

CHAPTER 6

TOTAL QUALITY MANAGEMENT IN THE SOUTH AFRICAN AIR FORCE

6.1 INTRODUCTION

The preceding two chapters provided an extensive review of the literature available on the dimensions of TQM. These dimensions were divided into primary and supportive roles, and were furthermore identified as being part of “hard” management necessities and “soft” outcomes. The need to have an integrated approach to all 14 dimensions was also clarified. However, the focus of chapters 4 and 5 was on the points of view of scholars and experts as reflected in published sources. In order to introduce the primary part of the research reported in this thesis, it is therefore necessary to turn to practice. This chapter will therefore discuss the SA Air Force and its context as an introduction to the empirical research undertaken for the thesis.

Since 1980 it was necessary for the SA Air Force to make continuous adaptations to its administrative and management systems in order to stay abreast of changing circumstances. In 1998 a decision was made to apply more “quality management techniques” in order to increase performance results and productivity. One of the methods followed was the establishment of a formal self-assessment programme based on the model of the EFQM that was launched in August 1998 by the Inspector General of the SA Air Force, followed in January 2002 with the SAEF model. To enable the SA Air Force to determine results and areas for improvement continuously, it became clear that a new approach to management was needed to guide all management initiatives based on the TQM philosophy in order to ensure improved performance. The SA Air Force will be able to make a valuable contribution over the next few decades should it institute a TQM philosophy in its entirety with the aim of focusing the organisation on improvement.

The purpose of this chapter is therefore to provide details of the SA Air Force in order to understand the process followed by the organisation in implementing TQM at its various bases. To achieve this, it is first necessary to provide information on the aim, functions and strategic direction of the SA Air Force. Following this, a review is provided of its organisational design and structure before turning to a discussion of the historical development of the implementation on TQM in the SA Air Force since 1980 to the present.

Based on the available literature, the TQM methodology utilised in the SA Air Force is reviewed, followed by an examination of the self-assessment methodology (based on the SAEF) that is used by the SA Air Force to improve its overall performance and to promote excellence. The latter includes a review of the role and function of the Directorate Management and Renewal Services and the role and function of the Inspector General in the implementation of self-assessment methodologies.

6.2 AIM, FUNCTIONS AND STRATEGIC DIRECTION OF THE SA AIR FORCE

The mandate of the SA Air Force is to provide air power¹ to the nation and manage the air defence capability of the Department of Defence (hereinafter referred to as DOD) on behalf of the DOD, thereby participating in the service to ensure: (1) the sovereignty and protection of the Republic of South Africa's (hereinafter referred to as RSA) territorial integrity, and (2) compliance with the international obligations of the RSA to international bodies and states. The aim of the SA Air Force is as follows: *To help ensure the interests of the Republic of South Africa by means of air operations.* The primary function of the SA Air Force is *to obtain and maintain a favourable air situation* (Van Zyl 2003:2). To support the primary function of the SA Air Force the secondary functions are as follows (Coetzee 2003:9-10):

- to participate in land battle;
- to participate in maritime battle;
- to protect SA Air Force assets;
- to pose a credible deterrent to external aggression;
- to provide a military air transport capability;
- to act to preserve life, health and property;
- to assist and co-operate with other friendly air forces and institutions;
- to assist on short notice with humanitarian aid to South Africa and its neighbouring countries; and
- to assist and co-operate in peacekeeping operations on the African continent (for example in Burundi and the Democratic Republic of the Congo).

¹ According to Thackwray (1998:6), airpower (1) is the ability to do something in the air, or (2) is a component of the total capacity of a nation, or (3) is the total ability of a nation to fly (Shikapwashya 1998:48). Visible air power is divided into military air power and civil air power. The structural elements of air power are people, equipment and doctrine.

To support the mandate, aim, primary and secondary functions of the SA Air Force, the Air Force Board² (hereinafter referred to as AF Board) decided in 1998 that, if the SA Air Force was to continue to thrive through the next millennium, it was to adopt a new approach towards management and assessing management trends and outputs. For the AF Board survival depended on a list of crucial factors including flexibility, efficiency, effectiveness and a host of other virtues that could be grouped under the banner of “corporate business excellence”. It was important to the AF Board that the SA Air Force has dynamic, world-class pro-active and appropriate leadership. This meant using and honing its internal systems to effect improvement in the SA Air Force as a whole. For the AF Board officers commanding (hereinafter referred to as OC’s) air force bases (see figure 6.8) should recognise these issues. To be able to steer the SA Air Force towards world-class performance the current position should be identified, reacting to ever-changing market and operational climates, constantly reviewing the course they sail. The AF Board decided to adopt a new approach towards inspections, which entailed a new process to evaluate air force bases, with the emphasis on the TQM philosophy and self-assessment.

To support the new emphasis to manage the SA Air Force according to the TQM philosophy and self-assessment, the AF Board decided in February 2001 to commit itself to a demanding transformation process in an effort to harmonise its strategies and objectives with those of the DOD. This approach has produced encouraging results thus far, but a rapidly changing strategic landscape, both locally and globally, requires an occasional review of the selected strategies to test their validity and, where necessary, adjust those in need of revision. The provision of combat-ready air power is the fundamental consideration in its strategic planning process, which in turn is aimed at the optimum relationship between the structural elements of air power – people, equipment and doctrine. Through dynamic and inspiring leadership it endeavours to create an enabling environment capable of maximising each of these elements to achieve air power excellence. To meet these demands, the AF Board developed a long-term strategic outlook, known as “SAAF Vision 2012”, which maps out the environment within which air power has to be created and provided, the strategic challenges and issues it faces to achieve the desired future state, and the strategic objectives it has set to ensure success. (Van Zyl 2003:1.)

² The AF Board consists of all chief directors and directors at level 2 (see figure 6.5) and level 3 (see figure 6.6) of the SA Air Force and is under the chairmanship of CAF.

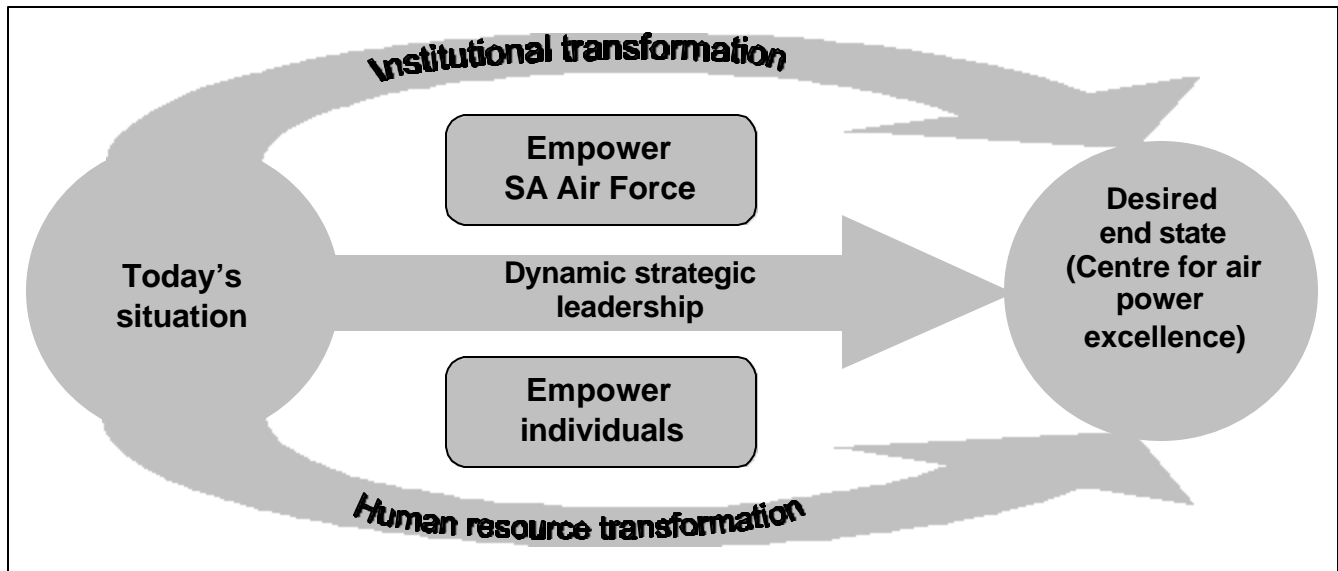
For the AF Board it was important to be competitive and successful in today's modern and dynamic times if the SA Air Force was to envisage itself in the future and know how to arrive there. The AF Board developed a clear vision, mission, values and strategy, to succeed in its new effort to manage and assess management trends and outputs, no matter how successful its history. The vision of the SA Air Force is as follows: *Striving for Air Power Excellence*. The mission of the SA Air Force is as follows: *The SA Air Force provides combat-ready air capabilities for the SANDF in service of our country*. According to Beukman (2004:6), the culture of the SA Air Force is not formed by what is preached or published, but by what is accepted by leaders in practice. He emphasises that a value is an enduring belief that a specific mode of conduct or end state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence. Values lead institutions to regard certain ways of reaching goals or means as proper and appropriate and other means or ways as improper or inappropriate. The values of the SAAF are as follows (Beukman 2004:6; Van Zyl 2003:2):

- The SA Air Force believes that future excellence lies in the hands of all of air force people – the air force's most precious asset.
- The SA Air Force value credible, competent and effective (transformational) leadership (integrity).
- The SA Air Force values the inherent competence of all air force people (human dignity).
- The SA Air Force value continuous learning and improvement (excellence).
- The SA Air Force value ethical conduct and deplore any form of criminal behaviour.
- The SA Air Force is completely honest in all interactions.

From the aforementioned values, the values underpinning culture attributes are: (1) human dignity, (2) excellence in everything the SA Air Force does, (3) integrity, and (4) service before self (patriotism). The strategic approach followed to achieve the vision, mission and values is to establish the SA Air Force as a provider of combat-ready air power by means of transforming the SA Air Force's people and optimising the SA Air Force's assets through *dynamic strategic leadership*. The AF Board developed a strategy to get the SA Air Force from the current situation to the desired end state, that is being a

*Centre for Air Power Excellence*³, which requires three vital things (see figure 6.1), namely (1) transformation of the SA Air Force, (2) the transformation of human resources, and (3) dynamic strategic leadership. This was followed by a new motto for the SA Air Force, which is: *Our people, our air force, our future!* (MRI: 009481.)

Figure 6.1: Strategic approach of the SA Air Force



Source: Coetzee (2003:6)

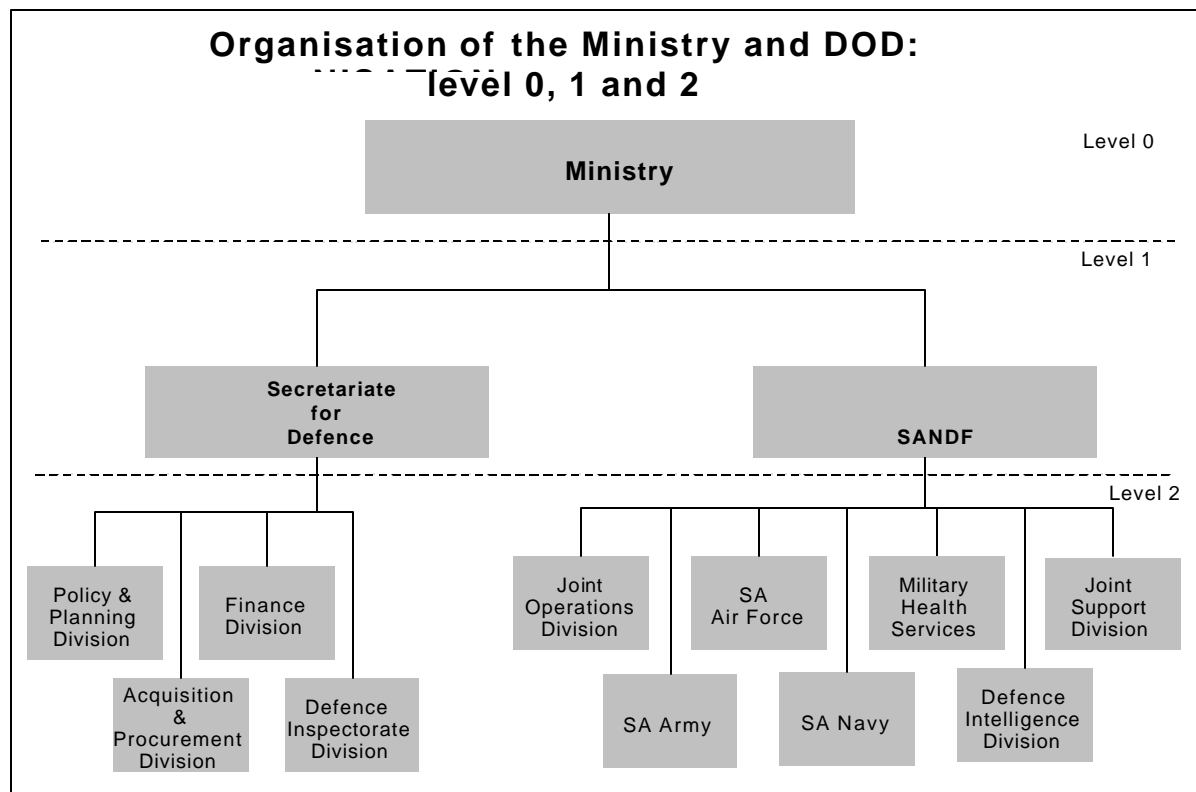
6.3 SA AIR FORCE ORGANISATIONAL DESIGN AND STRUCTURE

In South Africa the DOD is divided into two main sections. The one is the Secretariat for Defence (hereinafter referred to as SecDef), which consists of the civilian control of the SANDF and falls under the leadership of the Secretary for Defence. The other is the SANDF, under the leadership of the Chief of the SANDF. These two authorities operate at the same command level. Figure 6.2 gives an overview of the organisational structure of the DOD. The SANDF has various line (core business) functions and staff (support) functions. The SA Air Force is one of the line or core functions of the SANDF. Figure 6.2 shows these functions with the line functions represented by solid lines and the staff functions by dotted lines. As shown in figure 6.2, there are seven line functions in the SANDF namely Joint Operations, SA Army, SA Air Force, SA Navy, Military Health Services, Defence Intelligence Division and Joint Support Division, each with its own chief.

³ Ability to perform the best in the air with specific aircraft, for example fighter aircraft, transport aircraft, maritime aircraft, training aircraft, helicopters and flight-testing services.

These seven chiefs are all at the same command level, that is level 2, as regards day-to-day management. During operations Chief of Joint Operations (hereinafter referred to as CJ Ops) is responsible for the tasking of forces. CJ Ops are therefore responsible for *force application*, whereas the other chiefs are responsible for *force preparation* (recruiting and training forces).

Figure 6.2: Organisational structure of the Ministry and Department of Defence

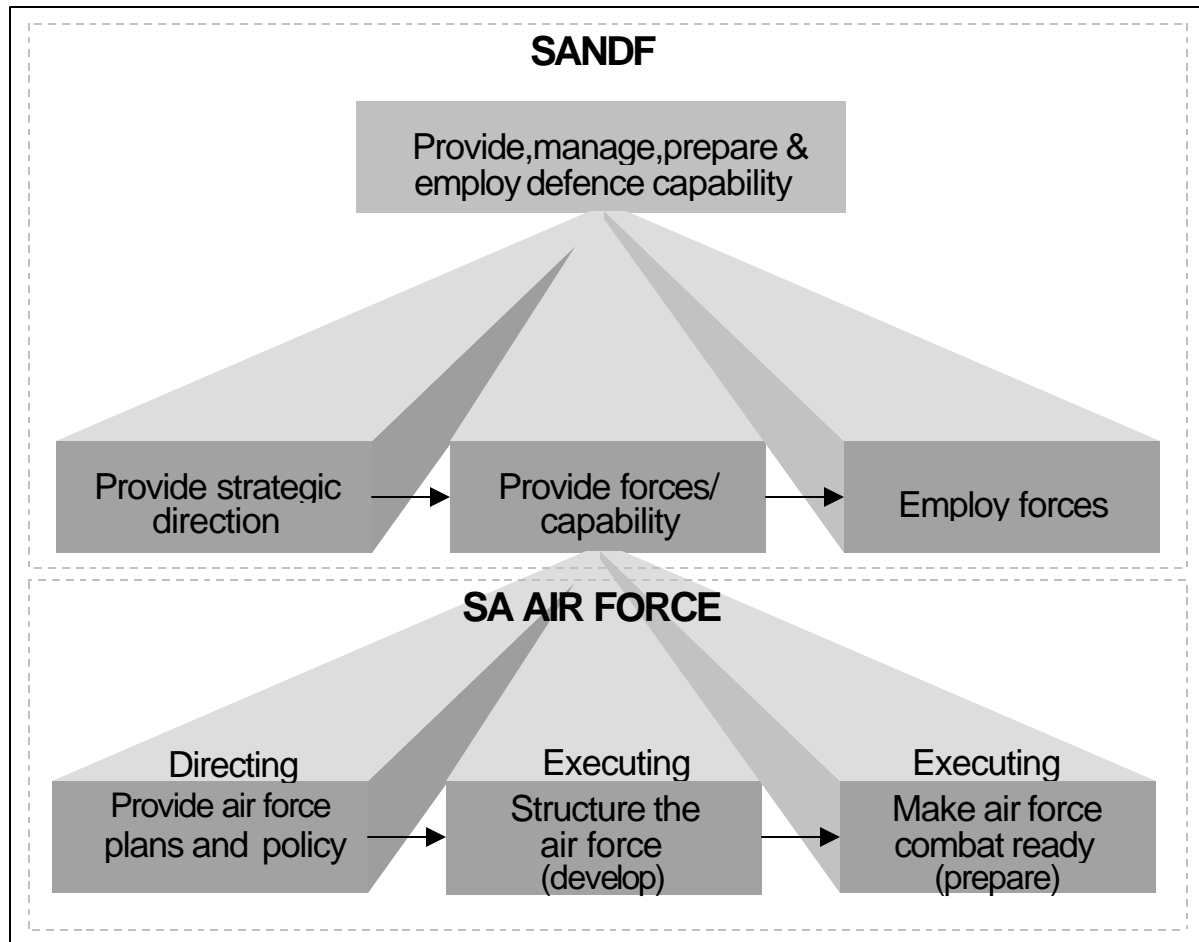


Source: Coetzee (2003:3)

The SANDF is responsible to provide, manage, prepare and employ defence capabilities (see figure 6.3). This implies that Chief of the SANDF must first of all provide strategic direction. Secondly, he must provide the necessary forces and capabilities in order to, thirdly, employ these forces. The SA Air Force falls under the second responsibility of Chief of the SANDF, namely to provide the necessary forces and capabilities. As shown in figure 6.3, Chief of the Air Force (hereinafter referred to as CAF) also has three responsibilities. First of all he must provide air force plans and generic policy, which gives direction to the SA Air Force. Secondly, he must structure the air force and, thirdly, he must make the air force combat ready, which entails the training of and maintenance of

forces and capabilities. The second and third responsibilities are the execution part of the plans.

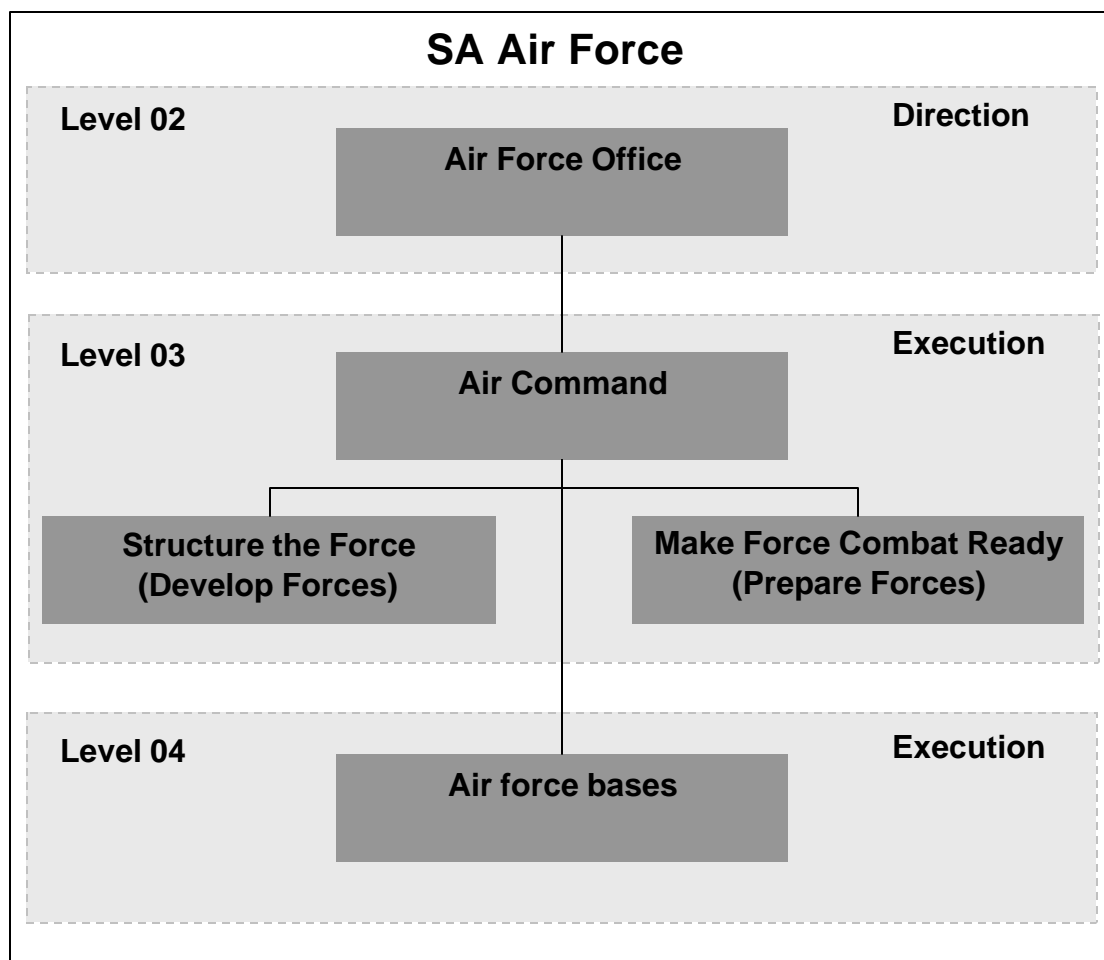
Figure 6.3: Responsibilities of Chief of the SANDF and Chief of the Air Force



Source: Coetzee (2003:12)

If the air force's responsibilities are taken and turned upright, the organisational structure of the air force starts to get form as shown in figure 6.4. The air force office provides the air force plans and generic policy, thus giving direction to the SA Air Force. The air force office is also known as the level 02 structure. At level 03 is the air command, starting to execute these plans and generic policy, but still giving direction to the level 04 structures (air force bases). The air command structures the air force (developing the forces) and makes the forces combat ready (prepare the forces). CAF commands level 02, that is the air force office (figure 6.5). The level 04 structures (air force bases) execute the plans and generic policy to the end. Levels 2 to 4 will subsequently be discussed independently.

Figure 6.4: Organisational structure of the SA Air Force

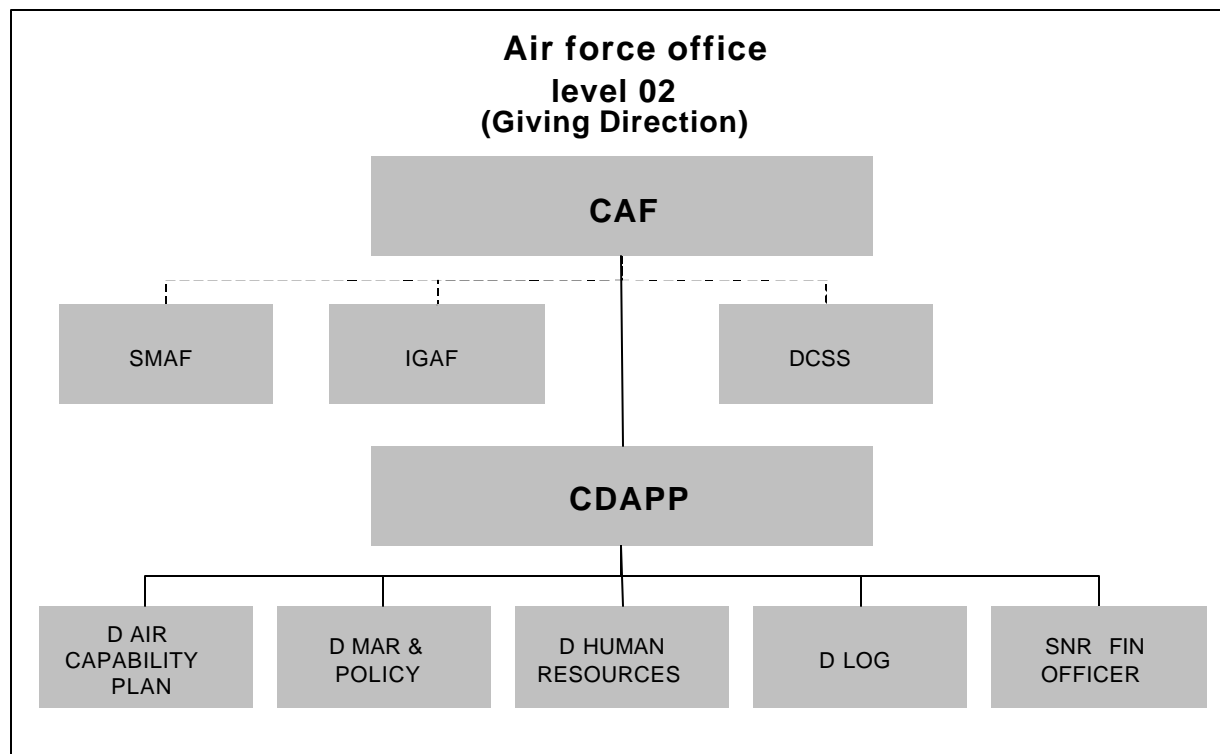


Source: Coetzee (2003:13)

6.3.1 Air force office

As depicted in figure 6.5 the Chief Director Air Policy and Plans (hereinafter referred to as CDAPP) reports directly to CAF. CDAPP is responsible for managing the following directors, (1) Director Air Capability Plan (hereinafter referred to as DACP), (2) Director Military Air Regulation and Policy (hereinafter referred to as DMARP), (3) Director Human Resources (hereinafter referred to as DHR), (4) Director Logistics (hereinafter referred to as D LOG) and (5) Senior Finance Officer (hereinafter referred to as SFO). CAF is furthermore supported by the following staff functions, (1) the Sergeant Major of the Air Force (hereinafter referred to as SMAF), (2) Inspector General of the Air Force (hereinafter referred to as IGAF), and (3) Director Corporate Staff Services (hereinafter referred to as DCSS).

Figure 6.5: Air force office

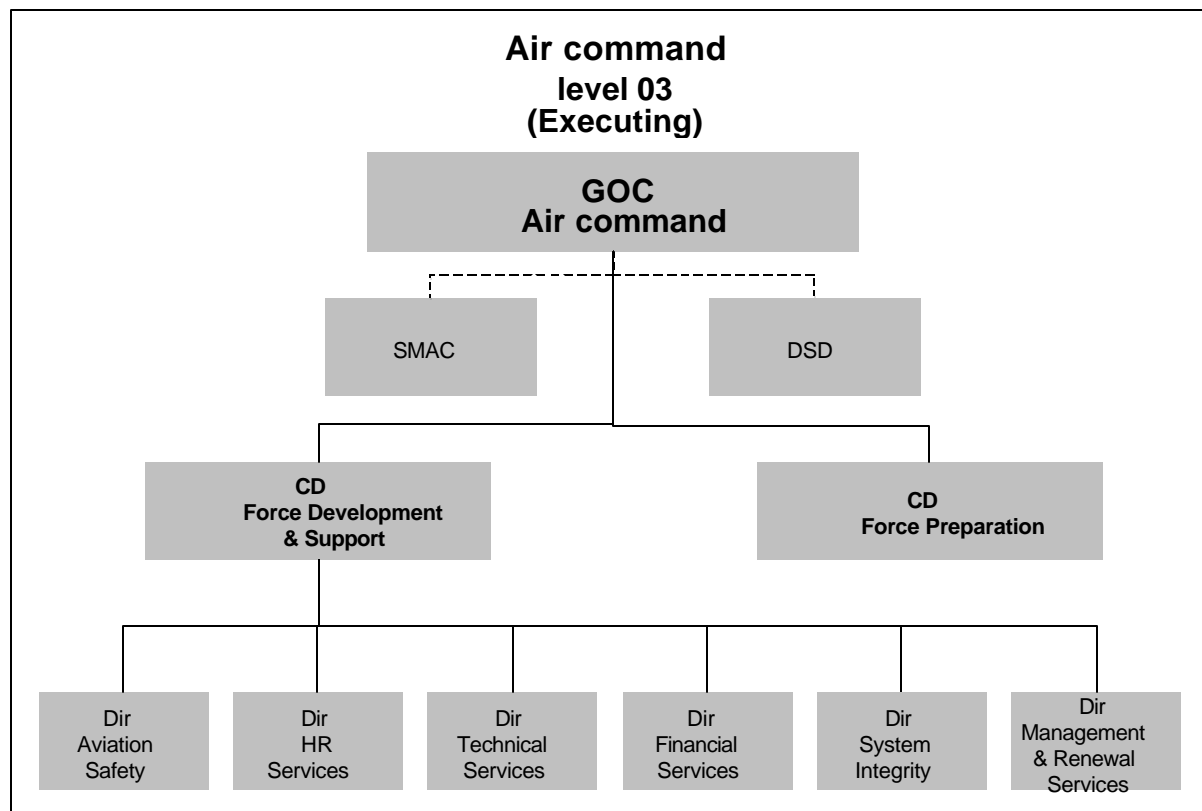


Source: Coetzee (2003:14)

6.3.2 Air command

The General Officer Commanding Air Command (hereinafter referred to as GOC Air Comd, see figure 6.6) starts to execute the plans and generic policy. He is responsible for force development and support as well as force preparation. Chief Director Force Development and Support (hereinafter referred to as CDFDS) is responsible for the following functions, (1) the furthering of institutional performance (performed by Directorate Management & Renewal Services), (2) the rendering of human resource services (performed by Directorate Human Resource Services), (3) the rendering of technical services (performed by Directorate Technical Support Services), (4) the rendering of air force related financial services (performed by the Financial Services), (5) the certifying of air force systems (performed by Directorate System Integrity), and (6) the promoting of aviation safety in the air force (performed by Directorate Aviation Safety).

Figure 6.6: Organisational structure of the Air Command



Source: Coetzee (2003:16)

Chief Director Force Preparation (hereinafter referred to as CDFP) consists of seven system groups, namely (1) Directorate Combat Systems, (2) Directorate Helicopter Systems, (3) Directorate Transportation and Maritime Systems, (4) Directorate Education, Training and Development, (5) Directorate Base Support Systems, (6) Directorate Operations and Intelligence Systems, and (7) Directorate Command and Control Systems.

6.3.3 Air force bases

The SA Air Force has eight self-accounting air force bases at various locations in the RSA as indicated in figure 6.7. These eight air force bases, namely Air Force Base Bloemspruit, Durban, Hoedspruit, Langebaanweg, Louis Trichardt, Overberg, Waterkloof and Ysterplaat (see figure 6.7) are used for the purposes of this study. In order to be an air force base the following criteria must be met, namely (1) have its own runway, (2) have

self-accounting status⁴, (3) have one or more permanent flying squadrons, and (4) host regular flying activities. The various air force bases were established to be “Centres of Excellence”⁵ in the following aircraft systems, namely (Van Zyl 2003:32):

- AFB Louis Trichardt to be an *Air Fighter Centre of Excellence* (base for fighter aircraft), which is vital as a force multiplier for deterrence purposes.
- AFB Hoedspruit to be an *Air Fighter Training Centre of Excellence* (base for advanced fighter training aircraft), which is vital for force preparation training of fighter pilots.
- AFB Waterkloof to be an *Air Transport Centre of Excellence* (base for transport aircraft), in fulfilling the mobility needs of the SA Air Force itself and of its various customers.
- AFB Bloemspruit to be a *Helicopter Centre of Excellence* (base for helicopters), to transport people or material directly to or from the point of need in war and peace.
- AFB Langebaanweg to be an *Air Training Centre of Excellence* (base for Pilatus Astra training aircraft), to provide the SA Air Force with sound basic flying training.
- AFB Ysterplaat to be a *Maritime Aviation Centre of Excellence* (base for maritime aircraft) aimed primarily at coastal patrol and the monitoring of marine resources.
- AFB Durban to be a *Helicopter Centre of Excellence* (base for helicopters) to transport people or material directly to or from the point of need in war and peace.
- AFB Overberg to be the *Test Flight Centre of Excellence* (base for test flight services) to prepare aircraft, conduct test flights and to evaluate aircraft with the emphasis on testing aircraft and all equipment carried on aircraft. A wide variety of ground, sea and air launched objects are also tested.

Although each base falls under the command of its own Officer Commanding (hereinafter referred to as OC), the mission, aim, responsibilities and budget of the various bases are similar (HS PLAN/D MAGS/502/1 13 June 1996). SA Air Force bases prepare and test manned air systems for force application on behalf of the SA Air Force and related defence industries (such as Denel and African Defence Systems). This task is not limited to the force preparation of existing aircraft systems in the SA Air Force, but also include rendering test flight related services/products to acquisition⁶, technology, support and

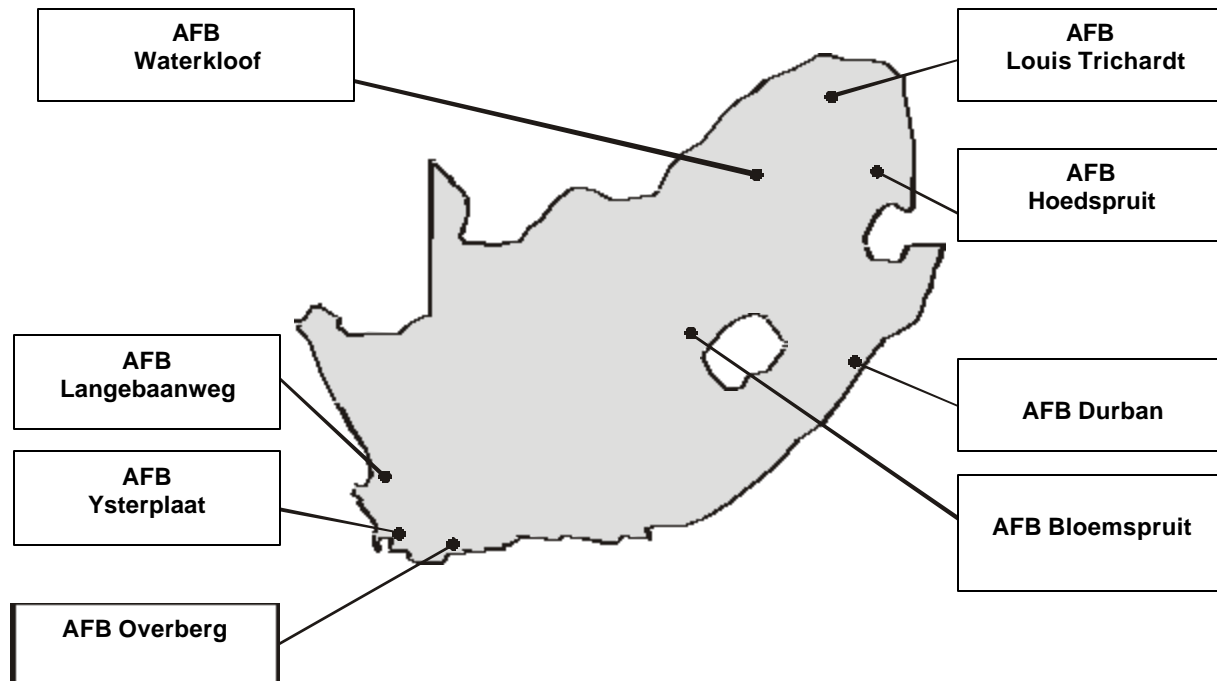
⁴ In SANDF context it implies a base with limited accounting status. Accountability is usually limited to the management and accounting of service equipment such as aircraft spares. Other services and domestic arrangements are usually provided by the various divisions at the base.

⁵ Focus area (aircraft type) of an air force base.

⁶ Acquisition is the conjunction of efforts to develop, produce and provide a weapon system for the user.

evaluation programmes. The services/products that can be rendered by the eight air force bases to the SA Air Force and other identified clients include aircraft testing, weapon testing, support for operational exercises, consultation and training.

Figure 6.7: SA Air Force Base locations in South Africa



Source: Van Zyl (2003:36)

Each air force base has the necessary infrastructure to prepare and evaluate aircraft, therefore each air force base is primarily focussed on service to the SA Air Force. The emphasis is on the force preparation of aircraft and all that can be carried on an aircraft. Therefore, each air force base has its own flight personnel, air traffic control services and aircraft for force preparation. Each air force base supports the government and the Minister of Defence in respect of all aspects of international civilian and military cooperation as far as force preparation is concerned. Each air force base is further an important part of the supporting infrastructure that the SANDF needs to establish a basic deterrence. It supports the SANDF with its preparations to defend the RSA, as well as to participate in peacekeeping operations.

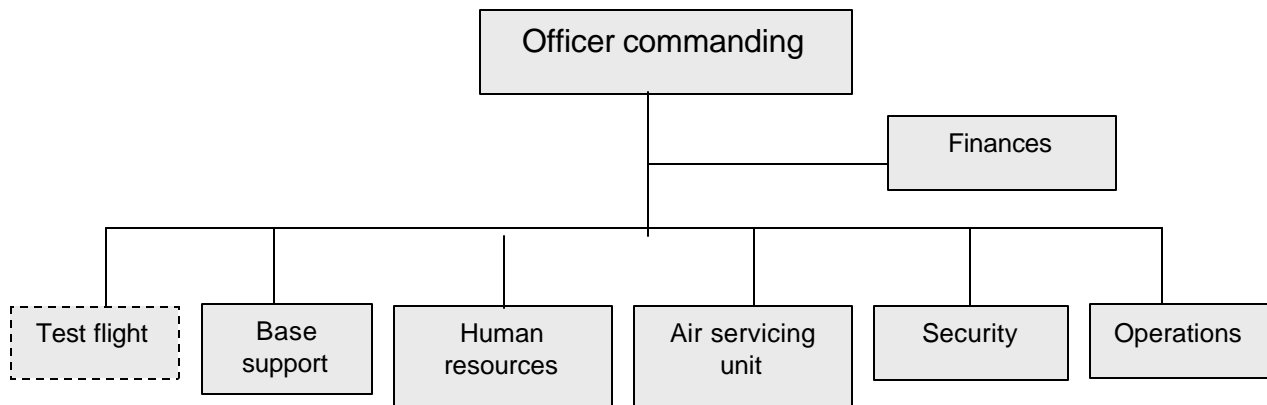
Each air force base and all relevant assets belong to the government and are managed accordingly. The total budget of air force bases consists of a combination of personnel and base support items. Air force bases are financed by means of a pre-approved budget with the aim of providing force preparation services to the SA Air Force and other institutions, both national and international. Just as in the case of all other defence force units, air force bases are required to operate within their budget.

Figure 6.8 depicts the generic layout of air force bases. The air force base organisational design is based on the defined main business processes to ensure that the design supports the flow of these processes as well as the execution of resultant procedures. Air force bases' flat organisation structure ensures the shortest possible lines of communication between the point of decision-making and the execution of tasks. The number of managerial levels is determined by the nature of the functions performed as well as the level of expertise of personnel employed, but is always limited as far as possible. Within air force bases' flat organisational structure a realistic span of control is maintained, both in terms of the number of organisational units (entities) and personnel reporting to a director as well as the expertise required to manage certain functions. Posts (workers) and sections are grouped in organisational units to enhance interaction. Each air force base consists of various departments that each renders specific functions. The main aim of all the departments is to contribute to the rendering of effective and efficient flight relevant services to the SA Air Force and related defence industries. The seven departments are indicated in figure 6.8 and their specific objectives and functions will subsequently be discussed.

- Department Finances: This department is responsible for the management, accounting and administration of the total budget of the base. It is also to ensure coordinated financial administration and the execution of the SANDF's financial scheme as contained in the budget. It is further responsible for the compilation of the base's budget and must exercise control over the spending of all government funds allocated to the base.
- Department Test Flight (only in the case of AFB Overberg): This department is responsible for the developmental testing, operational testing and acceptance testing of all weapon systems in the SA Air Force. Maintenance testing is also performed.

Advice is also provided to programme managers of acquisition programmes in order to ensure that the client obtains the right service/product from the provider.

Figure 6.8: Organisational structure of an air force base



Source: Own observation

- Department Base Support: This department is responsible for the logistic management and support of the entire base, including (1) motor transport administration and maintenance, (2) building and facility maintenance, (3) mess administration⁷, (4) supply support, (5) environmental services, (6) airfield maintenance, (7) terrain maintenance, (8) logistic training, (9) workshop management and administration and (10) the technical status management of the entire base.
- Department Human Resources: This department is responsible for personnel provisioning, personnel maintenance and personnel utilisation. Personnel work includes generic administrative functions (for example determine personnel policy, organising personnel and dealing with personnel finances), help functions (eg collecting and processing data and making decisions on personnel matters) and functional activities. The latter include personnel provisioning functions (creating posts, creating an establishment, recruiting, placing, transferring, promotions and discharges), supporting functions (determine service provisions, dealing with grievances, labour relations, research, medical and welfare matters), training and development functions and employment functions (providing work programmes, disciplinary actions and personnel evaluation).

⁷ A mess is a facility at a base that provides daily meals to employees of the SA Air Force.

- Department Air Servicing Unit: This department is responsible for the total management of the serviceability of the aircraft systems used for force preparation. These include aircraft maintenance, pre-flight and post flight inspections, armament of aircraft and the configuration management of aircraft.
- Department Security: This department is responsible for all security aspects at the base.
- Department Operations: This department is responsible for the daily planning of all operational flights, as well as the air traffic control of all outgoing, incoming and passing flights in the base's declared⁸ air space zone. Within this department are the sections counterintelligence and communication that are responsible for all counterintelligence tasks and the operational management of all communication networks at the base.

6.4 HISTORICAL DEVELOPMENT TO IMPLEMENT TOTAL QUALITY MANAGEMENT IN THE SOUTH AFRICAN AIR FORCE

6.4.1 1980 to 1988

In 1980 a need was identified within the SA Air Force to manage air force bases (see figure 6.7) according to quality standards in order to ensure that aircraft systems were maintained correctly. Although there was at that stage no financial deficits in the budget of the SA Air Force, the procurement of spares or the acquisition of new aircraft was either limited or in certain cases totally impossible. Quality assurance management techniques were established on 10 August 1975 to ensure the operational serviceability of aircraft systems. SA Air Force bases were responsible to ensure the operational serviceability of aircraft systems and the integrity of aircraft systems. The quality of a product or a specific task or service was dependent on the integrity and skills of all who contributed to the end result. Proper maintenance enhanced system reliability with the result that the client's trust in the equipment and the people who modify and maintain these was enhanced. As far as aircraft systems were concerned and where it contained potential danger in respect of certain operational tasks, this trust was very important. It was therefore of the utmost

⁸ A declared airspace is airspace where only specific aircraft may fly.

importance that quality of maintenance and modification were at all times ensured by formal quality management practices. (AFI 3/1/88.)

With the establishment and expansion of the various air force bases since 1975, quality standards were applied in limited format, based on *Lugmag Uitgawe 81*-system documentation (hereinafter referred to as LMU) for aircraft inspections, maintenance and limited depot production. At that stage members of air force bases received international training in respect of the maintenance, modification and improvement of aircraft systems. The quality and inspection of products/services were limited to the level of training that the employees of the various systems had received. Complicated electronic processes and especially mechanical structure strength tests were performed by the Centre for Scientific and Industriel Research. (AFI 3/1/88.)

The first real discussion of quality management guidelines and shortcomings took place during an Air Force Staff Council meeting⁹ held on 23 February 1983. In national interest the SADF launched a formal SADF wide productivity improvement programme on 25 November 1986. Productivity was for the first time regarded as:

- techniques to improve employee performance and the working environment;
- measuring how well managers employ the available resources to obtain the desired results; and
- an instrument with which quality can be improved.

In 1987 the SADF celebrated its 75th year of existence - 1987 was also the beginning of an exceptional effort to establish productivity improvement as a way of life in the SADF. The establishment of a productivity improvement programme resulted in financial savings for the SADF of approximately R30 million (Oschman 2002:137). As a result the SA Air Force promulgated Air Force Instruction (hereinafter referred to as AFI) No 0/5/88 according to which the SA Air Force, in national interest, had to promote productivity on a continuous basis by establishing a formal productivity improvement programme. AFI 0/5/88 focussed on the following three objectives, namely:

- Improved effectivity (“do the right things”).

- Improved efficiency (“do things right”).
- Improved quality of working life.

Since the implementation of the productivity improvement programme in 1987, the SA Air Force has presented an annual productivity competition at all air force bases. Productivity awards were presented to bases for maintaining productivity and reducing costs, while not decreasing the morale or motivation of members. Floating trophies symbolizing supreme excellence were at stake. During this period the concept “quality assurance” was used as management mechanism to increase productivity. By following this approach employees had little opportunity to participate in management on a structured basis.

6.4.2 1989 to 1997

As a result of shortcomings in AFI No 0/5/88 the SA Air Force promulgated an improved AFI 4/12/91 on 11 October 1994. This instruction was based on the 20 International Organisation for Standardisation’s (hereinafter referred to as ISO) 9000:2000 elements as discussed in chapter 2, paragraph 2.6. The aim of the instruction was to ensure that quality assurance was managed purposefully and uniformly in the SA Air Force in order to improve productivity. The Quality Procedure Manual (hereinafter referred to as QPM) that was designed as a result of this instruction, was used as a reference document to other relevant documents in the SA Air Force. In this manual the manner in which a department was to be managed was inter alia discussed. The benefit of the manual was that if a person who was responsible for a specific task was absent, any other person could perform his/her task with the aid of the section/department’s QPM. A further objective of AFI 4/12/91 was to explain the QPM and to ensure that there was uniformity in respect of the compilation of QPMs at air force bases. Although AFI 4/12/91 addressed the important aspects of quality standards, there was no indication as to how the process was to continue and employees/clients as an important asset of all air force institutions were ignored. (AFI 4/12/91.)

Between 1989 and 1997 the personnel numbers of the SA Air Force increased to 11 500 owing to the increased technical expertise required and the increased number of projects that the SA Air Force had to deal with. The number of projects in which the SA

⁹ At that stage the Air Force Staff Council consisted of the various SA Air Force directors, under the

Air Force was involved, increased with 120% between 1989 and 1997. As the number of projects increased, the customers of the various bases also increased with 50%. Since the beginning of 1989 a large amount of management time was dedicated to the planning of quality assurance and flight safety as aircraft systems were very expensive to operate. Since 1994, after the political changes in South Africa, the creation of a system of equal opportunities, a safe and healthy work place and the development of all employees became important priorities in the SA Air Force. (Oschman 2002:138.)

After promulgating an amendment to AFI 4/12/91 in 1994, the quality management of air force bases showed a dramatic improvement. To determine the effectiveness of the amended AFI 4/12/91, audits were conducted by the quality management (QM) sections at all air force bases. These audits indicated a remarkable improvement annually from 1994 to 1997. Audits were completed in a cycle of at the most 18 months. After each audit the base was awarded a star grading that had to be displayed on a prescribed display board. From 1994 to 1997 all air force bases maintained a three to five star grading in respect of quality assurance. In 1996 various air force bases were awarded either a silver or a gold SANDF productivity award. The productivity improvements included technical as well as administrative innovations that were expressed annually in financial terms. In 1997 the air force bases had more than 550 innovative entries. These entries resulted in financial savings of R13 million. At the end of 1997 the NPI silver and gold productivity awards, based on performances in 1997, were awarded to the SA Air Force. These awards were presented to those bases in the SANDF that had shown exceptional productivity improvement. The main reason why the SA Air Force was awarded these prestigious awards, was because the air force bases were the leaders in the entire SANDF in respect of the establishment of dynamic leadership that resulted in good discipline, the empowerment of subordinates and the maintenance of high standards and work ethics. The entries also included many administrative innovations to bring the leadership potential of subordinates to the fore. (TFDC/103/7.)

6.4.3 1998

In 1998 the OC's of air force bases determined that training was to receive the most emphasis at bases. Training courses were developed with the focus on *leadership*

development, based on Blanchard's (1994) "Leadership and the One Minute Manager"; *teamwork*, based on Blanchard's "Building High Performing Teams", *developing creativity*, based on the works of Kobus Neetling; and *general management principles*, based on the works of Flanagan & Finger. A part-time top management official presented these courses.

The Directorate Management Services (hereinafter referred to as DMS) of the SA Air Force also officially presented the transformational leadership course, based on the theories of Bernard M. Bass of the United States of America, at air force bases. Through research Bass has proven that transformational leadership has motivated subordinates in the American defence force to put in extra effort in order to perform. This contributes to military preparedness and subordinates are encouraged to commit themselves to the vision and mission. The reason and need for the training was that the top management of air force bases realised that their employees were their most valuable asset in the high technological environment in which they had to provide services to the SA Air Force and other defence clients. Top management also realised that *quality of work life* depended on the extent to which the employee has a say in how the work must be done as well as what recognition should be given for a task well done. After a work session the OC's of the air force bases launched the following action plan to improve quality of work life at each air force base, namely (Oschman 2002:140):

- to encourage participation in decision making by means of small group activities;
- to discuss career opportunities with employees and equip employees by means of training and development with the necessary skills to realise expectations;
- to give more recognition in order to promote a spirit of fulfilment;
- to ensure a safe work place; and
- to change an autocratically structured management system to a team spirit system at air force bases.

OC's realised that employees needed support systems as well as the necessary empowerment to perform their tasks effectively. As they all agreed that transformational leadership should be regarded as the heart of leadership, they felt that they had an important role to fulfil if they wished to apply it successfully. According to Edwards (1999:50), the application of the new paradigm of leadership is not only restricted to the

strategic level of an institution, but any leader at any level of the hierarchy can apply the approach to influence subordinates to commit to the mission and objectives of the institution. Therefore, the base command councils (hereinafter referred to as BCCs) of the various air force bases underwent the training first to indicate their commitment to empower employees. The White Paper on Defence and the White Paper on Transformation in the Public Sector indicate that the emphasis of training should be mainly on the following aspects: empowerment of employees, acquiring skills, development of employees (including self-development), the establishment of a professional work force and maintaining high ethical values and standards (Edwards 1999:51).

Early in 1998, Major General Carlo Gagiano, former Inspector General of the Air Force (hereinafter referred to as IGAF), became concerned about the SA Air Force's ability to increase productivity and to compete with the top air forces of the world. With the intention of encouraging greater productivity and competitiveness at all air force bases, more emphasis was placed on the necessity of a quality attitude amongst all members on a permanent and long-term basis in order to ensure continuous improved performance. Major General Gagiano convinced the AF Board that the future of the air force lay in the provision of quality services and products. He conducted research on the use of a quality based self-assessment model, known as the "*European Foundation for Quality Management model*" (hereinafter referred to as EFQM), in order to determine its performance according to an internationally recognised management philosophy. According to him the best method to achieve quality services and products was by means of the TQM philosophy, supported by the EFQM model and the two ISO standards, namely ISO 9000:2000 and ISO 14000, which represent a system as a common denominator for what business quality entails internationally. The reasons why Major General Gagiano decided to use ISO 9000:2000 and ISO14000 in conjunction with the TQM philosophy and EFQM model were that (1) customers required it, (2) certification meant more business, and (3) it reflected well-organised operations (MRI: 007775 2000:2). By using the EFQM model, Major General Gagiano wanted to restore productivity improvement at air force bases through the application of policies and management techniques, which resulted in a substantial improvement in productivity and other gains on a broad scale at the air forces of other countries. After two conferences held in Pretoria towards the middle of 1998, the emphasis turned to creating the right culture for improved customer services and increased productivity and, consequently, the performance of the air force. The necessary training was presented to the top

management of the SA Air Force and the OC's of air force bases by an external consultant, Mr Bond of Ideas Management.

Since the beginning of 1998 the SA Air Force no longer participates in the NPI competition owing to the fact that the Office of the Inspector General of the SA Air Force had taken over the responsibility of DMS with regard to evaluations/inspections and training. IGAF introduced a new approach to evaluations/inspections and training with a view to improve the results of the SA Air Force bases, with the emphasis on quality. The TQM and EFQM model implementation effort began in middle 1998 under the leadership of Major General Gagiano. The office of IGAF became the recognised directorate in the air force for training, publications, conferences and research in respect of TQM and EFQM self-assessment disciplines. The top management of the SA Air Force regarded TQM and the improved evaluation/inspection system as essential in order to keep personnel at the various air force bases informed as to the position of their bases and as a means to make the problems experienced at bases visible. IGAF aspired to improve the productivity of all bases in the SA Air Force, to limit expenditure as much as possible and to foster a culture where all personnel members were treated as customers.

6.4.4 1999

At the beginning of May 1999 the top management of the SA Air Force set the objective to implement the TQM philosophy and EFQM model at all eight air force bases (see figure 6.7). One of the main reasons for the switch to total quality was the announcement in 1996 of the new strategic defence package that *inter alia* included the procurement of new aircraft systems. The modernisation of aircraft systems and the new technology resulted in an improvement in the air speed of aircraft and the effectiveness of weapons. It entailed amongst others that new systems be managed and maintained in the best way possible. A further point of interest was to establish the need for a total quality attitude amongst all members of the SA Air Force to ensure continuous improved performance of the expensive systems. The main aim was to enable employees to perform their tasks more productively, to ensure that quality service was delivered to clients and to improve general results. Prior to the implementation of the model, management ensured that the aim and objectives of the SA Air Force were clearly understood by all involved so that these aspects would continuously be borne in mind. The reason for this point of departure was that they did not want to apply a new process within their own area of responsibility

without fully considering the impact of their own plans and later actions on the aspirations and objectives of the SA Air Force.

On closer examination it became clear that TQM obtained new stimulus amongst employees once members from the Office of the Inspector General of the SA Air Force conducted evaluations based on the EFQM model at air force bases. This observation was amongst others made by comparing the results of the inspections conducted with those previously obtained by members from DMS. From this comparison it appeared as if there was a shift in emphasis in the management mechanisms identified by IGAF to improve the results of SA Air Force bases. DMS either did not point out contentious matters during their evaluations, or they suppressed/ignored them. The SA Air Force therefore became more open in its approach to its employees and as to what was expected of them. From the contents of the new evaluations based on the EFQM model, it was clear that contentious matters with regard to especially the welfare of the SA Air Force bases received more attention.

The EFQM model is based on the TQM philosophy and has the following unique characteristics for the philosophy of the SA Air Force, namely (Oschman 2002:144):

- to determine the performance of SA Air Force bases on the basis of an internationally recognised management philosophy;
- to promote and stimulate air force bases to adopt strategies to improve quality as a fundamental process of continuous improvement;
- to make the personal initiatives and interest of CAF in TQM more visible;
- to force the SA Air Force to continuously look at itself and to improve owing to changing circumstances;
- to achieve clearly measurable results (as a service institution this was a major challenge for the SA Air Force);
- to give recognition to air force bases who have demonstrated outstanding achievement in the improvement of the quality of their people, processes, products, services and management;
- to achieve objectives in an efficient manner as opposed to the point of view that the best results should be obtained;

- to improve the SA Air Force's financial position by means of an improvement in quality in such a way that weapon system projects could be tackled; and
- the realisation that the SA Air Force as part of a larger government department should make a valuable contribution to improve quality in national interest.

The EFQM model was implemented slowly and systematically. The implementation plan that was followed can be applied with great success by other air force bases or public institutions that plan to implement the model. In September 1999 Major General Gagiano proposed that CAF annually present an EFQM award to those air force bases that have performed exceptionally well in order to add impact, visibility and prestige. However, he was careful to point out that winners should be selected by the Office of IGAF to avoid political influence as IGAF was selected by the AF Board based on his reputation for impartiality. Major General Gagiano further stated that the SA Air Force had embarked on the TQM philosophy and EFQM model in order to have a better operational system. The SA Air Force also felt that they needed to be competitive to other SADC air forces in order to deliver quality services to peace-support operations on the African continent. Other reasons were: (1) to improve working conditions, (2) to improve productivity, (3) to improve employee work satisfaction, and (4) to improve customer satisfaction. (Msimang 1999:6.)

The TQM and EFQM effort began to gather momentum. In the ensuing months, basic structures for award administration and funding for training began to take shape. By the fall of 1999, draft criteria had been developed by IGAF. IGAF's work created the air force mechanisms and laid the groundwork for inspections/evaluations and to make recommendations for the yearly awards. The Office of IGAF provided broad direction to the TQM and EFQM programme. They met monthly to review award activities and make recommendations for improvement. Day-to-day operations and administration of the award programme were carried out by IGAF. They also designed and prepared instructional materials for use in the information transfer programme and assisted with training activities. In November 1999 the Test Flight and Development Centre was the first air force base to win the prestigious award, based on the EFQM self-assessment method.

6.4.5 2000 to present

Since the year 2000 the motto of the SA Air Force has changed to “Our People, Our Air Force, Our Future” (Coetzee 2003:5). Bearing this in mind, the SA Air Force realised that its human resource must be regarded as its most important asset. The importance of this resource is confirmed by the prominence provided to man in the Strategic Transformation Plan, as detailed in Vision 2012. According to this plan, the SA Air Force accepts full responsibility for the success of Vision 2012 as a comprehensive plan to change and renew the air force. In this regard it is of exceptional importance to recognise that the members of the air force must have specific capabilities and skills owing to the highly advanced technological environment within which they have to function. Owing to the drastically changed environment of the SA Air Force, human resources are regarded as the central point around which all activities must occur. It is the responsibility of the top management of the SA Air Force to lead its human resources to successful work performance.

The SA Air Force realised that it had many internal and external suppliers and customers with whom they had to cooperate. The SA Air Force employs the services of contractors and consultants in the private sector for the maintenance of various systems; amongst others ground systems, aircraft systems and subsystems of various main systems. These institutions are contacted on a daily basis and cooperation occurs in a coordinated manner. However, the question that arises is how management at military institutions, such as the air force bases, must occur in order to ensure satisfaction amongst internal and external suppliers and customers. The implementation of the Public Finance Management Act, 1999 (Act 1 of 1999 as amended by Act 29 of 1999) together with the promulgation of the Public Service Act (Act 103 of 1994) and the Public Service Regulations (PSR), 1999 prescribe measures to promote the efficient, economic and effective use of resources in the SA Air Force. These public policies require departments in the SA Air Force to develop and establish systematic management systems in order to ensure that all SA Air Force resources (assets and liabilities) are managed efficiently, economically and effectively. They also provide a hierarchy of accountabilities, roles, responsibilities and functions for sound administration. Faced with this together with the degenerating of physical infrastructure at air force bases, the leaders of the SA Air Force recognised the growing need for TQM implementation to provide both long-term direction and a short-term operating framework. They realised that TQM can help the SA Air Force leaders to determine where the SA Air Force ought to be going, identify the resources it needs to get there and develop the long and short-term action plans required to

accomplish its objectives. In the year 2000 Brigadier General Eksteen succeeded Major General Gagiano as IGAF. He subsequently replaced the EFQM model with the South African Excellence Foundation (hereinafter referred to as SAEF) model. The implementation of this quality based self-assessment model served as a stimulus for this study.

Since the beginning of the year 2000, the AF Board committed itself to a demanding transformation process in an effort to harmonise its strategies and objectives with those of the SAEF. To meet these demands, the AF Board developed a long term outlook – SAAF Vision 2012 - which maps out the environment within which air power has to be created and provided, the strategic challenges and issues it faces to achieve the desired future state, and the strategic objectives it has set to ensure success. The AF Board accepted the challenge and also committed themselves to the TQM philosophy by setting the following goals, namely (Oschman 2002:143):

- to annually give recognition to prestige bases in the SA Air Force and to successfully implement the SAEF model by the end of 2001;
- to develop and maintain such levels of efficiency that the flight safety objectives of the SA Air Force are ensured; and
- to obtain the highest possible level of flight safety preparedness through the optimum utilisation of the taxpayers' money.

In more direct quality terms the following objectives were set, namely (Oschman 2002:143):

- to utilise quality management over as wide a level as possible and to increase it to the highest level possible;
- to foster the idea of quality management on a permanent basis amongst all employees;
- to encourage optimum participation in all facets of quality management amongst all employees and other interest groups; and
- to foster more awareness of the meaningful appropriation of funds, as well as the employment of employees and utilisation of facilities and equipment.

The aim of the aforementioned objectives was to prepare for the future. Bearing these objectives in mind, the OC's of the various air force bases held a four-day work session in May 2000 in order to discuss the implementation of TQM at all air force bases. It was the first time the TQM philosophy and SAEF award were discussed in a formal legislative meeting. The following subjects were discussed, namely:

- A TQM implementation plan for SA Air Force bases.
- An implementation plan for the SAEF model for self-evaluation within air force bases.
- Identifying all the customers of air force bases.
- Funding of the new programme (SAEF model).
- Time span in years for implementing TQM.
- Creating three new posts in IGAF, (1) one to manage the SAEF/ISO9000 implementation, (2) another to manage occupational health and safety, and (3) one for training in the SAEF (the three posts were approved and filled in 2000).

During the work session the OC's accepted TQM as the management system to be followed. It was also decided that the emphasis should be on service rendering, employee empowerment and applying the SAEF model as management model, based on the National Quality Criteria for self-evaluation purposes. The AF Board together with the OC's decided to use the SAEF model as management model for the following reasons (Schoeman 2002:5-10):

- The SA Air Force was beginning to understand that improved quality of service goes hand in hand with improved productivity, lower costs and increased customer satisfaction.
- The SAEF model serves as a method to stimulate the air force to improve quality and productivity for the pride of recognition while obtaining a competitive edge through increased service delivery.
- The SAEF model provided a means to recognise the achievements of air force bases that improved the quality of their services and provided an example to others.
- The SAEF model serves as a solid basis to manage the entire air force according to a recognised management model.
- The SAEF model serves as prerequisite to becoming a world-class institution.

- The SAEF model provides all the important dimensions required to successfully implement TQM.
- The SAEF model serves as a method to integrate existing management systems into one single management system, with the aim of all departments moving into the same strategic direction.
- The SAEF model can be used to increase communication, participation and cooperation.
- The SAEF model can be used to identify continuous areas for improvement.
- The SAEF model can be used as a daily technique to increase work performance.
- The SAEF model can serve as framework for further integration.

The AF Board further decided to implement the following drastic changes in order to support the implementation of the TQM plan and SAEF model, namely:

- Work units change – from functional departments to process teams.
- Jobs change – from simple tasks to multi-dimensional work.
- People's roles change – from controlled to empowered.
- Job preparation changes – from training to education.
- Focus on performance – from activities to results.
- Advancement criteria change – from performance to ability.
- Values change – from protective to productive.
- Managers change – from supervisors to coaches.
- Organisational structures change – from hierarchical to flat.
- Executives change – from scorekeepers to leaders.

By middle June 2000 time legislation for the implementation of TQM and for a national quality award in the air force was compiled, and in August 2000 Colonel Pelsler (2000:2) introduced the AFI, MRI: 007775 to implement TQM in the SA Air Force, with the objective of encouraging OC's of air force bases to practise effective quality control in the provision of their services. In August 2000 the Air Force Staff Council¹⁰ at level 3 approved the AFI.

In September 2000 the AF Board divided the implementation of TQM into three phases, namely (Oschman 2002:145):

- Phase 1 from 2000 to 2002 – **The start-up phase**, consisting of (1) the learning period to obtain clarity on the “what”, “why” and “advantages” of TQM, (2) the strategy that will be followed by the SA Air Force for the next ten years to manage TQM and (3) the implementation of the SAEF model’s enabler phase.
- Phase 2 from 2002 to 2004 – **The deployment phase**, during which air force bases’ management systems have to be adapted to support the total quality effort. The adaptations were done on the basis of (1) process management, (2) empowering employees, (3) implementing quality teams to accept TQM as culture at SA Air Force bases and to work according to the principles of quality on a day-to-day basis, (4) computer control techniques to determine tendencies in order to obtain continuous improvement and (5) 100 % integration of the SAEF model’s enabler phase. (The start-up phase and the integration/deployment phase together form the enabler phase.)
- Phase 3 from 2004 to 2012 – **The result phase**, consisting of the continuous improvement of service rendering results to clients and employees in order to be regarded as a world-class institution. This phase will also focus on the result phase of the SAEF model. In this phase it will be determined whether the manner in which things are being done at the SA Air Force correlates with exceptional results. Various techniques will be used to measure results. Full transparency should also be obtained on whether the SA Air Force has made any progress or not.

The AF Board also set the following *critical success factors* for themselves, namely (Oschman 2002:146):

- to ensure that top management drives the implementation of phase one to three energetically;
- to involve middle management from phase one and to fully understand their support needs;
- to pay attention to employee needs at all times and to encourage employee participation;

¹⁰ Directors on level 3.

- to limit top management's participation in order to establish clear opportunities for employees to increase ownership;
- to provide good training during phase one, by satisfying specific needs;
- not to delay phase one once the process has begun;
- not to cancel actions that were planned, such as meetings and training sessions, and
- to openly delegate problem areas/opportunities to employees, but not accountability.

In middle September 2000 the AF Board promulgated the following TQM policy statement (MRI: 009481):

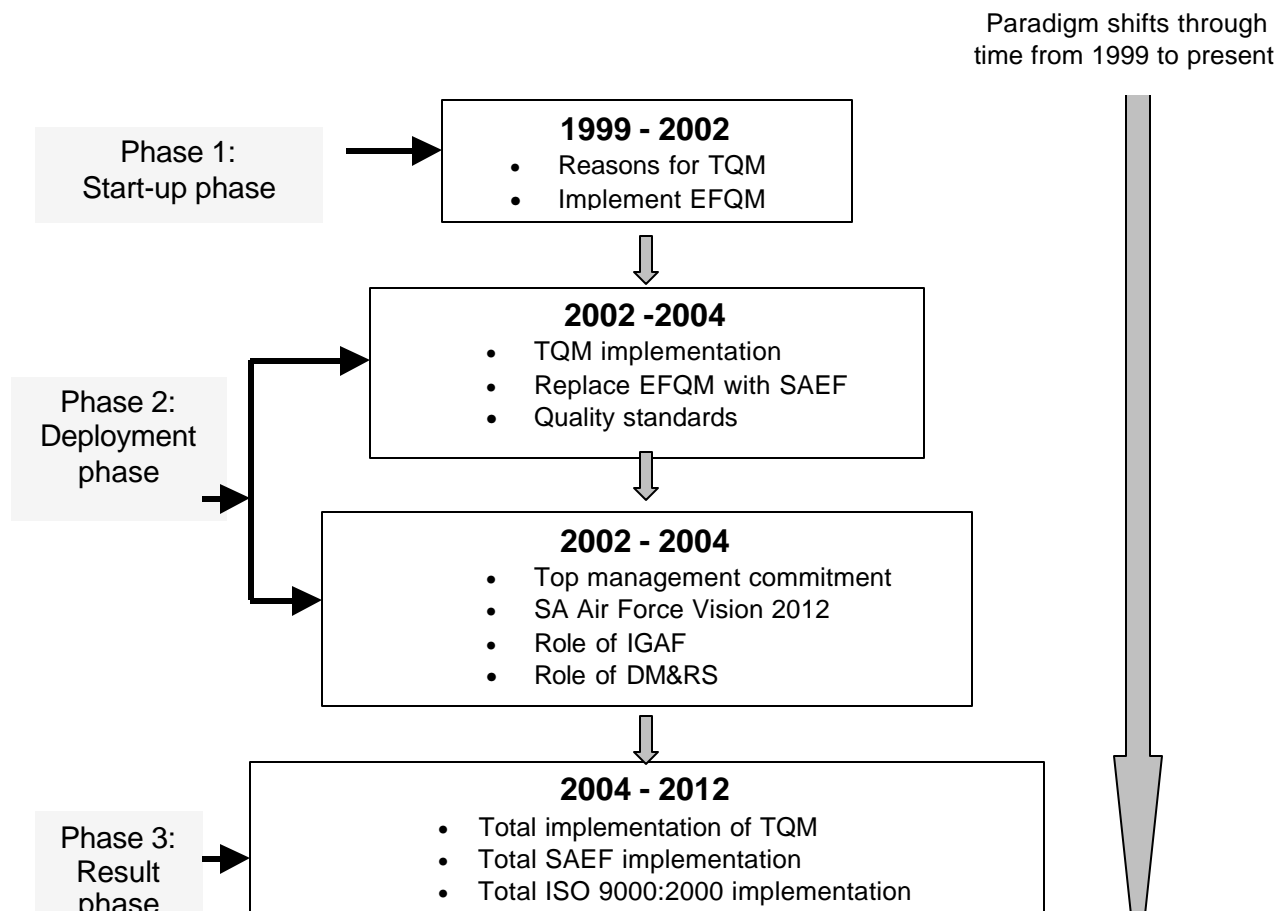
- "We, the members of the SA Air Force, dedicate ourselves to continuously improve the readiness, affordability and integrity of our systems and processes in order to strive for air power excellence."
- "We are committed to exceed the expectations of our internal and external customers and stakeholders."
- "We will empower all air force members by proper delegation of responsibility, accountability and authority, in an atmosphere of trust."
- "We will promote personal and organisational competence, innovation and productivity through the provision of life-long learning and sharing of knowledge."
- "We will reduce safety, health, environmental and other risks related to air force operations and support to the lowest practical level."

With the above approach in mind, the AF Board, as top management of the SA Air Force, conducted an attitude survey compiled by them with due consideration of the principles of the SAEF model, at SA Air Force bases (Msimang 1999:6). The survey was conducted during the initial phase of the implementation of the SAEF model. Prior to the survey, the AF Board conveyed the reasons and aim of the SAEF model to all members employed at bases by means of communication forums. The attitude survey confirmed that a positive climate for the acceptance of the SAEF model existed. This facilitated the task of the AF Board as little resistance to change was noted in the attitude survey. The survey further indicated that there was little fear for dismissal or dissatisfaction in respect of sensitive issues. The major source of dissatisfaction was the *interpersonal relationships* between employees and management at certain departments. The report also indicated that employees were satisfied with their work and employer. Since then the same survey has

been conducted annually and it still indicates that *interpersonal relationships* between employees and management at certain departments are the main problem area (Msimang 1999:7). An extremely positive spirit of cooperation exists that has resulted in exceptional achievements in 2000.

Since 2000 the TQM programme, that includes the SAEF model and ISO 9000:2000/14000, has been launched in an energetic manner at all eight air force bases. In January 2000, the AF Board made known the transformation phases to implement TQM, self-assessment, ISO 9000:2000 and ISO 14000 (see figure 6.9). Formal and informal training on the principles of TQM and applying the SAEF model was presented to top management as well as middle management and employees at the various air force bases. Top management of the bases further indicated their commitment to the process through their close involvement in the training and development of themselves and their employees. They compiled a programme to offer employees the opportunity to contribute to the never-ending improvement of quality that the entire SA Air Force has since systematically began to follow.

Figure 6.9: Transformation phases to implement TQM, self-assessment, ISO 9000:2000 and ISO 14000 at air force bases



Source: Own observation

Together with the training the top management of bases created safe and enjoyable working conditions for their employees. They became personally involved in quarterly safety audits, monthly safety meetings, environmental aspects, as well as investigating serious and potential serious injuries and incidents. The commitment of the management of the SA Air Force to the creation of a safe and healthy workplace without doubt played an important role in the creation of a positive attitude and safety consciousness amongst employees. The top management of bases began to place greater emphasis on the occupational health and safety of employees, as they regarded employees as their most valuable asset. In an environment where weapon systems are modified and maintained there are at all times a safety risk present (AFI 3/1/88). However, it can be limited by sufficient safety precautions and by establishing safety awareness amongst all employees that are involved in flight activities.

The OC's of the various air force bases issued a safety management declaration personally signed by them to all employees. It was part of top management's strategy to create an enjoyable and safe work climate and through training to diminish fears with regard to the new TQM philosophy and SAEF model and to increase employee satisfaction prior to implementing the TQM philosophy and SAEF model. In the first two years since 2000 the award programme based on the SAEF model exceeded the expectations of those who worked to establish and implement it. The task now is to maintain the gains and continue to enhance the award's prestige and value. The award programme is intended to spark interest and involvement in quality programmes, drive air force products and services to higher levels of quality, and better equip air force bases to meet the challenges set by government. The SAEF award is more than an annual presentation done by CAF. It is the driving force of a national movement, the hub around which the wheel of quality improvement in the air force turns.

Now that the historical development to implement TQM is clear, it is necessary to discuss the TQM implementation methodology followed by the SA Air Force.

6.5 TOTAL QUALITY MANAGEMENT METHODOLOGY IN THE SA AIR FORCE

Owing to the paradigm shift and new strategic environment since the year 2000, the SA Air Force was increasingly under pressure, both externally and internally, to improve effectiveness and efficiency, while at the same time adhering to international expectations in respect of occupational health, safety and environmental responsibility. The government clearly stated that the lives of military personnel should not be endangered through the provision of inferior equipment. Furthermore, its environmental policy states that all South Africans, present and future, have the right to a decent quality of life through sustainable use of resources. Meanwhile, budgetary constraints greatly challenged the SA Air Force's ability to satisfy such expectations.

In the face of these and similar pressures, the SA Air Force elected to adopt the philosophy, principles and management system of TQM as a primary tool to help it balance conflicting expectations. In an effort to align South African government departments with modern management practices, the Green Paper on the Government Service prescribes that the business of the DOD must be done in accordance with the principles of TQM. The SA Air Force has chosen TQM as its general management philosophy. The AFI on TQM, with serial number MRI: 007775, was part of a strategic plan drawn-up under the supervision of Colonel Pelsler, a member of the board of DMARP, to make the TQM methodology the SA Air Force was to follow, visible. The reason for promulgating the AFI was that prior to quality management practices being implemented, the top management of the air force wanted to build trust and show their interest in the workers of the SA Air Force. TQM principles were generally well known amongst the directors at levels 2 (see figure 6.5) and 3 (see figure 6.6), who were also aware of the benefits gained on implementation in foreign air forces. The principles of TQM that the AF Board adopted in 2000 focused primarily on the needs of the following (MRI: 007775: 2000:5-8):

- Strategic planning (use foresight) should be used as the trigger action to begin and deploy TQM for future results.
- Top management leadership and commitment should be the core to start TQM implementation.
- Empowerment of all employees as a source for performance improvement.

- Obsession with customer (customer focus – internal and external) and stakeholder satisfaction.
- Covering all parts of the air force base/department by managing the air force base as an open system.
- Continuously reengineer processes for short-term results.
- Include every person (primary resource) employed at the air force base/department.
- Examine all costs that are related to quality.
- Innovation and creativity should be the norm.
- Teamwork through collaboration and participation.
- Continuous training and education.
- Integrated management systems – integrate people, processes (core processes, supporting processes and assurance processes) and technology to support strategy (the strategic intent) to move in the same direction.
- Continuous communication to establish a new culture and manage change continuously.
- Self-assessment (SAEF model) as control mechanism to determine results.

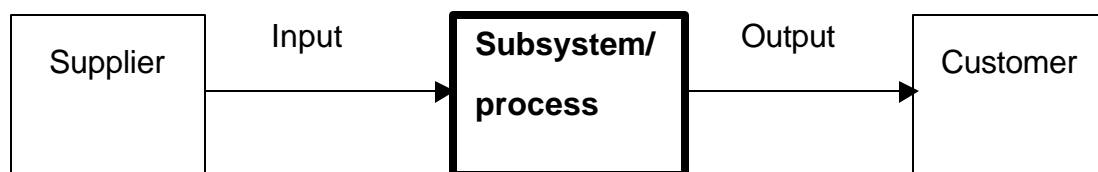
The ISO 9000:2000 and ISO 14000 series quality and environmental management system standards of the International Institution for Standardisation (hereinafter referred to as ISO), as well as the SAEF model added even more value to these principles. Through this approach the SA Air Force showed its dedication to the continual improvement of its systems and processes through the total involvement of all members, in order to meet and exceed the expectations of customers and stakeholders. In August 2000 both CAF and the GOC Air Comd declared their total commitment to the TQM approach by approving the AFI on TQM (MRI: 007775: 2000:1).

IGAF at that time, Brigadier General Eksteen, regarded the SAEF model as the best measure available for the application of TQM in the SA Air Force. Therefore, the SAEF model is used by the Office of IGAF to evaluate air force bases. The model can be applied to any air force base, whether it is involved in strategic management, operations, support, production, or in any other service. It also has the advantage of allowing for direct comparison with first-world air forces. The AFI on TQM, as compiled by Colonel Pelsler, uses the guiding principles of TQM as adopted by the AF Board and the specific process requirements of the ISO 9000:2000 and ISO 14000 series in combination with

self-assessment by means of the SAEF model and continual improvement to establish an integrated effectiveness, efficiency, safety, health, environmental, risk and quality (hereinafter referred to as SHERQ) management system. This management system gives members a simple yet effective framework to evaluate existing management and work processes. The objective is to work smarter, not harder.

During a SA Air Force Excellence Seminar in May 2001, IGAF at that time, Major General Gagiano, stated that TQM was a philosophy that changes management behaviour creating a change-management culture that aims to provide a customer-driven air force. According to him TQM instils a modern inspirational approach to old coercive leadership and management methods, facilitates communication by removing departmental silos and recognising process chains, where the output of previous work processes form the input to subsequent work processes. After this seminar the AF Board realised that a common definition of TQM was required to prevent confusion amongst staff members and to help to resolve any arguments that may arise from time to time within and between departments in the institution. Based on the above-mentioned analysis of TQM by Major General Gagiano, the following definition of TQM was developed for the SA Air Force: "TQM is a total management-led effort to continuously improve the SA Air Force's effectiveness and efficiency at every level and in each area of activity in order to meet and exceed the expectations of customers and other stakeholders" (MRI: 007775: 2000:2). From the definition it is clear that customers are regarded as the downstream users of a process or subsystem's output. For example, an operational squadron is a customer of an air-servicing unit. Upstream providers of its inputs are its suppliers. Customers and suppliers may be within the air force base, *ie* internal, or outside, *ie* external. Every subsystem has one or more customers as well as one or more suppliers, as figure 6.10 shows.

Figure 6.10: Customers versus suppliers



Source: Pelser (2000:5)

At the highest level, the government and people of South Africa are the eventual customers of the SA Air Force, but the DOD's Joint Operations division are the direct downstream users of the SA Air Force's outputs, while the governments and people of friendly countries are also stakeholders. The government and people of the RSA are the ultimate customers of the DOD, but for most of the members of the SA Air Force the most direct consumer of their output is the aircrew in the frontline of operations. A subsystem's right to existence is directly tied to the need for its output, and the efficiency with which it creates value for the customer. Stakeholders are those who are directly or indirectly affected by the intended or unintended results of a process. Stakeholders generally include suppliers to a process, members executing the process, the environment, regulatory agencies and society at large. Examples are the employees of the air force, suppliers, the general public, the environment and the governments and public of friendly countries.

The MRI: 007775 (2000:7) made it visible that the journey towards a TQM culture requires the commitment and creativity of all top managers in the beginning to lead the TQM programme to implementation. TQM also requires that top management be empowered and encouraged to take ownership of their output, to measure their own performance and to prioritise, develop and implement improvements. This change in management style is vital to the growth of the SA Air Force. The AF Board decided that the following executive authorities in the SA Air Force should lead the TQM process, namely (MRI: 007775 2000:5):

- Directors within the Air Force Office and Air Command and OC's of air force bases should implement TQM within their directorates and at their air force bases.
- Every member of the SA Air Force should be responsible and accountable for the quality of his or her outputs, and every manager for the quality of the output of his or her part of the SA Air Force, according to the line responsibility allocated.
- Efficiency coordinators should act as SHERQ management representatives where such posts are available. Where not, OC's should appoint suitable representatives.
- IGAF should carry out regular evaluations to ensure that a sound TQM is maintained.
- Directorate Aviation Safety should promote SHERQ management throughout the SA Air Force.
- DMRS should integrate TQM training into military development courses.

The AF Board realised that an institution does not progress from previous-generation quality management systems to state-of-the-art TQM in the space of a single year. Depending on the starting status, it can take many years of concerted and continued effort to achieve high levels of TQM implementation. Several models to implement TQM are available that illustrate this point. Therefore, the AF Board adapted a model based on the “Capability Maturity Model”, which has its origins in the software development arena, but is equally applicable to the SA Air Force. Five levels of maturity are postulated in figure 6.11.

Figure 6.11: Implementation process of TQM



Source: Pelsler (2000:12)

The AF Board adopted the model as it can be mapped onto the SAEF excellence measurement instrument. Few institutions are higher than level 3, or obtain a score of

more than 50% on the SAEF excellence instrument. ISO 9000 institutions are somewhere between levels 2 and 3. This information is not intended to discourage institutions, but to inject an appreciation for reality into discussions. It may take 2 to 3 years to progress one level of maturity! To implement the model, the AF Board recommended the following steps, namely (MRI: 007775 2000:12-13):

- Integration of TQM into the strategic management process, mission, vision, values and objectives of the SA Air Force, and creation of the required internal environment for TQM to flourish.
- Top-down TQM training and institutionalisation. Top management of headquarters and air force bases should be the first to receive training. Leaders and management should serve as mentors for TQM and as its champions. All the members of a workgroup or management team should be trained together. Training should cascade down the institutional structure. Training and implementation should be integrated, using real situations, real problems and real improvement opportunities as case studies. Trainers should ideally remain available as consultants, *ie* should be knowledgeable SA Air Force employees.
- Identification, definition, analysis, continuous improvement and standardisation of key processes. Continuous improvement consists of identifying and defining opportunities for improvement, analysing collected data to determine process quality drivers, implementing selected improvements, evaluating the results, and taking further corrective action where necessary. TQM should be introduced simultaneously across all parts of the SA Air Force.

6.5.1 Implementation of the ISO 9000:2000

The SA Air Force has chosen to use the ISO 9000:2000 Series Standards and the SAEF model as its main reference for TQM. The recently updated ISO 9000:2000 Draft International Standards series provides extremely valuable guidance at the process level. The standards are now applicable to all types and sizes of air force bases, independent of the type of outputs they produce. The AF Board decided that air force bases should comply with those requirements of ISO 9000:2000 that are applicable to their activities. The ISO 9000:2000 has been simplified and requires significantly less documentation than before. TQM principles have been integrated with the ISO 9000:2000. This revision did not mean that air force bases should discard quality management systems based on the

old AFI 4/12/91 and start developing a new system from scratch. The SA Air Force developed cross-references between the ISO 9000:2000 and AFI 4/12/91 with a very strong correlation between the two and very little additional work being required to comply with ISO 9000:2000. The SA Air Force is in the process of developing an integrated management system to encompass Safety, Health, Environment, Risk, and Quality (hereinafter referred to as SHERQ) management in one. (MRI: 007775 2000:9.)

6.5.2 Environmental management

To implement the full intent of TQM, it was imperative for air force bases to also address environmental protection. ISO 14000 shares common management principles with TQM, the SAEF model and the ISO 9000:2000 Quality Standards. Whilst the latter focuses on customer needs, the former deals with the need for environmental protection. The AF Board decided that the environmental impact should be managed as part of TQM and should address the following (MRI: 007775 2000:13):

- The nature, scale and environmental impact of activities, products and services.
- A commitment to continual improvement and prevention of pollution.
- A commitment to comply with relevant environmental objectives and targets, legislation and regulations.
- Effective waste management.

6.5.3 Occupational health and safety

The Occupational Health and Safety (OHS) Act, Act 85 of 1993, also binds the public sector by virtue of the provisions of section 47 of the Act. The public sector is regarded the same as any other employer. In fact, the public sector is known to be the largest employer in the RSA. Although the OHS Act makes provision for exemptions, the Chief Inspector of the Department of Labour withdrew all exemptions issued to government departments in Government Notice R.1610 dated 11 December 1998. This was done to further uniformity, and in accordance with the request of departments to be transparent in the application of the OHS Act. The sections and regulations of the Act therefore bind the DOD and the SAAF. The Act charges the Chief Executive Officer (CEO) of an institution to ensure that the employer complies with the Act. In terms of section 16 (4), the head of

any department of the public sector shall be deemed to be the CEO of that department. The SecDef is thus the CEO of the DOD. The SecDef may assign his responsibilities in terms of the OHS Act to competent persons employed by the DOD. Subject to certain provisos, the SecDef however remains accountable for any contravention of the Act. The resultant personal accountability ensures the involvement and commitment of the DOD's command cadre in health and safety matters, thereby increasing the effectiveness of the health and safety management programme. The SA Air Force implemented the OHS Act in accordance with Air Force Order (AFO) 4/3/97 dated 22 June 1997. This AFO will remain in force until the DOD Instruction is promulgated which will supersede the AFO. The SA Air Force's implementation of the OHS Act is managed and evaluated as part of the TQM philosophy. (MRI: 007775 2000:13-14.)

6.5.4 Quality manual and handbook

To support the TQM philosophy, the AF Board decided that OC's of air force bases must have a quality manual (hereinafter referred to as QM) and quality handbook (hereinafter referred to as QH). This QM sets out the policy, authority, responsibilities and practices regarding the TQM at a base. The QM also serves as a permanent reference for the implementation and maintenance of SHERQ management systems. The QM in essence reflects the OC's interpretation of the OHS Act, Act 85 of 1993 as applicable to his/her area of command. The SA Air Force developed a generic layout and requirements of a QM. The QH describes the critical processes involved in the production of an air force base section's output, as well as the related SHERQ management practices, resources and activities, as derived from the air force base QM. RSA-MIL-STD-51 - Standard for Quality Assurance (hereinafter referred to as QA) Plans, is used as a guideline, but can be tailored to the specific application. Where the base QM or other SA Air Force documentation such as AFIs, AFOs or new Air Force Publications adequately covers aspects, reference to such documents must suffice. It is not the intention to rewrite existing documents in the QH. However, processes unique and critical to the successes of an air force base should be explicitly addressed (this guidance is also applicable to QMs.) Compliance to the QH is the responsibility of the different section heads of air force bases. (MRI: 007775 2000:14.)

The AF Board decided that all OC's are to ensure that self-assessments, based on the SHERQ and SAEF model, are performed at least quarterly. Cross-evaluation of sections

may be employed to lighten the workload and encourage benchmarking. Self-assessments make use of the SAEF model, ISO 9000:2000 and ISO 14001, as applicable. Self-assessment measures process maturity and quality, and identify environmental, safety, health, programmatic and other risks, problems being experienced and opportunities for improvement. Programmatic risks specifically include those endangering the cost-effective achievement of objectives. It is accepted that not all risks, problems, or improvement opportunities can be addressed simultaneously. Risks are prioritised according to criticality, *ie* present or imminent impact on system cost-effectiveness and integrity, and addressed in order of priority. Where necessary, risk abatement/management plans must be developed. Risks, problems and improvement opportunities, along with corrective actions and improvement efforts initiated as a result, must be recorded in a consolidated management database, and progress on their resolution shall be tracked systematically. However, where the abatement of risks, correction of problems, or implementation of improvement efforts prove to be impossible or outside the powers vested in an OC or director, the issues are to be taken up with the next higher command authority. If this proves unsuccessful, IGAF should be informed. (MRI: 007775 2000:15.)

Records of self-assessments, the consolidated management database, and of all meetings must be kept for at least 3 years, and made available to higher authority and IGAF upon request or during staff visits and evaluations. Bases have to prepare executive summary reports after every quarterly meeting. Bases then forward the reports *via* the normal command line, *ie* through the base command to GOC Air Comd, for the attention of the applicable systems group at level 3 (see figure 6.6). A copy is directed to IGAF for information. These reports have to be kept as short as possible but should at least cover the following (MRI: 007775 2000:16):

- The number of problems identified.
- The number of risks identified.
- The number of improvement opportunities identified.
- The number of each of the above considered to be critical enough, easy enough, or to provide sufficient gains, so as to warrant corrective action, risk abatement efforts, or improvement efforts.

- The number of the latter successfully addressed and completed.
- The number of each of the above still in process but under control.
- The number of risks, problems and improvement opportunities warranting action, but not actionable at unit/directorate level.
- The number of these that are intolerably delayed.
- The most critical issues beyond air force base/directorate powers, or delayed, should be discussed shortly.
- Also shortly discuss the best suggestions received and any risks, problems or improvement opportunities with possible general benefit or impact, *ie* to the wider SAAF/SANDF.

6.6 SELF-ASSESSMENT METHODOLOGY IN THE SA AIR FORCE

The SAEF award was established (1) to promote awareness of quality as an important element in competitiveness, (2) to recognise excellent institutions, (3) to increase the understanding of the requirements for performance excellence by promoting the sharing of information on successful performance strategies and (4) the benefits derived from implementing these strategies. The SAEF model was introduced in the SA Air Force to improve overall performance and to promote excellence.

The South African Excellence Award based on the SAEF model is the highest level of national recognition for performance excellence that a South African institution can receive. The major focus of the award is on results, with emphasis on customer satisfaction. It is not given for specific products or services. The SA Air Force must have a system which ensures, through sound leadership, continuous improvement in the delivery of products and/or services and which provides the means of satisfying and responding to customers' needs. The main aim of the SAEF is to manage and promote continuous performance improvement through the use of the SAEF model. This model uses self-assessment to enable the SA Air Force to determine its level of performance excellence. Self-assessment is the regular and systematically reviewing of the SA Air Force's activities and results and measuring these against a structured model. The self-assessment process allows the SA Air Force to clearly identify its strengths and areas for

improvement, to prioritise and plan improvement actions, and to monitor for progress. An important element of the SAEF approach is to promote self-assessment as a key activity that is fully integrated with business operations. Once the self-assessment has become routine and sufficient data have been collected, the SA Air Force will be in a good position to make an application for the South African Excellence Award. Self-assessment is a structured approach in the pursuit of excellence. It enables the SA Air Force to objectively assess its performance under a number of headings (criteria) and identify strengths and areas for improvement. When fully deployed, self-assessment becomes a comprehensive, systematic and regular review of the SA Air Force's activities and results, which culminates in planned improvement actions. It helps to: Identify what is done well, identify what needs to be improved, and identify where best practices exist. (Schoeman 2002:2; South African Excellence Foundation 2000:7-12.)

Institutions that affect self-assessment through the SAEF are able not only to compare the units of their institutions within, but also benchmark their institutions against others. By comparing the best with the best, self-assessment boosts the process of continuous performance improvement. The SA Air Force has decided that the SAEF model will be used to review the performance of its eight air force bases. The SAEF model provides a framework and direction to create a culture of performance excellence throughout the SA Air Force to enhance overall competitiveness and promote the well being of all SA Air Force personnel.

What are the criteria for performance excellence? It provide the SA Air Force with an integrated, results-orientated framework, based on the Fundamental Concepts for Excellence (see table 6.1), for implementing and assessing processes for managing all operations. It also forms the basis for self-assessment (Internal Assessment) of the SA Air Force and measurement as a whole.

Table 6.1: The fundamental concepts of excellence

Results Orientation	Excellence is dependent upon balancing and satisfying the needs of all the relevant stakeholders. These include the people employed, customers, suppliers and society in general as well as those with financial interests in the SA Air
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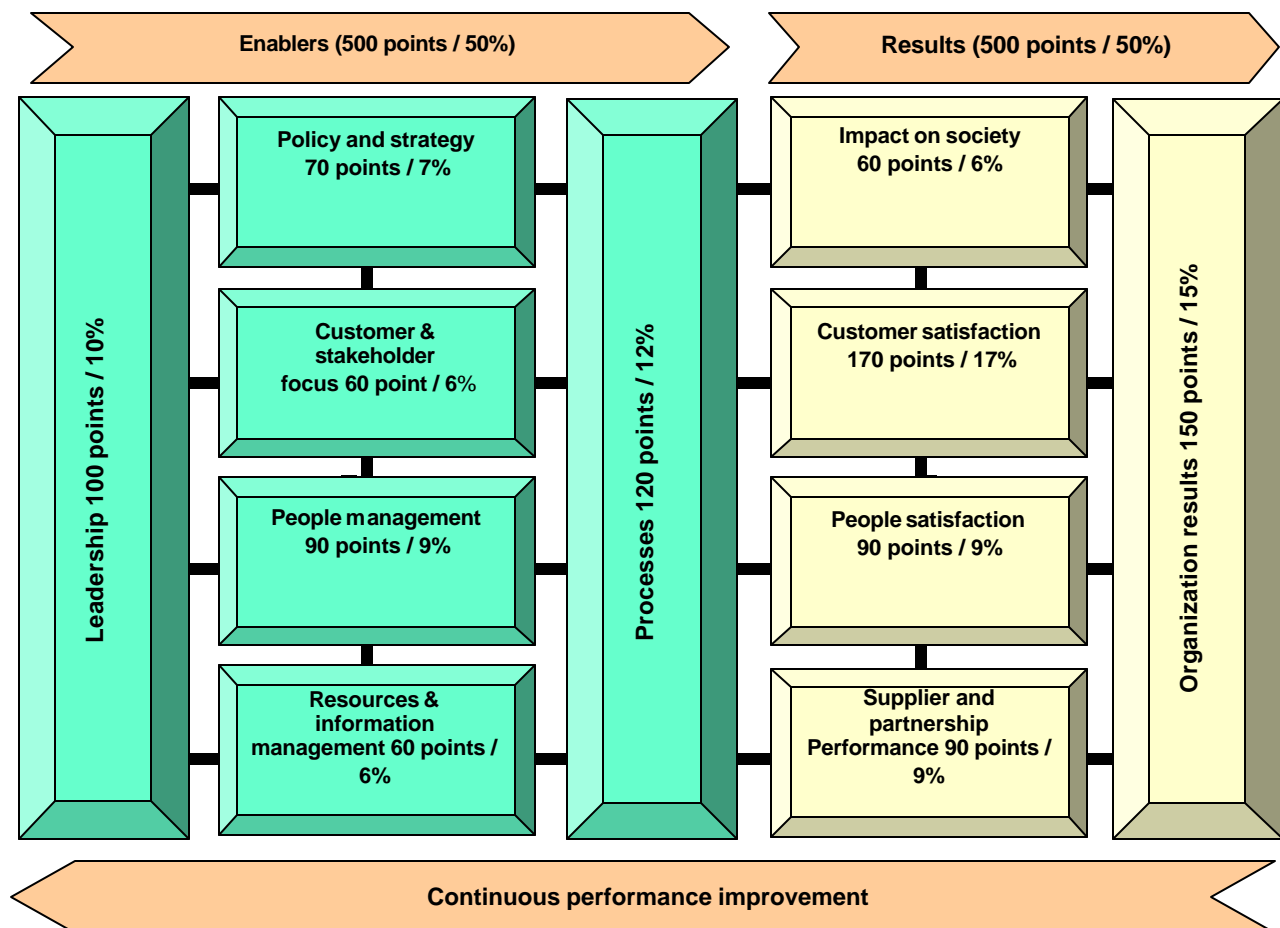
	Force.
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Customer Focus	The customer is the final arbiter of product and service quality as well as customer loyalty. Retention and market share gain are best optimised through a clear focus on the needs of current and potential customers.
Leadership and Constancy of Purpose	The behaviour of the SA Air Force's leaders creates a clarity and unity of purpose within the institution and an environment in which the institution and its people can excel.
Management by Processes and Facts	The SA Air Force performs more effectively when all inter-related activities are understood and systematically managed, and decisions concerning current operations and planned improvements are made using reliable information that includes stakeholders' perceptions.
People Development and Involvement	The full potential of the SA Air Force's people is released through shared values and a culture of trust and empowerment, which encourages the involvement of everyone.
Partnership Development	The SA Air Force works more effectively when it has mutual beneficial relationships, built on trust, sharing of knowledge and integration with its partners.
Public Responsibility	The long-term interests of the SA Air Force and its people are best served by adopting an ethical approach and exceeding the expectations and regulations of the community at large.
Continuous Learning, Innovation and Improvement	SA Air Force performance is maximised when it is based on the management and sharing of knowledge within a culture of continuous learning, innovation and improvement.

Source: Schoeman (2002:3) and South African Excellence Foundation 2000 (a):13-14

The SAEF model (see figure 6.12 and table 6.2) is divided into 11 criteria and each criterion is subdivided into subcriteria. The 11 criteria are grouped into 2 groups for performance excellence, namely enablers and results. The enablers are concerned with **how** the SA Air Force conducts itself, whilst the results refer to **what** the SA Air Force has achieved. The following SAEF model diagram summarises the model: (The description of the enablers and results criteria of the SAEF model that follow is not intended as a reference work, but merely to introduce the model.)

Figure 6.12: SAEF-model



Source: Bond (2000:11) and South African Excellence Foundation 2000 (a):14

The process of conducting *self-assessment* is very dynamic and generic as presented by SAEF. The process can be adapted to the needs of each institution. The process followed by the SA Air Force since the introduction of the SAEF model is as follows:

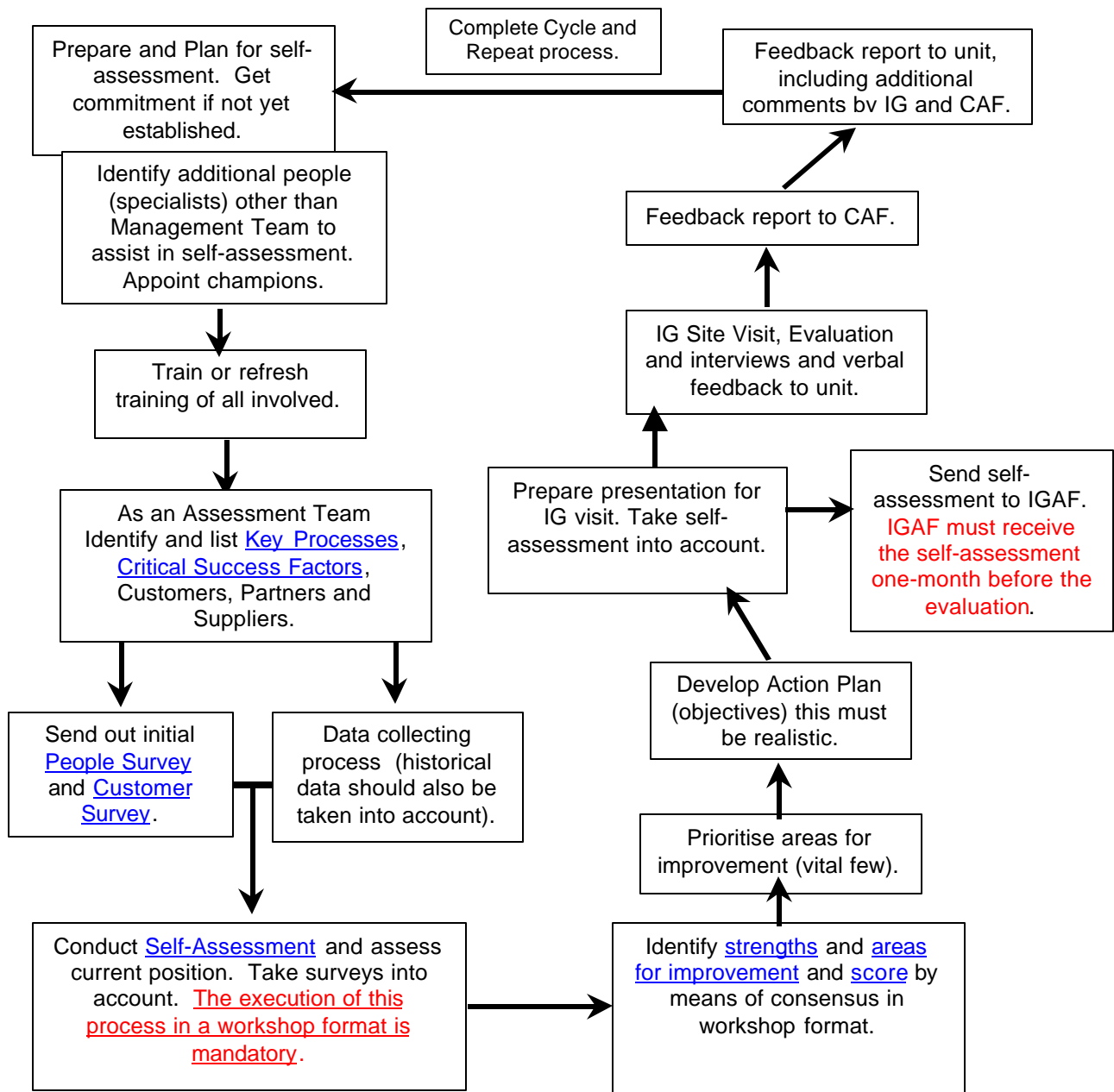
Table 6.2: SAEF criteria (enablers and results) for performance excellence

ENABLER CRITERIA – 500 POINTS (50%)		
	Criteria	Definition
1	Leadership (100 points / 10%)	The behaviour and actions of the executive team and other leaders should inspire, support and promote a culture of excellence (Total Quality Management) as the best way to achieve the institution's objectives. This will include a vision and mission for the SA Air Force, where applicable. Every member should accept this vision and mission as their own. Leaders should also consider the application of techniques such as those covered in the Full Range Leadership Programme.
2	Policy and Strategy (70 points / 7%)	The SA Air Force should formulate, deploy and review policy and strategy, and convert it into plans and actions, through a high-quality process. Existing and higher-level policies, plans and objectives should be taken into account.
3	Customer and Stakeholder Focus (60 points / 6%)	This element considers how the SA Air Force determines the needs, requirements and expectations of customers and stakeholders. The SA Air Force needs to define its customers and stakeholders.
4	People Management (90 points / 9%)	The people element has to do with how the SA Air Force releases the full potential of its members. The SA Air Force should have a Human Resource Plan and take labour laws into consideration. Recognition of members' efforts should also be taken into account.

5	Resources and Information Management (60 points / 6%)	This element considers how the SA Air Force manages and plans external partnerships and internal resources in order to execute its policy and strategy. It includes planning, programming, budgeting, budget control and the management of resources.
6	Processes (120 points / 12%)	This element covers the management of all value adding activities within the SA Air Force and how the SA Air Force identifies, describes, measures, manages, reviews and improves its processes.
RESULTS CRITERIA – 500 POINTS (50%)		
7	Impact on Society (60 points / 6%)	This element considers the SA Air Force's performance in meeting or exceeding the expectations of the community at large. Society has a right to expect the SA Air Force to act responsibly.
8	Customer Satisfaction (170 points / 17%)	This element considers the SA Air Force's performance in meeting or exceeding the expectations of its internal and external customers.
9	People Satisfaction (90 points / 9%)	This element considers the SA Air Force's performance in meeting or exceeding the expectations of its members. Morale surveys or other tools shall be used to determine satisfaction levels.
10	Supplier and Partnership Performance (30 points / 3%)	This element considers what the SA Air Force is achieving in relation to the management of supplier and partnering processes.
11	Institution Results (150 points / 15%)	This element has to do with what the SA Air Force is achieving in relation to its planned objectives. This will include satisfying the needs and expectations of everybody with an interest or stake in the SA Air Force. Contingency readiness, affordability, integrity and compliance with legislation are typical results to be considered.

Source: Schoeman (2002:4) and South African Excellence Foundation 2000 (b):11-12

Figure 6.13: The SA Air Force’s process of self-assessment



Source: Schoeman (2003:6)

Before discussing the evaluation and training placements of the SAEF function, it is necessary to understand the difference between three concepts, namely *audit*, *self-*

assessment and award, based on the SA Air Force's point of view. This is depicted in table 6.3.

Table 6.3: Differences between the concepts *audit*, *self-assessment* and *award*

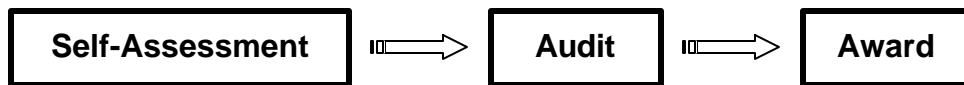
Audit	Self-Assessment	Award
a	b	c
<ul style="list-style-type: none"> • Compliance against a standard. • Often done by an external body or auditor. • Focus is on doing things right and corrective action. • Can tend to be historical. • Auditor owns evaluation and feedback report. • Objective of audit is neutral regarding motivation. 	<ul style="list-style-type: none"> • Positioning against a framework. • Best done by yourself, perhaps facilitated by a specialist. • Focus on strengths and areas of improvement. • Both historical and forward looking. • Self-assessment team's own assessment and feedback report. • Aim is to be motivating for those involved. 	<ul style="list-style-type: none"> • Can be a competition. • Marketing tool / publicity. • Is a way of recognising a level of achievement. • Involves a judging process. • Can tend to be historical. • Motivating for those receiving the award.

Source: Van der Colff (2003:4)

It is clear from table 6.3 that if an air force base adopts the SAEF model, all three concepts are to play a part to *institutionalise excellence* in the SA Air Force. The differences are the levels on which each concept takes place as well as the time frames. The logical process (see figure 6.14) the air force base is to follow, is to first do a *self-assessment* to determine the level of performance excellence. Once the *self-assessment* has shown that the performance is at an optimum level, an *audit* will be conducted to verify the findings after which the air force base will be in a good position to make an application for the *South African Excellence Award*.

In order to institutionalise excellence in the SA Air Force, it is necessary to focus on the word 'institutionalise'. According to the American Heritage® Dictionary of the English Language, Third Edition © 1996 *institutionalise* means: "(1) to make into, treat as, or give the character of an institution to, (2) to make part of a structured and usually well established system". In other words, to institutionalise excellence in the SA Air Force, excellence should become a way of life in the air force. Therefore, the SA Air Force needs a body that will be able to institutionalise excellence in the SA Air Force.

Figure 6.14: The logical process of the different concepts *audit*, *self-assessment* and *award*

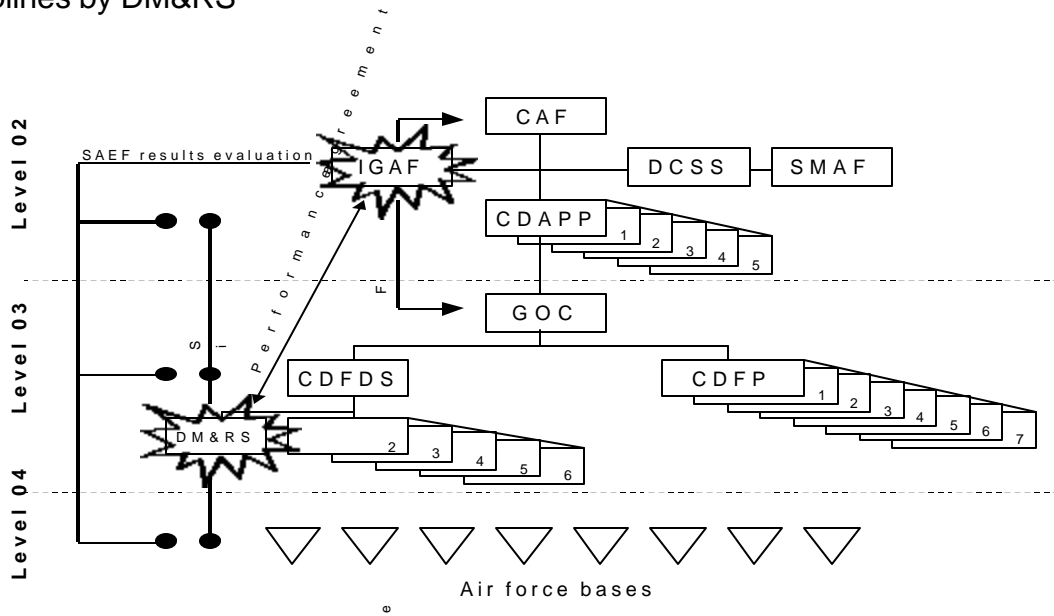


Source: Van der Colff (2003:4)

Since the introduction of the SAEF model in the SA Air Force, the SAEF function at IGAF consists of three distinct disciplines, namely the training, implementation and evaluation of the SAEF model in the SA Air Force. It was also proposed during an AF Board work session in May 2003 to split the institutionalisation of excellence, training and implementation from the inspection/evaluation discipline and to move the SAEF institutionalisation of excellence, training and implementation disciplines to DM&RS [see figure 6.15 (a)] and the inspection/evaluation to IGAF [see figure 6.15 (b)].

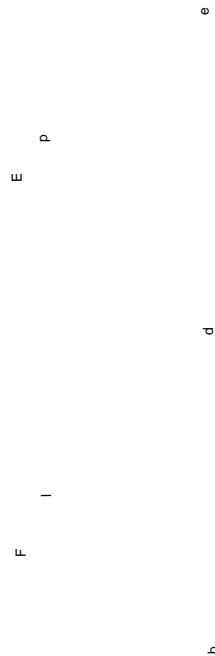
In June 2003, the Office of IGAF indicated that their core business was to conduct inspections/evaluations, which does not necessarily include training and implementation [see figure 6.15 (a)]. It should also be borne in mind that on cessation of Quality Management during the planning of the new organisational structure of the air force in 1998, the functional evaluation teams of OHS and QA were allocated to IGAF. The reason for this was to widen its focus with regard to operational readiness in the air force. In other words, the Office of IGAF is currently the *only body* in the SA Air Force with a team of trained auditors to do inspections/evaluations based on the SAEF model.

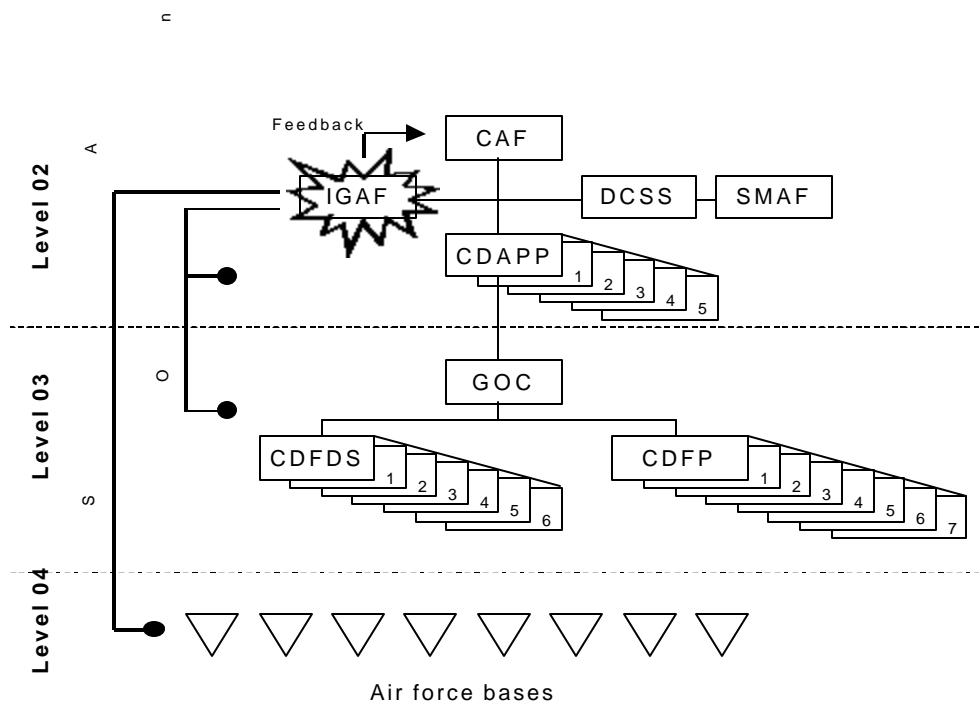
Figure 6.15 (a): SAEF institutionalisation of excellence, training and implementation disciplines by DM&RS



Source: Own observation

Figure 6.15 (b): SAEF inspections/evaluations by IGAF





Source: Own observation

6.6.1 Role and function of the Directorate Management and Renewal Services (DM&RS) to implement self-assessment

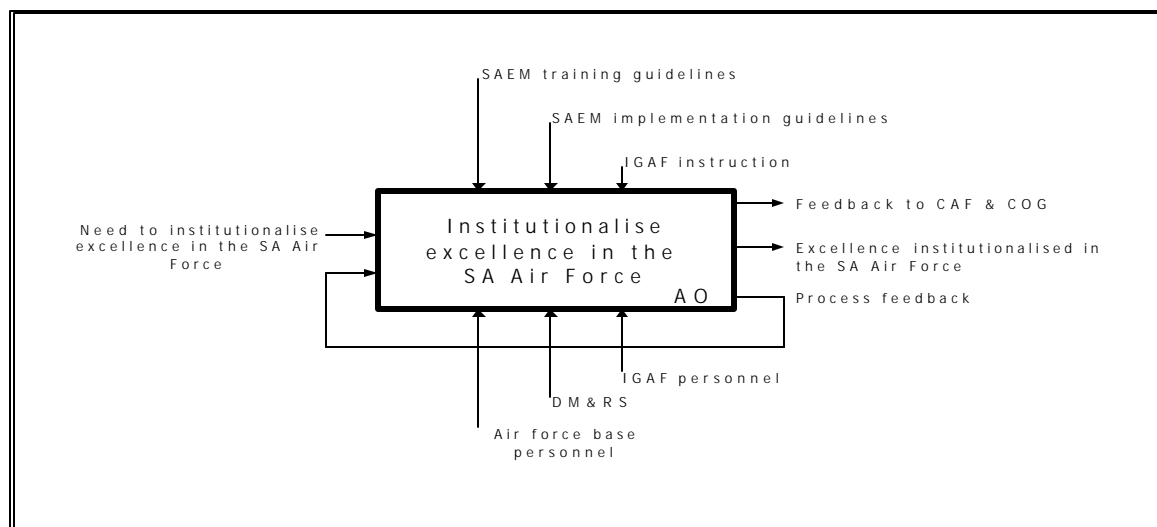
Since June 2003 DM&RS has been involved in the day-to-day training process of the SAEF model and is the executive authority for the *institutionalisation of excellence* in the SA Air Force. Looking at the core functions of all the other directorates at Air Force Office and Air Command levels, as discussed in figures 6.5 and 6.6, the AF Board decided that in order to *institutionalise excellence* at air force bases, DM&RS at Air Command (level 03 - see figure 6.6) was the most appropriate directorate (Van der Colff 2003:11). As mentioned previously, DM&RS has been the champion for the *institutionalisation of excellence*, training and implementation of the *SAEF model* [see figure 6.15 (a)] since June 2003. According to its performance agreement, DM&RS is responsible for the following (Van der Colff 2003:11):

- Purpose of the Post. To provide CAF and the GOG Air Comd with general management, institutional performance and renewal advice in order to effect excellence in the SA Air Force's performance and service delivery.
- Functions of the Post:

- Enhancement of the SA Air Force's system performance.
- Facilitation of the SA Air Force's corporate strategy deployment.
- Maintenance of the SA Air Force's business architecture.
- Continuous renewing of the institution.
- Management of the internal performance of the directorate.

DM&RS' core responsibility is to further institutional performance in the SA Air Force. To institutionalise excellence [see figure 6.16 (a) and figure 6.16 (b)] in the SA Air Force, which is regarded as an institutional development function, falls squarely within the boundaries of DM&RS. As DM&RS provides advice to affect excellence in performance and service delivery, they play the primary role in respect of the institutionalisation of excellence [see figure 6.16 (a) and figure 6.16 (b)], training [see figure 6.17 (a) and figure 6.17 (b)], and the implementation of the *SAEF model* [see figure 6.18 (a) and figure 6.18 (b)]. (Van der Colff 2003:12.)

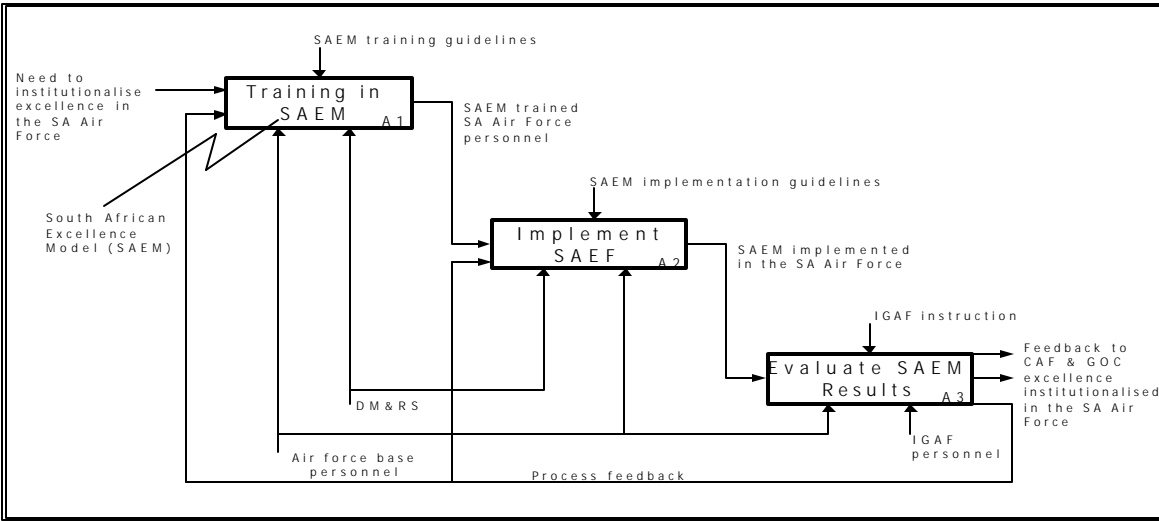
Figure 6.16 (a): Institutionalisation of excellence (SAEF) in the SA Air Force based on the IDEF0¹¹ *context diagram*



Source: Own observation

Figure 6.16 (b): Institutionalisation of excellence (SAEF) in the SA Air Force based on the IDEF0 *decomposition diagram* (see footnote 11)

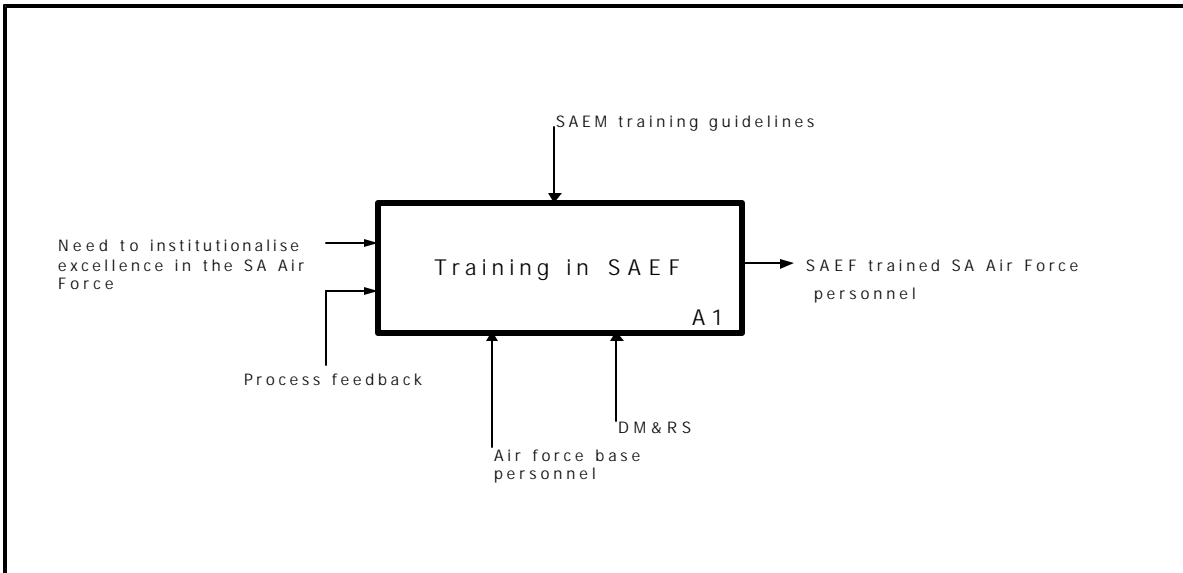
¹¹ The DOD has selected the Integrated Definition for Function Modelling – 0 (hereafter referred to as IDEF(0)) method of analysing, developing and describing processes. A0 (context diagram – a diagram with a single activity represented as a box with at least one input and one control arrow like figure 6.14) and A1 –



C2

Source: Own observation

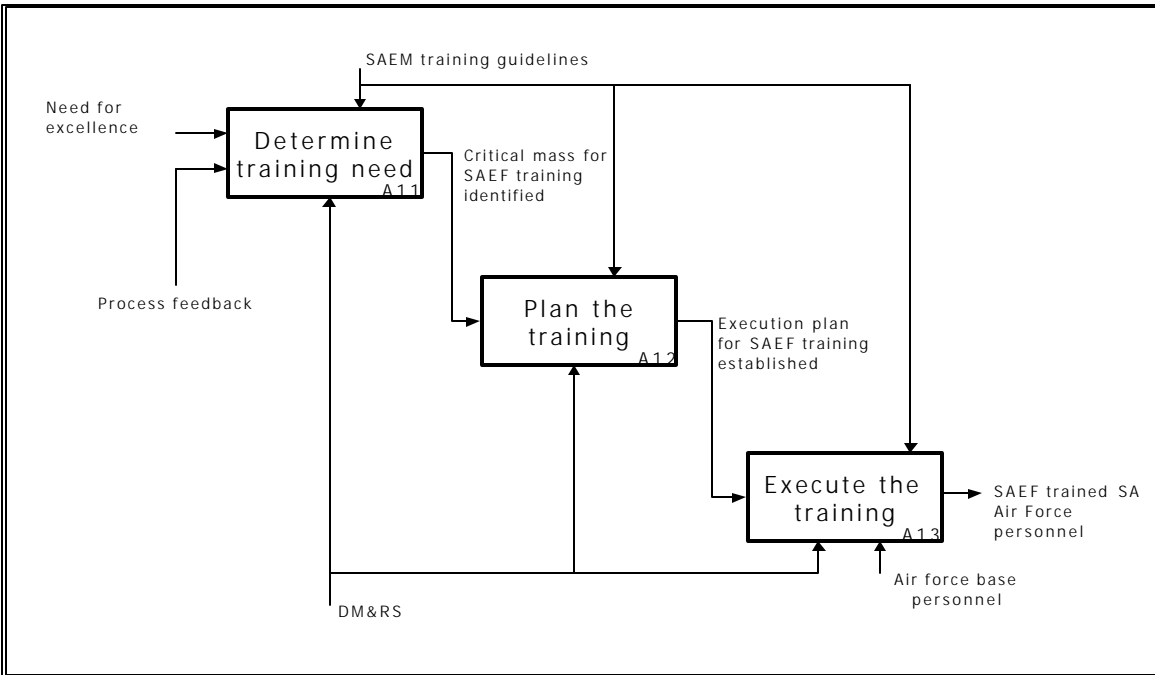
Figure 6.17 (a): Institutionalise training in the SA Air Force based on the IDEF0 *context diagram*



Source: Own observation

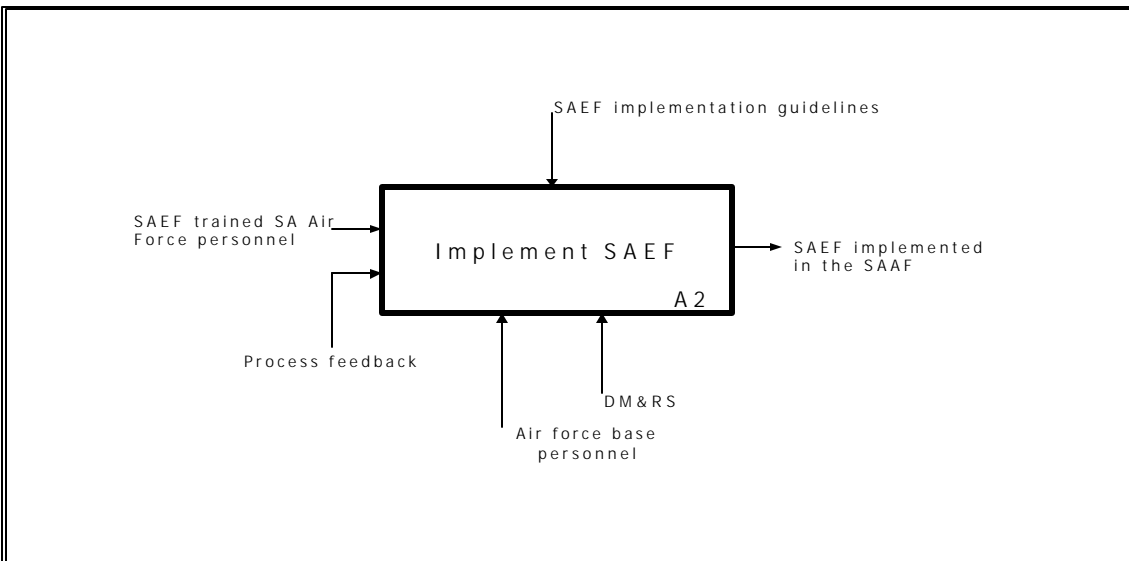
Figure 6.17 (b): Institutionalise training in the SA Air Force based on the IDEF0 *decomposition diagram*

A3 (decomposition diagram – a diagram with three to six activities represented as boxes with each box having at least one input and one control arrow like figure 6.15).



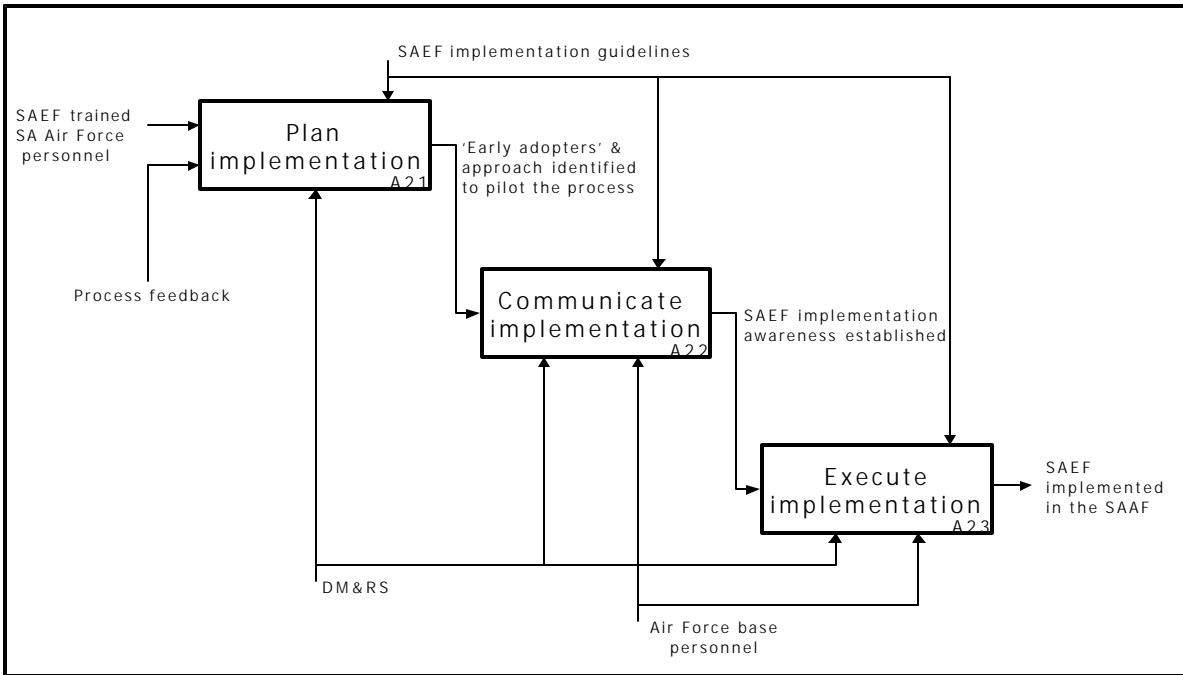
Source: Own observation

Figure 6.18 (a): Implementation of the SAEF model based on the IDEF0 *context diagram*



Source: Own observation

Figure 6.18 (b): Implement the SAEF model based on the IDEF0 *decomposition diagram*



Source: Own observation

6.6.2 Role and function of the Office of the Inspector General of the Air Force (IGAF) to implement self-assessment

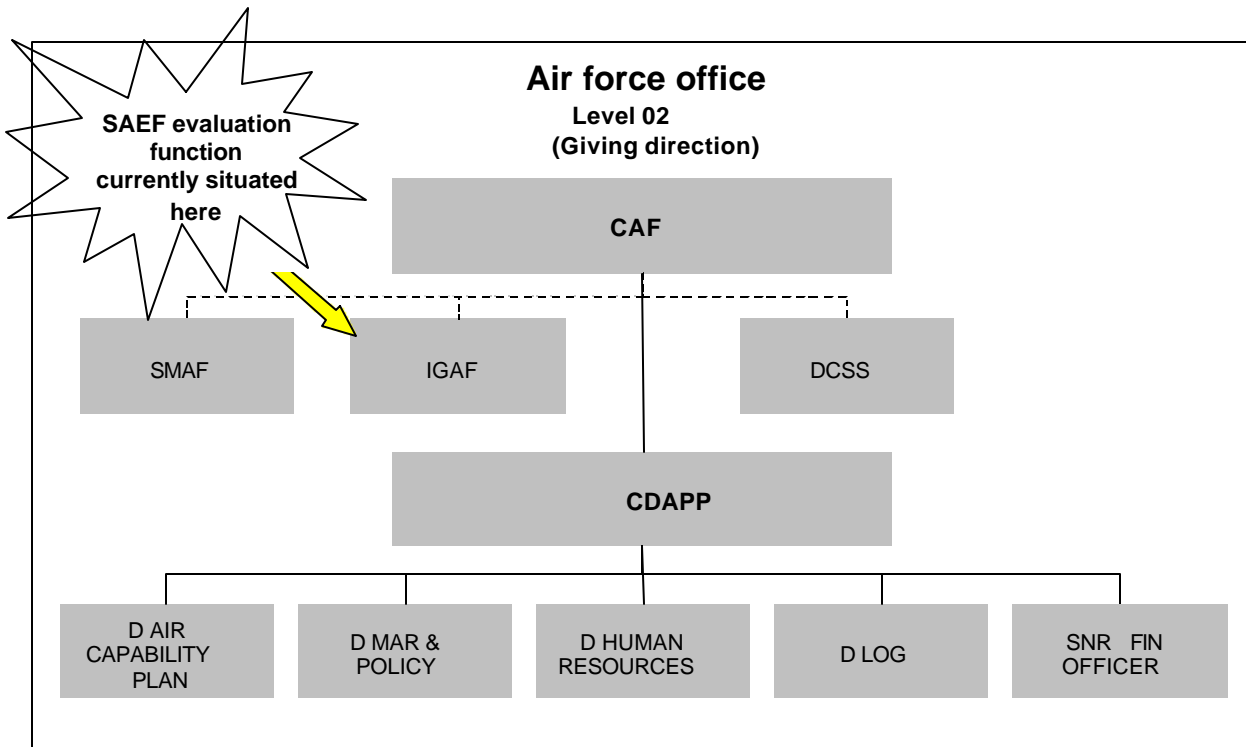
Since the introduction of the SAEF model in the air force, IGAF has been the champion for the development, promotion and evaluation of the model in order to help *institutionalise excellence* in the SA Air Force (see figure 6.19). IGAF is mandated to manage a professional inspection service based on the vision, mission and value system of the SA Air Force, in order to ensure that the SA Air Force functions in an effective manner. The primary focus is therefore on the “required operational capability” of the SA Air Force as a total system. The mission of the Office of the Inspector General is to provide the highest authority in the SA Air Force with an impartial, independent monitoring and evaluation service that assists system owners, managers, OC’s, their air force bases and crews or staff to achieve the highest levels of effectiveness, discipline, efficiency, integrity and, ultimately, national confidence. IGAF is a three-tiered structure consisting of seven judges. Selected on the basis of expertise, experience and peer recognition by the AF Board, judges and inspectors are quality experts. They come primarily from air force bases at level 4 and are members with practical expertise. The inspectors are chosen by IGAF himself. (Msimang 1999:6.)

The Office of IGAF base their evaluations on the SAEF model due to the performance merit link with international TQM principles and management concepts that are based on continuous improvement. The purpose of the Office of IGAF is to determine by means of *inspections* and *evaluations* to what extent the SA Air Force is *performing* in relation to the required operational standards. IGAF also assists system owners or OC's of air force bases to achieve their stated goals and objectives. To this end, the Office of IGAF provides a balanced and trend-setting inspection service. Recommendations are made immediately available to the highest authority in the SA Air Force so that constraints in the system may be alleviated or resolved expeditiously at this level. IGAF is an autonomous and impartial ombudsman within the SA Air Force. IGAF's core responsibility is to measure results against criteria (*measure excellence*) in accordance with the SAEF model and he is not mandated to *institutionalise* excellence in the SA Air Force. IGAF should continue to conduct audits by means of inspections and evaluations in accordance with the SAEF model to determine to what extent the SA Air Force is performing in relation to the required operational standards. (Van der Colff 2003:10.)

As mentioned earlier, IGAF has been the champion for evaluation based on the SAEF model. According to his performance agreement, IGAF is responsible for the following functions (Van der Colf 2003:11):

- Providing management information in respect of the efficiency of the SA Air Force.
- Monitoring progress and the feasibility of strategic level decisions.
- Providing support services.
- Identifying, by means of inspections, what the state of force preparation and development is within the SA Air Force.
- Identifying, by means of operational evaluation, the state of the SA Air Force's operational readiness.
- Monitoring and reporting on the standards of the SA Air Force's discipline and upholding of standards.
- Measuring the air force against excellence, according to the South African Excellence Foundation Model.

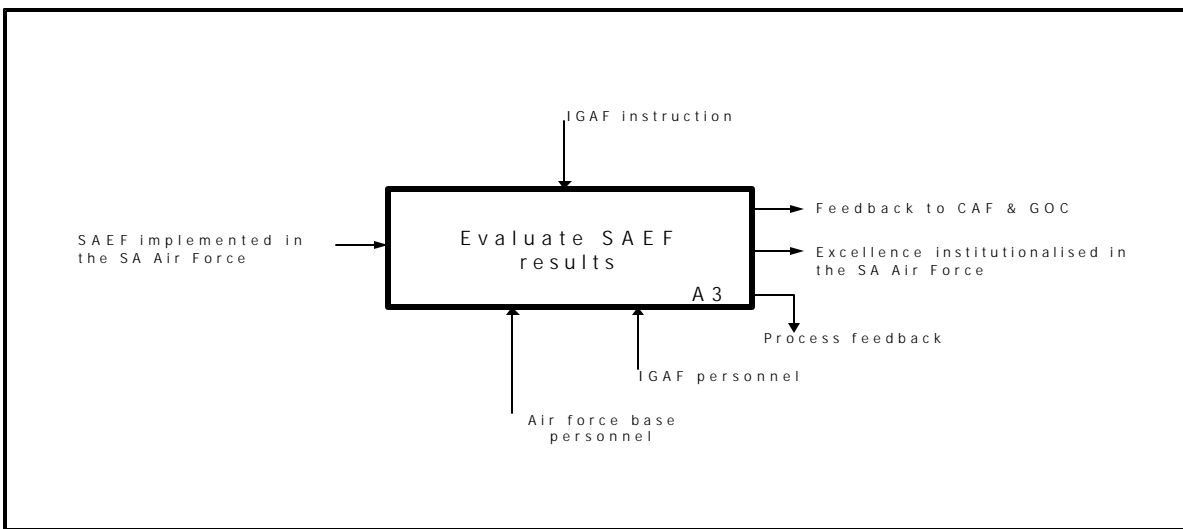
Figure 6.19: Organisational structure of the Air Force Office



Source: Van der Colff (2003:6)

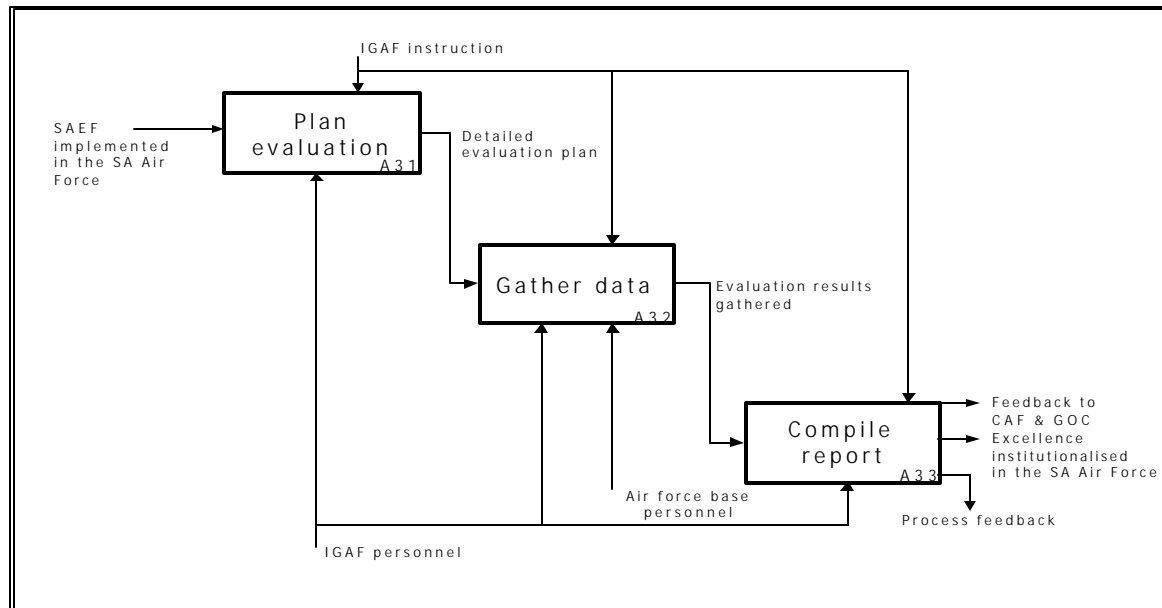
By adopting the new process of inspection and evaluation as indicated in figure 20 (a) and figure 20 (b), members of the inspectorate act as assessors. After self-assessment, an air force base should present its findings to IGAF.

Figure 6.20 (a): Evaluate SAEF results by IGAF based on the IDEF0 context diagram



Source: Own observation

Figure 6.20 (b): Evaluate SAEF results by IGAF based on the IDEF0 *decomposition diagram*



Source: Own observation

The inspectorate will then carry out a site visit (an inspection) to confirm the findings made by the base. The base is to prove that initiatives are deployed down to the lowest level and throughout the SA Air Force. By applying the model, OC's and staff are involved and know exactly what their strong and weak points are, with consensus being reached on the results.

This model of inspection and evaluation based on the IDEF0 has the further advantage that a mechanism exists for an air force base to measure the current level of achievement as perceived by the group. The same air force base then has the ability to improve its performance through the use of its strong and weak points and a score to improve on. IGAF, in consultation with air force bases, draws up a year plan which allows all air force bases to be assessed throughout the year. Some air force bases are evaluated in March for the November Prestige Evening of every year, but a full year would have lapsed since the previous inspection. This model contributes not only to a more effective SA Air Force, but also assists in determining the prestige air force base of the SA Air Force on an annual basis.

Feedback on virtually every aspect of the SAEF programme – criteria, application, examination and examiner training - was for example collected throughout the year 2003.

The feedback came from all eight air force bases. From February 2003 through to May 2003, after award criteria were made public within the SA Air Force, comments were collected from examiners and from air force bases with regard to the application process. During the examiner training courses and the application review period, from May 2003 through to September 2003, comments were once again collected from the examiners. Finally, on completion of the application review process, comments were collected from examiners concerning air force bases that had applied for the award, as well as air force bases that had not applied but had been exposed to the programme. Based on these inputs, a draft document on areas of improvement needed at air force bases was prepared and reviewed in December 2003 by IGAF. This version was sent out to all eight air force bases for review and comments, which were then incorporated in the AF Board agenda to manage critical identified issues. After this, improvements to award criteria in the SA Air Force were made at the level of the eight air force bases.

IGAF has a dedicated team of inspectors (the inspectorate), with each functional environment being represented by a functional inspector. Various types of inspections are carried out throughout the SA Air Force. During the inspections each inspector inspects his/her specific functional environment, taking cognisance of not only negative aspects, but also positive aspects. Aspects of a generic nature such as leadership, morale and discipline are also taken into account. On completion of the inspection, recommendations are made and monitored by the inspectorate. By inspecting air force bases in this way, IGAF has made a positive contribution towards ensuring that the SA Air Force functions in an effective manner. There are, however, disadvantages such as (1) IGAF being perceived as a “super policeman” and in certain cases a threat, and (2) if the OC did not accept ownership of the recommendations, the necessary action would not be taken. (Msimang 1999:7.)

In the last two years IGAF and his team have identified a number of issues that required the attention of top management as well as OC's. The SA Air Force Strategic Committee is in the process of analysing these issues and formulating strategies to overcome the areas of concern. These areas of concern are as follows (Msimang 1999:7):

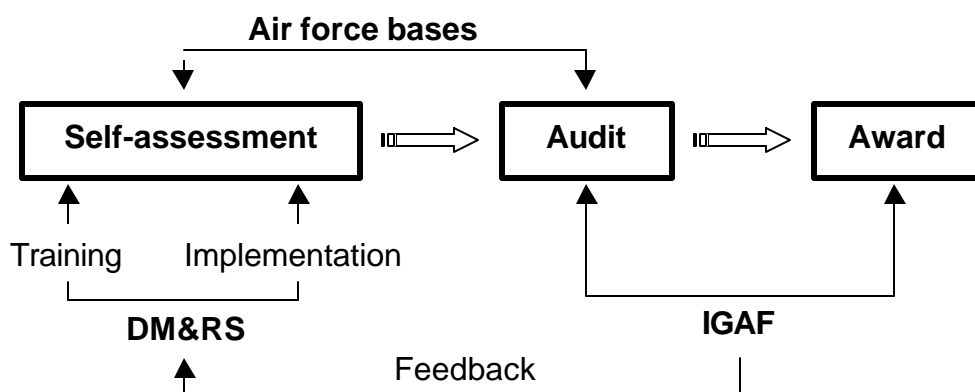
- Deterioration of infrastructure and ageing of main equipment.
- Loss of expertise over a wide spectrum.

- Shortage of qualified OHS representatives, resulting in non-conformance to Act 85 of 93 and the required standards not being met.
- The SA Air Force is not customer-orientated and very little information is available to determine trends.
- The SA Air Force is to a large extent not output-driven.
- Stock in stores not visible to the people who need it.
- Very little work was done to optimise and review processes.
- Wastage of resources.
- Innovation and creativity is not a way of life.

6.6.3 Co-operation between DM&RS and IGAF

As depicted in figures 6.5 and figure 6.6 as well as figure 6.8, the process with its process owners is as follows: firstly, all air force bases at level 04 of the air force do a self-assessment based on the SAEF model to determine their level of performance excellence. In this regard DM&RS assists the air force bases with the institutionalisation of excellence, SAEF training and implementation. Once the self-assessment shows that the performance is at an optimum level, IGAF will conduct an audit to verify the findings. IGAF is then in a good position to award the best air force bases as well as to ensure applications for the South African Excellence Award, if necessary. A feedback loop from IGAF to DM&RS (see figure 6.21) ensures that all information required for training and implementation purposes is provided on time.

Figure 6.21: Suggested visual SAEF process with its process owners



Source: Own observation

The advantages to the SA Air Force to split the institutionalisation of excellence, SAEF training and implementation done by DM&RS and inspections/evaluation done by IGAF, are as follows (Van der Colf 2003:13):

- By splitting the institutionalisation of excellence and SAEF training and implementation disciplines done by DM&RS from the inspection/evaluation discipline prevents IGAF from becoming both the judge and the jury.
- IGAF concentrates primarily on its core business, that is to *measure* to what extent the air force is performing in relation to the required operational standards (results against criteria).
- IGAF gives credible and objective advice with regard to *SAEF* problem areas in the air force to DM&RS after each inspection/evaluation.
- '*Institutionalising*' is a concept far beyond training. As Institution Development (OD) experts, DM&RS could devise a plan on how the *SAEF* model should be deployed and institutionalised. DM&RS is also able to build a core of experts who can facilitate the process on an on-going basis at expert level.

6.7 SUMMARY

The SA Air Force is a complex institution that is influenced by many factors. In order to play its important role in the country successfully, and to ensure harmony within its ranks and the full utilisation of its resources to its own satisfaction and that of the community, changing circumstances force the SA Air Force continuously to strive for better work performance and to take pro-active steps to comply with the changing environment. In order to survive, the SA Air Force realised that a new management approach was essential if output was to be managed correctly. Employees were also to be managed effectively and efficiently in order to maintain and/or improve performance levels. Since 1994 various quality-based models, methods and methodologies were used to manage the SA Air Force. Most of these models, methods and methodologies were applied successfully, but were not combined into a single integrated approach.

Therefore, in striving for the required results, it became necessary for the SA Air Force to adapt its administrative and management systems continuously in order to ensure that it

stayed abreast of changing circumstances. In 1998 a decision was made to apply more “quality management techniques” in an attempt to increase performance results and productivity. One of the methods followed was the establishment of a formal self-assessment programme based on the model of the EFQM that was launched in August 1998 by the Inspector General of the SA Air Force. The SA Air Force started in 1999 to show improvements in its operational, financial, marketing and community results and in customer and employer satisfaction by implementing the EFQM self-assessment model and the TQM philosophy supported by the ISO 9000:2000 and ISO 14000. At the end of 2000, the SA Air Force changed its formal self-assessment programme from the EFQM model to the South African Model, instituted by the South African Excellence Foundation. The top management of the SA Air Force pledged their commitment to TQM. Since January 2002, the SA Air Force has been evaluated annually using the SAEF model. To enable the continuous assessment of results and areas for improvement, it became clear that a new approach to management was needed to guide all management initiatives based on the TQM philosophy if improved performance was to be ensured.

The SAEF model programme has been applied in the SA Air Force for the past four years and results indicate that the organisation has grown in all 11 building blocks of the SAEF model, especially the first six building blocks of the enabler phase. From 2005, the SA Air Force will focus more on the result phase, including impact on society, customer satisfaction, supplier and stakeholder satisfaction, people satisfaction and institutional results (the latter form part of the SA Air Force’s plans to implement TQM). The SA Air Force can be regarded as a progressive institution that has made significant progress during the last four years in its attempts to implement TQM successfully.

Turning to the empirical part of the thesis, the next chapter will discuss the research and data collection methodology used in order to fulfil the stated aims of the research in greater detail. The focus will be on the method utilised for data collection, questionnaire design and application, reliability analysis and validity, as well as the important issue of confidentiality.