approved by the cabinet in August 1997, and the White Paper on the South African Defence Related Industry. Thus, the assessment of DIP proposals is based on the extent to which they support the capabilities required in the defence industry to provide for a strategic design, development, manufacturing, logistical support, and upgrade capability for a technologically advanced and modern defence force, its doctrine and posture. In contrast to the NIP, where industrial participation is a precondition but not a factor in the adjudication, the IP element in defence procurement, in addition to being a precondition, forms one of the key evaluation factors and plays a major role in the final adjudication of the tender. In addition, an assessment factor is applied for activities involving previously disadvantaged persons or entities.

For contracts with an imported value between $2 and $10 million, the DIP obligation is at least equal to the value of the purchase contract. For contract values above $10 million the industrial participation obligation remains at a value at least equal to the value of the purchase contract, but usually divided equally between DIP and NIP. As far as the DIP component is concerned, a distinction is drawn between direct and indirect DIP. Direct DIP refers to projects that form part of the planned procurement (i.e. subcontracting). Indirect DIP refers to other, indirectly related projects, in the defence industry. Direct DIP is required to make up 20 percent and indirect DIP 70 percent obligation at a minimum. The direct and indirect DIP obligations must meet the following requirements:

• products: more than 45 percent of the DIP commitment, excluding any exports, (local industry participation, related to physical work packages).
• technology: as defined in the DIP agreement, not more than ten percent
• exports: greater than 25%
• investment: up to 15% (Equity or Capital Equipment)
• loans: up to 2.5%
• marketing support: up to a maximum of 2.5% of export value

As is the case for the NIP, IP proposals are requested along with the tenders. These proposals are routed through the Armscor Defence Industrial Participation unit (see Figure 2 below).
The Armscor DIP secretariat and the Department of Trade and Industry (DTI) each complete the evaluation and negotiations separately, in the case of Armscor in close co-ordination with the programme manager and the Defence Secretariat. Only once both the DIP and NIP agreements are concluded, is the purchase contract signed. Armscor, as a rule, applies credits at the time of conclusion of the contracts for the IP deliverables with the local suppliers, rather than when deliveries are effected, as the contracts are for the delivery of specific goods and services against a given schedule, rather than for an economic activity that will yield benefits such as production and exports against a largely unknown schedule, as with NIP. Progress against all projects is monitored at six-monthly review meetings.

Credits are given for:
- local added value of goods ordered (local or export);
- technology transfer; and
- investments.

The scheme therefore requires greater real turnover to meet the contracted obligation than NIP but is fairly prescriptive in terms of desired economic activity, compared to NIP. According to Mr Nigel Fisher, the Ministry of Defence (MoD) representative at the British High Commission in South Africa, the NIP scheme in turn is unusually prescriptive representative at the British High Commission in South Africa.

DIP, NIP AND THE STRATEGIC DEFENCE PACKAGE

The Strategic Defence Package contracts were signed on 3 December 1999. The value was approximately $3.9 billion or R24.9 billion on that day’s rate of exchange. Although various currencies were involved in the actual contracts, Armscor generally reports in dollars to allow meaningful comparisons over the lifetime of the projects. The arms package consists of:
- 4 Corvettes from the German Frigate Consortium;
- 3 Submarines from Ferrostaal;
- 28 Gripen fighters from a British Aerospace Systems (BAE)/SAAB consortium;
- 24 Hawk jet trainers from BAE; and
- 30 Agusta A 109 light utility helicopters (LUH) from Agusta (Italy).

Timescales on projects of this magnitude are very long. The first corvettes are due in 2003 for the integration of weapon systems produced by Thales of France and their local subsidiary ADS (African Defence Systems). The Hawk deliveries extend from 2005 to 2009, and Gripen from 2007 to 2011. The latter programme was delayed to fit the affordability profile of the South African DoD while still gaining IP benefits.

The stated tender requirements for offset were that DIP and NIP should at least equal the value of the purchase contract. Such was the interest among tenderers that IP became a key differentiating issue, and the agreements that were eventually signed were for DIP of $2.4 billion (60 percent of contract value) and NIP of $14 billion (350 percent of contract value)—in total more than four times the value of the contracts. In the words of one source referring to the BAE/SAAB contracts, “In exchange for the South African government’s promise to buy £1.5 billion worth of its aircraft, BAE Systems undertook to generate four times that amount – almost £6 billion—in economic activity in South Africa. Proportionally it is the largest offset clause in defence industry history.” The contracted values per contract are: 11

<table>
<thead>
<tr>
<th>Programme</th>
<th>IP Value, R millions</th>
<th>Contract Price, R millions</th>
<th>Obligation as percentage of contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corvettes</td>
<td>20,267</td>
<td>5,473</td>
<td>370%</td>
</tr>
<tr>
<td>Submarines</td>
<td>19,680</td>
<td>4,289</td>
<td>459%</td>
</tr>
<tr>
<td>Helicopters</td>
<td>6,137</td>
<td>1,532</td>
<td>400%</td>
</tr>
<tr>
<td>Hawk, Gripen</td>
<td>55,606</td>
<td>13,680</td>
<td>407%</td>
</tr>
</tbody>
</table>

These values clearly exceed the requirements of the DIP and NIP policies by a wide margin. In addition the performance guarantees were set at ten percent of the contract price (ten percent of imported value for the corvettes), which is less than the five percent of IP value usually specified, but is certainly more than five percent of an IP value of only 100 percent of the contract. 12

The DIP/NIP agreements were signed at the same time as the purchase agreements (3 December 1999). The fulfilment period is seven years, except for the Gripen agreement, which extends over 11 years. The agreements are modified versions of the Strategic Partnership Agreement, taking into account the complexity of underlying undertakings. The agreements are also in the foreign currencies of the purchase agreement, to ensure that the obligation in rand terms matches the contract values in rand terms, balancing the fluctuating external value of the rand. They make provision for key milestones at years three, four and seven, and establish a business plan that is monitored by formal six-monthly review meetings to ensure that projects are on track, and to consider alternatives when circumstances dictate a change.

The DIP and NIP obligations are truly enormous. At the exchange rate at the time of signing the contracts, the NIP is valued R87.5 billion and the DIP is R14.6 billion. To put this in perspective, defence capital spending in 1999 was only R1.8 billion. To achieve the required spending over the fulfilment period implies that a large number of projects will have to be found, contracted, and brought to fruition. For each successful project there will be a large number of proposals that have to be assessed by skilled professionals to ensure that the selected projects are viable and profitable for all

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concerned. All projects, especially those in the NIP arena, have commercial risks, and on this scale no company can afford to contract lightly; the commercial downside can potentially inflict heavy losses. It is tantamount to establishing a series of multimillion-rand businesses without having a business failure, which is practically unheard of in the normal course of events. It is therefore encouraging to note that all the contractors are taking their obligations very seriously, and have set up project offices to drive the offset obligations with the same professionalism that characterises their SDP project offices.

BAE/SAAB run the DIP projects from the BAE corporate offices in Pretoria. There are about five full-time staff supplemented by specialists as required from BAE or SAAB. For the NIP a dedicated operation, SANIP, has been set up in Johannesburg. Employing three expatriates and 12 local specialists from various industrial sectors, the office is approached by four or five parties a week with business proposals requiring funding or other assistance. Only a handful of these proposals eventually meet the stringent requirements of BAE, SAAB, Armscor, and DTI.

Both the DIP and NIP offices are backed up by dedicated offset business units at BAE and SAAB, who are responsible for the global offset commitments of the two companies. It is not uncommon to find that major international companies have dedicated counter trade offices, as they often encounter offset/IP/barter requirements in contracts with governments around the world.

Mr Nigel Fisher, First Secretary, Defence Supply at the British High Commission, and Colonel Lars Ljung, Defence Attaché at the Swedish Embassy emphasise the importance their governments attach to the projects. Selling a military aircraft creates a partnership that will last 25–30 years, matching the service life of modern combat aircraft, including maintenance and upgrades. The supplier’s credibility is therefore vital to establishing and maintaining this relationship. Because of the size and visibility of the DIP projects in South Africa, Mr Fisher believes that BAE is under international scrutiny, and that the suppliers’ credibility internationally is very much at stake. “Failure is not an option,” says Mr Fisher.

The other contractors have all set up similar organisations to handle the volume of work resulting from their obligations, but declined to be interviewed to elaborate details of their commitment.

Progress on the DIP programme

Progress on the DIP projects has been quite rapid, especially on Direct DIP, where specific subsystems are client preferred equipment and therefore required no extended search and validation period before being ordered. By 31 March 2003, DIP credits to the value of R3.7 billion had been approved (at the exchange rates of R 6.25 to the dollar and R6.4 to the euro), based purely on the local value added on all contracts placed. This represents 26.5 percent of the total DIP commitments, which is 106 percent of the planned fulfilment by the end of the third year. The outstanding commitment is estimated at R14.2 billion (at an exchange rate of R 8.06 to the dollar and R8.78 to the euro, the rates applicable on 31 March 2003). Orders have been placed with 38 local companies, and the estimated work content of the contracts placed is 3.6 million man-hours, or an estimated 1,677 jobs.

The R3.7 billion credits approved are in the following categories: (All figures in R million)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Sales</th>
<th>Technology Transfer</th>
<th>Investments</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corvettes</td>
<td>1036.9</td>
<td>175.2</td>
<td>5.6</td>
<td>7.8</td>
<td>1224.5</td>
</tr>
<tr>
<td>Submarines</td>
<td>422.6</td>
<td></td>
<td></td>
<td></td>
<td>422.6</td>
</tr>
<tr>
<td>Helicopters</td>
<td>141.2</td>
<td>85.4</td>
<td>3.9</td>
<td>0.8</td>
<td>231.5</td>
</tr>
<tr>
<td>Hawk</td>
<td>588.3</td>
<td>193.3</td>
<td>1</td>
<td>88.2</td>
<td>870.9</td>
</tr>
<tr>
<td>Gripen</td>
<td>282</td>
<td>457.4</td>
<td>0.9</td>
<td>228.7</td>
<td>969</td>
</tr>
<tr>
<td>Totals</td>
<td>2470.1</td>
<td>911.3</td>
<td>11.5</td>
<td>325.6</td>
<td>3718.5</td>
</tr>
</tbody>
</table>

Some examples of contracts placed include:

Corvettes
- Assembly of main diesel engines in South Africa by MTU: €4.9m
- Locally developed surface-to-air Kentron Umkhonto missiles: €29.9m
- LW’s 76mm main gun and 35mm dual purpose machine gun: €10.5m
- Integration of Electronic Warfare suite by Grintek, mainly using local technology: €16.1m

Submarines
- Electronic Warfare system by Grintek, mainly local technology: €17m
- Electrical switchgear from Siemens South Africa: €5.8m
- Design and manufacture of periscope by Eloptro in partnership with Zeo Zeiss of Germany: €6.2m

Light Utility Helicopter
- Subcontracting for part of the helicopter starting with number six to Denel Aviation: $9m. Sub-
contracts for part of a Swedish order for 20 helicopters is in progress.

- Aircraft health management system locally developed by AMS: $4m
- Repair and maintenance of Makila engines under licence by Turbomeca Africa: $10m

Agusta only claims credits on completion of contract, and are in fact much further committed than required by the schedule.

**Hawk**

- Design of the mission system for Hawk by ATE: $80m, including technology transfer of $20m
- Locally developed Health and Usage Monitoring systems from AMS: $20m
- Final assembly, equipping and testing at Denel Aviation: $4m
- Various smaller contracts have been placed with black economic empowerment (BEE) companies for electric looms, electric consoles, and machining of precision parts.

**Gripen**

- Design and development centre from Denel Aviation: $10.5m
- Proprietary communications subsystems from Grintek. (This has now also been adopted for the Swedish and export versions.): $10m
- Power supply and display systems from Grintek: $9m
- Development and manufacture by Denel Aviation of NATO standard pylons for Gripen export programme: $7m (The Swedish Air Force have a proprietary standard for pylons)
- Equity investment, mainly in Grintek companies: $7.3m

It should be emphasised that on projects such as ship and aircraft building there is a significant period during which designs are finalised, followed by the building of the basic platform. Subsystems are usually only integrated quite late in the overall building cycle, and usually have shorter lead times. For instance, Hawk deliveries are scheduled from year six to year nine. Some subsystems may be required earlier but there is an expected (and planned) upsurge in orders only later, peaking perhaps in years six and seven. Likewise Gripen deliveries extend from year seven to year 11, implying an upsurge even later. This lag is reflected in the planning of the DIP commitments, and the 26.5% commitment reported by Armscor is therefore comfortably ahead of plan. It is envisaged that the impact on the South African defence industry will increase in the next few years as subcontracting rises to meet delivery commitments. On the other hand, most of the commitments to date are for Direct DIP, with most of the Indirect DIP still to be identified and contracted. This may take more time and effort than the DDIP and place considerable pressure for performance on the contractors.

The first few years of the projects saw a significant interaction between the prime contractors and the South African industry. This has resulted in significant indirect benefits.

In the first place, the industry was visited by large numbers of senior representatives from European industry and defence forces that would not otherwise have been exposed to South Africa and its industry. It is impossible to export defence equipment while the preconceived notion about South Africa is that it is a third world country lacking in sophisticated technology and political stability. These visits dispelled these notions and paved the way for partnerships that can extend for the lifetime of military systems. For example, the Swedish military attaché estimates that he brought 30 visitors a month to South Africa, many of whom have formed close relationships with South African companies and individuals which will lead to further business down the road. Sybrand Grobbelaar, the CEO of Grintek, mentions that due to these visits the perceived political risk of South African suppliers was ameliorated to the point where, for instance, an export order to the Swiss Air Force has been contracted directly, whereas previously it had been a requirement before that it be contracted via a European partner.

Secondly, during the selection and bidding process gaps in capabilities were identified and addressed. In some cases, such as Grintek and AMS, it was sufficient to review and update processes to meet international requirements, resulting in certification of the companies concerned as preferred suppliers. In other cases such as MTU and Denel Aviation investment in facilities were required to improve capabilities and capacities to meet the requirements of the prime contractors. This process is ongoing and will continue as DIP commitment levels rise. The net result is a progressive upgrading of the competitiveness of the South African defence industry.

In some cases the relationships extended to shareholdings, for example SAAB (formerly Celsius Technologies) acquired a 49% interest in Grintron, which has yielded benefits in terms of technology transfer, merging of products with the SAAB product line, and making available the marketing resources of SAAB internationally.

Finally, as a direct result of all these actions, several companies dramatically increased export business some or most of which does not form part of the DIP.
credits. These include Eloptro (periscopes), Grintek (electronic warfare systems), AMS (Health and Usage Monitoring Systems for aircraft) and the sale of Umkhonto surface-to-air missiles to the Finnish Navy.

Thus it appears that the DIP is succeeding in upgrading the defence industry capability, technology, and capacity and therefore leading to increased exports of sophisticated military equipment.

Mr Hans Pretorius, Executive Director Aerospace at Denel, raises concerns about the capacity of the aviation component industry to benefit to the full from the DIP. This is due to profound changes in the structure of the aircraft industry in the last few years. Due to competitive pressures more and more content is contracted out to the lowest cost qualified bidder, with the aircraft manufacturer becoming more of a final assembler. At the part level it is even worse, with highly automated manufacturing yielding high volumes of very low cost parts. The debate within Denel is ongoing about Denel’s role in this evolving scenario. This same dynamic applies to all manufacturing that is driven by cost rather than intellectual value added, and is being felt across South African industry. It contrasts sharply with the export successes experienced by companies who own the intellectual property in their own products and are consequently less sensitive to the price/volume curves.

On the other hand, the Commercial Manager of BAE/SAAB in Pretoria and head of the DIP projects, points out that they are aware of the problems and are working closely with the local industry to bridge the gaps. Some examples include:
- technology transfer;
- participation of production experts in setting up cost effective manufacturing processes;
- collaborative planning around available opportunities, including planning ways of funding individual ventures; and
- assisting with the cost-effective procurement of manufacturing plant and equipment.

In short, given the long time scales available for the completion of contracts, the potential for further export orders for Hawk and Gripen that could come to fruition in these timescales and in which industry could participate in an enhanced manner, and the commitment of all concerned, Mr Dickson is positive that the gaps can be closed. In particular Denel Aviation will be brought up to speed simply because it is so big and can be a major player for the building of airframe sections for both Hawk and Gripen.

### Progress on the NIP programme

By March 2003, 45 projects had been approved under the NIP programme. These projects are expected to generate credits to the value of $6 billion over the fulfilment period of seven years (11 years for BAE/SAAB). Thus over 40 percent of the total commitment of $14 billion has already been approved after only three years. Unfortunately the DTI does not provide a breakdown of figures per contractor, but they state that “the performance of defence obligors’ implemented projects have been in line with, and in some cases, exceeds their commitments”.18

The approved projects cover a number of industry sectors, enterprise sizes and geographic regions, broadly supporting government’s industrial development objectives. Some examples of the projects launched by each contractor are as follows:

#### Thales/ADS Combat Suites19
- A joint venture with Total Energy and Tenesa to manufacture solar panels in the Western Cape. Export revenue of $20m per year is earned with 140 jobs created.
- The upgrading of the furnaces of Polokwane Smelters in joint venture with Pechiney and Invensil to improve efficiencies and rescue company from closure. Goods worth $3.5m are exported each year and 390 jobs are retained.

#### German Frigate Consortium/Thyssen Rheinstahl20
- The manufacture of aluminium tubes for radiators in the automotive industry. With an investment of $2.9m the turnover is projected at $35m over five years. Exports are being considered requiring additional investment. Ennovative Solutions is the BEE partner.
- An off-take agreement with SA Ferrochrome, a company owned by the IDC, Bateman, the Royal Bafokeng Nation, Outokumpo and Thyssen Krupp Met. A third furnace is being considered, as well as the addition of downstream products requiring an additional investment of R180m.
- The production of pressed metal house panels for sub-economic housing, creating 100 jobs.

The net result is a progressive upgrading of the SA defence industry.
**Agusta Helicopters**

- Filk Gold Chains is a joint venture between Filk SpA of Italy and Oro Africa for the manufacture and export of gold chain. The factory in Cape Town employs 50 people and has revenue of about $26 million per year, 80% for export.
- Cape Mohair introduced a high technology spinning and fancy twisting line, as well as the dyeing of the mohair yarn for export. It employs 90 people in the Eastern Cape and generates revenues of $12 million each year.
- Projects scheduled for operation in 2003 include the manufacture and export of leather seat-cover kits for automobiles, and a further gold jewellery manufacturing facility in the Free State.

**German Submarine Consortium/Ferrostaal**

- Major commitments have been made for the manufacture of stainless steel, and related products in the Coega Industrial Development Zone in the Eastern Cape. These have been delayed by the slow start of the Coega development, but will be the largest direct investment by any of the obligors in their own right.
- Facilitation of agricultural and floricultural exports from the Eastern and Western Cape has created an estimated 1,500 jobs.
- A plant for the manufacture of high quality condoms has created 520 new jobs in the Eastern Cape.

**BAE/SAAB Hawk and Gripen**

BAE/SAAB have launched some 27 projects, taking a ‘brown fields’ approach in most cases, that is facilitating the expansion of existing businesses rather than starting from scratch. This has enabled a relatively quick start with tangible results already in evidence. Here are some examples:

- Working with Harmony Gold in Virginia, Free State, a number of initiatives have been taken to give shape to a beneficiation strategy pursued by the mine. These include a new refinery, various Harmony owned manufacturing projects, technology development, a dedicated jewellery industry school and downstream joint venture projects that will manufacture jewellery for export. SANIP has provided support through facilitation of international partners, provision of equipment and bursaries to the jewellery school, and loan capital to fund the working capital of the gold chain manufacturing plant. Some 110 jobs have been created. It is anticipated that the jewellery manufacturing will export $37m by April 2004 and $350m by April 2011.
- About 1,000 tourists per month are being brought to the Eastern Cape from Scandinavian countries through facilitation of package tours. Prior to 1994 very few Scandinavians visited South Africa.
- Five projects have been implemented in the automotive sector, including the manufacture of pistons for Ford RoCam engines, and export of tyres from Dunlop in Ladysmith, Kwazulu-Natal.
- Two projects with AECI Bioproducts in Umbogintwini and Biological Control Products in Durban have enhanced competitive skills in the field of biotechnology.
- Involvement with Global Forest Products of Sabie in Mpumalanga, have enhanced the capability of an existing operation to export value added timber products with direct benefit for 67,000 hectares of forests, three saw mills, a plywood plant and two value added processing facilities. Improvements were made in technology, know-how, and export channels.

In general the role of the obligors has been facilitative, bringing together South African businesses in need of technology, capital or export clients, with appropriate international partners. In some cases seed funding has been provided in the form of loans or in a few cases extending to shareholding. In effect the obligors are, with some exceptions, not putting huge amounts of their own money at risk, whereas the performance bonds at ten percent of contract value are for substantial amounts. This business model provides a powerful incentive to achieve the NIP obligations rather than having to forfeit the performance bonds. Most of the projects are achieving upgrades in the quality of plant and product, skills of staff, and establishing international relationships that can only be to the long-term benefit of the South African economy.

**CONCLUSION**

The SDP has generated substantial industrial participation obligations, to the value of more than four times the value of the contracts. These values are furthermore protected in that the obligation is expressed in the same currency as the related contract so that fluctuations in the value of the rand will result in matching fluctuations in both the contract and offset values.

Both Armscor and the DTI have set up appropriate structures to manage and oversee the progress in making and meeting the commitments, and to ensure that the projects proposed comply with the objectives of the South African government in terms of industries and technologies supported and geographical reach. It is of concern that there appears to be a fairly high turnover of staff at the DTI. For instance, the IP secretariat already has its third Chief Director in the six years of its existence. Continuity and experience are essential if the control is to be effective and consistent.
The contractors are demonstrating real commitment by the size of the operations they have put in place to give effect to their obligations, and the results obtained to date are very encouraging in terms of percentages of total obligation that have already been committed.

There is a suspicion that the early successes, especially in the DIP arena, reflect the tendency to go for the low-hanging fruit, and that it will become progressively more difficult to find acceptable projects as time goes by. Similarly, the remaining time for a given activity to achieve the required benefit within the fulfilment period also decreases, and the next few years will therefore be crucial in achieving the required level of commitment. Failing this, it can be expected that requests for extension of the fulfilment period will be to the detriment of all involved.
ENDNOTES

1 Armscor website <http://www.armscor.co.za/DIS/what>
2 Ibid.
4 Armscor website, op. cit.
5 Armscor DIP Guidelines, Armscor, Pretoria, paragraph 3.1
6 Ibid, paragraph 6.2.2.2
7 Personal communication, Mr Nigel Fisher, First Secretary, Defence Supply at the British High Commission, April 2003.
8 Exchange rate of USD 1 = R6.25
9 Personal Communication, Ms JEJ Potgieter, Senior manager DIP, Armscor, May 2003.
10 T Butcher, AProfessionalism, tact and diplomacy-military partnership@, in Partners in Defence, 2003, a British Defence Export Services Publication.
11 Joint Report by Auditor General, Public Protector, and Director General of Public Prosecutions to Parliament, 14 November 2001, paragraph 12.2.7.1.
12 Ibid, paragraph 12.2.7.3(b).
13 Personal communication, Linden Birns, PR and spokesman for BAE.
14 T Butcher, op cit.
16 Ibid.
17 Personal communication, Ms JEJ Potgieter, Senior manager DIP, Armscor, May 2003.
21 Ibid, p 6–7
22 Ibid, pp 23 and 34.
23 Ibid, pp 12–14 and 32–33.
Industrial offset programmes are often used in the defence trade worldwide to offset the effect of unusually large purchases by requiring a percentage of the contract value to be invested in some way in the economy of the purchasing country. As part of South Africa’s arms procurement process—the strategic defence package—the government secured industrial participation agreements that amount to more than 400 percent of the value of the weapons being purchased. This paper explores this dimension of the defence package and reviews the benefits that could come to South Africa if the industrial participation agreements are fully realised.

About the author

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