Joint Initiative on Priority Skills Acquisition (JIPSA)

Growing priority skills in South Africa
Final report on JIPSA

MARCH 2010

THE PRESIDENCY
REPUBLIC OF SOUTH AFRICA

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Introduction

South Africa's skills challenge remains as critical as it was at the time of JIPSA's formation in March 2006. Meeting the skills needs of the economy, shaping the nature and trajectory of growth and development, responding to the need to absorb more young people into the economy and alleviating poverty all remain significant imperatives that guide the discourse of skills development in our country.

JIPSA was always intended to be a temporary initiative to focus the attention of a wide range of social partners and project owners on critical aspects of the skills landscape in the country. At the same time, JIPSA found that it could not avoid engaging with systemic issues where these impacted directly on the priority skills challenges at hand. Furthermore, JIPSA had to recognise and deal with the legacy of skills underdevelopment amongst the majority of South Africa's citizens, caused by the systematic denial of opportunities to black South Africans to acquire skills under apartheid and the challenges faced by the education system in the democratic dispensation.

Today, a new administration has prioritised coordination and planning at the highest level of government and has created the Department of Higher Education and Training. The divide between education and skills development has been removed and new opportunities created for engagement between the users and producers of skills through the Human Resources Development Strategy (NHRDS).

In its first annual report published in March 2007, JIPSA noted that "South Africa lacks sufficiently skilled professionals, managers and artisans, and the challenge is amplified by the uneven quality of education and the impact of the apartheid legacy which located many people a great distance from their places of work, thus pushing up the price of labour of the poor. The acquisition of priority skills was identified as one of the most significant challenges to growth, because skills development is a long-term process."

In the course of its four-year lifespan, JIPSA produced an important set of experiences and critical lessons about how to deal with the skills challenges that South Africa continues to face. This close-out report focuses on the essence of the JIPSA experience as it folds into the NHRDS.

It starts by examining the role of skills provision in supporting a more equitable growth path. It then goes on to examine the progress made since 2006 with priority skills provision, and concludes with an analysis of insights that emerge from the JIPSA experience and may prove helpful to the NHRDS as it commences its work.

This report has been produced by the JIPSA Secretariat, which has wound down the activities of the initiative following the final meeting of the Joint Task Team (JTT), the key decision-making structure for JIPSA, in April 2009. In the previous month the revised HRD Strategy had been approved by Cabinet and the JIPSA process thus started winding down with a view to folding into the revised HRD strategy. This report from the JIPSA Secretariat documents the JIPSA process and presents its experience and critical learnings to the HRD Council for its consideration.

1. Setting the context: Priority skills acquisition for equitable economic growth

Given the scarcity of skilled workers in the country, employers are forced to offer unusually high wages to attract scarce employees. This has created a situation in which skilled people are able to command a significant wage and income premium.

Since 1994 South Africa has benefited from impressive economic growth, particularly during the period 2001-2007. While this stimulated much needed employment creation, the economic growth path has been characterised by a disproportionate demand for highly skilled workers.

Setting the context: Priority skills acquisition for equitable economic growth

Given the scarcity of skilled workers in the country, employers are forced to offer unusually high wages to attract scarce employees. This has created a situation in which skilled people are able to command a significant wage and income premium. In turn it also skewed the economic growth returns toward better skilled and educated people. The research shows that people who are unskilled, or who have skills that do not match the demand for labour in the economy struggle to source sustainable employment and decent work.

According to the University of Cape Town's Development Policy Research Unit (DPRU), shifts in employment are highly sensitive to economic growth. Its analysis demonstrates that during the period 2001 to 2007, for example, a 1% increase in GDP growth was associated with a 0.6% increase in total employment.[1] From a skills development perspective, it is particularly important to understand how this relationship varies when employees are categorised by education levels.

1.1   Impact of economic growth on people with different levels of education

The DPRU analysis shows that in South Africa a 1% increase in economic growth over the period 2001 to 2007 was associated with a *decline* in the employment of people with no education or an incomplete GET (Grade 8 or lower) of 0.5% and 0.3% respectively. In contrast, better educated people benefited from growth over this period: For people with a tertiary qualification, economic growth of 1% produced a 1.4% increase in employment.

This suggests that the period of unprecedented economic growth benefited highly skilled individuals at the expense of lesser skilled people.

What about **households**? A preliminary analysis of the data shows that the income gains from employment have been concentrated, overwhelmingly, amongst better educated households.

For example, income growth in households where the head has a tertiary qualification (8.54%) is effectively double that in households headed by individuals with no education (4.6%) for the period 2001 to 2007. In poor households (those in the bottom 30 percentiles) headed by

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[1]   According to Prof. Haroon Bhorat, this is known as 'simple aggregate output-employment elasticity'. Of course, formal modelling is required to control for the variety of different variables that may impact on the relationship between output and employment. Formal output-employment elasticities are determined through the econometric estimation of a labour demand equation (Oosthuizen, 2006). Consequently, the numbers presented are not output employment elasticities.

individuals with only a matric qualification, the rate of income growth was negative, indicating that these households experienced a drop in income over the period. In contrast, poor households headed by an individual possessing a tertiary qualification showed positive income growth at rates higher than those in which the head has only a complete GET (Grades 9, 10 and 11) or a matric qualification.

The conclusion is inescapable: income gains were *highest* among better educated households during the period 2001 to 2007, even when examining those at the bottom end of income distribution. The high rewards for skills also shows how severe the skills shortage is in South Africa, especially in periods of rapid economic growth. Matric-educated household heads and those with a complete GET appear to have *benefited least* from growth over the 1995 to 2005 period. In other words, positive economic growth did not impact equally on individuals or households.

1.2 The centrality of education to a more equitable growth path

The analysis above demonstrates a truism, which is that an efficient and effective education system lies at the heart of a successful economic growth strategy.

The benefits of economic growth accrue to better skilled and educated people. Those people with a school-level qualification, or possibly even an FET qualification, are effectively excluded from the country's growth process. Lower quality schooling and poor FET provision means that people are ultimately being trained for unemployment rather than for active participation in the labour market and in the growth process more generally.

It may be possible to 'equalise' the benefits of the country's growth path, but this will depend on the schooling system producing higher quality graduates (for example in those areas targeted through the JIPSA initiative) who are able to enter the higher education system and study in fields which are in demand by firms. Other skills development interventions could also provide important points of departure for expanding employment opportunities. As is shown below, however, this is likely to depend on the NHRDS using an evidence-based problem-solving approach to address current areas of disconnection in the system.

Setting the context: Priority skills acquisition for equitable economic growth

1.3 The challenge of coordination in government and beyond[2]

Research shows that human resources development systems have three important components[3]: first, the acquisition of education and training through qualifications; second, the development of productive and organizational capabilities in specific institutional contexts (such as in a firm, government department, school, civic organisation or business association); and third, achieving innovation in HRD through the exchange of strategic information between government and private institutions on the demand and supply sides. The challenge for any effective HRD system is to achieve synergy between these three spheres through the effective interface between public, private and other sectors.

The DPRU analysis identifies schooling as a critical factor in widening the base of high-level skills in order to distribute the gains from economic growth more equitably. The challenge that emerges within the context of the developmental state is how to integrate public policy and national planning with the interests and activities of a wide range of players in the public and private sectors in order to widen the skills base.

In South Africa, vertical coordination of state responsibility takes place across the three tiers of government (national, provincial and local), while horizontal coordination takes place between government departments, either nationally or provincially. During the period 1999 – 2008[4], government made a number of attempts to improve planning, policy integration and cross-departmental coordination. The Accelerated and Shared Growth Initiative for South Africa (AsgiSA, launched in July 2005), was the most significant of these, being an economic and industrial policy campaign designed to identify the major bottlenecks to attaining a 6% growth rate by 2010. However, the *Fifteen Year Review* produced by the Policy Coordination and Advisory Services unit in the Presidency (2008) acknowledged that coordination and planning are

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[2]   The analysis in this section draws heavily on two unpublished mimeographs by Prof. Andre Kraak, both produced in 2010: (a) "Planning, policy integration and inter-departmental coordination: the possibilities and limits of the South African state" and (b) "Human resources development policies and the need for inter-departmental coordination: The case of South Africa".

[3]   Cited in Kraak 2010b: 8

[4]   Gumede (2009) notes four inter-linked planning phases: 1994-1996: The Reconstruction and Development Programme; 1996 – 2000: The Growth, Employment and Redistribution Strategy; 2000 – 2004: the rise of micro-economic reform and an expansionary state; and 2005-2008: The Accelerated and Shared Growth Initiative for South Africa (Asgisa — accelerating infrastructure development) (Gumede, W (2009) Participatory Developmental Planning for a democratic developmental state, unpublished mimeograph, June.)

ongoing challenges, with "factors militating against effective integration in government more deeply rooted and more difficult to overcome than initially recognised".

Horizontal coordination is an increasing focus of governments around the world in order to generate outcomes that cannot be achieved by units working in isolation. Research[5] shows that the success of horizontal coordination depends on capabilities and arrangements that emphasise relationships, interconnections, interdependencies and holistic thinking. Traditionally government departments are hierarchical in structure and work off accumulated wisdom, which is often resistant to change from outside. This produces administrative silos that satisfy legal jurisidictions and departmental interests, but do not benefit government as a whole. In the process policy gaps emerge, accompanied by duplication and contradiction.

The rise of horizontal coordination in government is a function of various factors, including the need to respond to social problems that transcend the traditional boundaries in government (such as education and heath inequalities, social cohesion, urban regeneration and climate change). It is also a product of the 'network mode of governance' that recognises shared jurisdiction and diffuse authority across the public and private divide.[6]

Structures used by governments for horizontal coordination include informal coordination, inter-departmental committees, clusters, task teams and central agencies (such as parastatals). Research suggests that the most influential and successful institutional arrangement is a coordination or planning unit located at the highest level of government. This is the direction which South Africa is now taking with the Ministry for Performance Monitoring and Evaluation and the National Planning Commission, both located in the Presidency. In addition, the establishment of the Department of Higher Education and Training in 2009 represents a significant step to align the outputs of education and training with the skills needs of the economy.

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[5]   Cited in Kraak (2010a: 10)

[6]   This view recognises that knowledge is located not only in government or market relations, but comes from communities through citizen engagement and resides in networks. If coordination is to be truly successful, it must be "owned" by the participants (Kraak 2010a: 5).

Setting the context: Priority skills acquisition for equitable economic growth

1.4 The relevance of the JIPSA experience

As is outlined later in this report, JIPSA was mandated to work in ways that could overcome fragmentation in order to pursue the acquisition of priority skills. Its approach recognised the interconnections and interdependencies underpinning priority skills acquisition. JIPSA demonstrated that the environment in which it was seeking to support the objectives of priority skills development was characterised by two features: first, fragmentation within national systems or within sectors and, second, a lack of alignment between the users and producers of skills or between public policy, providers and professional bodies or other stakeholders.

The JIPSA approach thus focused on the close involvement of different players in producing the priority skills required by the South African economy. It recognised their distinctive roles and sought to build working relationships between public and private stakeholders, organised labour and other players in an effort to forge solutions that individual players would not have been able to formulate or implement on their own. Rather than focusing only on targets, it used a problem-solving approach and identified that many features of the skills crisis arise from bottlenecks and logjams that cause the HRD system to malfunction. This prevents the skills pipeline from producing the quality and numbers of skilled people required by the labour market.

Through JIPSA, the social partners chose to make a number of short-term interventions that facilitated the interface between government departments, organised labour, business and other significant players such as professional bodies. The experience produced a number of tangible results, which demonstrate the contribution that an integrated project-based approach can make to systemic change.

The JIPSA experience thus informs possible approaches to widen the production of priority skills by linking human capital provision with employment outcomes. Should this be achieved, it is likely to generate a more equal growth path for the economy.

Through the provision of better educated individuals, and indeed within the JIPSA context of increasing the supply of priority skills, it is possible to create a more virtuous growth path. The availability of a large pool of skilled individuals not only reduces the wage premium on skilled workers, but also has the crucial impact of generating a quantum leap in employment opportunities. These latter two outcomes, alone, would be instrumental in placing the South African economy on a more equitable and shared growth path.

On this basis, this close-out report offers the NHRDS an experiential base that it could leverage as it moves forward to address the continued crisis in priority skills. It is hoped that the JIPSA experience will serve as a foundation off which the skills base can be widened in an effort to introduce the more equitable distribution of benefits from economic growth.

2. The JIPSA mandate, its approach, focus and model

JIPSA was established as an initiative designed to deal with a very particular economic problem — the supply of skills in relation to the economy and the labour market, and the concomitant role of education and training.

Prior to 1994, the South African economy represented one of the poorest examples worldwide of the interaction between the institutions of human capital and their final users. The education and training environment was passive and lacked dynamism. Many institutions were very weak and employers showed little interest in developing their employees. Universities operated in a vacuum, often offering programmes that bore little relation to the needs of a developing economy. There was no layer of FET institutions functioning effectively, and there were immense difficulties in the basic education system.

The JIPSA mandate, its approach, focus and model

In the years following the first democratic elections in 1994, significant efforts were made to restructure institutional support for skills development, including the introduction of the Sector Education and Training Authorities (SETAs) and an increased focus on technical training. However, the lack of interface between the users and suppliers of human capital still meant that these institutions have been less than effective in developing the skills required by the economy.

2.1 The JIPSA mandate

In this context, JIPSA was established as an initiative designed to deal with a very particular economic problem − the supply of priority skills to the economy, and the concomitant role of education and training. The shortage of these skills was holding up economic growth and employment creation.

Among the key aspects of JIPSA's mandate were the following directives regarding priority skills development:

- **Lead** the implementation of a joint initiative of government, business and organised labour to accelerate the provision of priority skills to meet the AsgiSA[7] objectives.

- **Prioritise key skills** and develop appropriate human resources development strategies to address these in the short to medium term.

- **Mobilise** senior leadership in business, government, organised labour and institutions concerned with education and training, and science and technology, to address national priorities in a more co-ordinated and targeted way.

- **Promote** greater relevance and responsiveness in the education and training system and strengthen the employability of graduates.

- **Lay the foundations** for more coordinated and effective human resources development strategies.

- **Identify** blockages and obstacles within the system of education and training that stand in the way of the achievement of JIPSA's objectives.

JIPSA was also mandated to provide momentum and support to the implementation of AsgiSA and to lead an effective programme to communicate its objectives and consult with stakeholders. Led by the Deputy President and housed in the Presidency, JIPSA reported to the AsgiSA Task Team and Cabinet on progress made towards agreed objectives.

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[7]   The Accelerated and Shared Growth Initiative for South Africa

2.2 The JIPSA partners

JIPSA functioned as a multistakeholder working group through which government, business, organised labour, academic and research institutions, and civil society joined forces to fast-track the provision of priority skills required to support accelerated and shared growth.
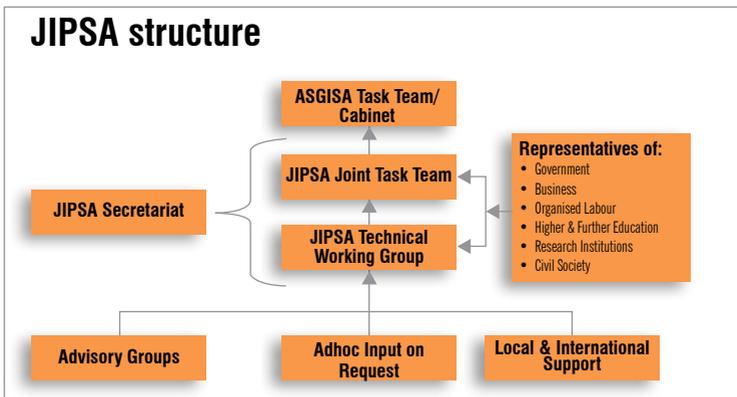
JIPSA focused the attention of key government departments, SETAs, and public education and training providers on the achievement of core national objectives. It called on business leaders to ensure that the private sector played an active role in the provision of priority skills, and sought the support of organised labour for a shared priority skills agenda.

The country's two largest trade union organisations – the Congress of South African Trade Unions (Cosatu) and the Federation of Unions of South Africa (Fedusa) – participated in the JIPSA Joint Task Team, as did top business leaders. The private sector contributed to its research and provided financial support and capacity to help implement some of the JIPSA projects.

JIPSA had no formal authority. In this context, the leadership of the Deputy President gave it the influence and leverage to inspire, to persuade and to lead. The participation of a contingent of powerful decision-makers and influential people meant that JIPSA's activities received the highest attention and priority from government.

2.3 The JIPSA structure

As is outlined in the diagram below, JIPSA was guided by a Joint Task Team and a Technical Working Group.

JIPSA structure

ASGISA Task Team/ Cabinet

JIPSA Secretariat

JIPSA Joint Task Team

JIPSA Technical Working Group

Representatives of:
• Government
• Business
• Organised Labour
• Higher & Further Education
• Research Institutions
• Civil Society

Advisory Groups

Adhoc Input on Request

Local & International Support

The JIPSA mandate, its approach, focus and model

According to the 2008 Annual Report, the Joint Task Team in 2007/08 included the Deputy President, nine cabinet ministers, eight chief executive officers from private sector companies, leaders from the two largest trade union federations in the country, and a significant number of other influential individuals (see Appendix 1 for participants in 2008).

2.4 How JIPSA operated

In carrying out its mandate, JIPSA actively sought not to duplicate existing structures.

The JIPSA Task Team (JTT) was chaired by the Deputy President who provided leadership and overall strategic oversight in pursuit of the JIPSA objectives. The JTT was made up of representatives from government, business, organised labour, higher education, professional bodies and associations, and specialist agencies.

Members of the Technical Working Group (TWG) comprised representatives from key government departments, business and organised labour. They were appointed by the Deputy President to advise the JTT on the development of a JIPSA Skills plan. The TWG was accountable to the JTT and reported to the JTT through the TWG chair. The calibre of representation in the TWG ensured that the recommendations put before the JTT were well considered and the implementation measures identified to address the skills constraints were clearly articulated.

JIPSA was supported by a small secretariat provided by the National Business Initiative (NBI). The secretariat was accountable to the JTT and reported to the JTT through its Director. The secretariat enlisted expert advice from specialists for each area of work through reference groups, advisory groups and working groups. It was able to move flexibly and with agility between and within social partners. It provided coordination, administrative and project management support, policy analysis, research management capacity, prepared reports and documents as required, and assisted JIPSA with tracking and monitoring progress. A close working relationship developed between the secretariat and the Presidency, with fortnightly meetings regularly attended and supported both by senior officials in the Office of the Deputy President and by the chair of the TWG. This contributed significantly to JIPSA's outputs.

2.5 The JIPSA model

JIPSA functioned as a task team over a period of four years, from 2006 to 2009.

During this time it refined its approach and mode of operation as follows:[8]

- It was constructed as a joint initiative of the social partners.

- It focused on a limited number of priority skills.

- It was based on the voluntary self-binding of autonomous project owners. JIPSA recognised the distinctive roles of project owners and attempted to provide an effective interface between them and coordinated efforts to achieve the set targets.

JIPSA's approach was practical and focused on problem-solving. Typically, its work entailed identifying and quantifying skills needs, identifying the constraints to skills acquisition, identifying the relevant project owners and role-players, securing their buy-in and support, and coordinating and supporting their collective efforts to address priority skills requirements.

Three features characterised the JIPSA model:

- Facilitating solutions to a limited range of identified problems at the interface of several departments;

- Focusing on single purpose, short-term projects;

- Locating the JIPSA deliberations at the highest level of government, in the office of the Deputy President, who was actively involved in its work.

However, it was noted that government departments may already have planned to deal with specific issues that JIPSA identified. In this case what was needed was not new projects, but greater communication between role players about departmental initiatives. Institutions around the country needed to align their outputs with national priorities and be made accountable for delivery.

2.6 The priority skills strategy

The JIPSA strategy involved broadening the training pipeline, retaining people in skilled employment, and training them more effectively and to higher standards. At the same time it recognised the importance of

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[8]   Drawn from the 2008 JIPSA Annual Report

The JIPSA mandate, its approach, focus and model

addressing the systems blockages, inefficiencies and problems of quality that impede the acquisition of relevant, high-quality skills to sustain growth over the medium to longer term.

Five priority skills areas were identified for immediate attention:

- High-level, world-class engineering and planning skills for the 'network industries' – transport, communications, water, energy;

- City, urban and regional planning and engineering skills;

- Artisanal and technical skills, with priority attention to infrastructure development, housing and energy, and in other areas identified as being in strong demand in the labour market;

- Management and planning skills in education and health;

- Mathematics, science and language competence in public schooling.

In addition, proposals were made for priority skills initiatives in the fields of tourism, ICT, BPO and biofuels, although the latter was ultimately focused on the agricultural sector in general.

2.7 Lessons learnt about the social partnership model

Lessons learnt about the interaction between social partners include the following:

- While business was initially slow to take up the issues raised at JIPSA, this changed once the participating CEOs committed themselves to prioritising skills development as a core business input. A significant factor here was that Business Leadership South Africa put the issue of skills development at the top of the private sector agenda.

- On the side of government, the Department of Education had a key role to play in the deliberations of the Technical Working Group, and it was encouraged to participate more vigorously in the process than had been the case in the first two years. Furthermore, all government departments were encouraged to make high-level contributions to the JIPSA process and to improve their decision-making turnaround time so as to facilitate the speedy resolution of the challenges identified in the priority skills areas.

- Organised labour played a positive role in the Technical Working Group and the Advisory Committees. At the same time participants at the JIPSA *Bosberaad* in 2007 felt that labour should be more active in the Joint Task Team and should cross-pollinate JIPSA activities and those of the National Skills Authority and SETA structures in which labour representatives participate.

- Although Higher Education South Africa (HESA) was initially slow to participate in JIPSA structures, the uptake did improve in the second and subsequent years. Although there was initially some defensiveness, constructive engagement between HESA and the Department of Education was critical in improving throughputs of engineers and technicians, strengthening training programmes for town and regional planners, and teacher education. It was felt that more active engagement from the Further Education and Training college sector in JIPSA deliberations was also needed.

In order to move JIPSA towards more effective action, a *Bosberaad* held at the end of 2007 recommended that the problem analysis phase should be strengthened and that JIPSA should be more specific about the commitments it wanted its partners to make on various projects. For example, what is the role of business in artisan training? What is the role of business in regard to strengthening mathematics and science in schools?

Two further operational recommendations were made: first the need for consistent high-level participation by the social partners in the JIPSA processes. This proved critical to the outcomes that JIPSA produced. It was also recommended that in addition to identifying the appropriate 'project owners', JIPSA should ensure that the operational teams were in place to support them in the processes of planning and delivery.

3. Progress made in priority skills development

Significant results were achieved in increasing the number of engineers, technologists, technicians and artisans.

JIPSA's work is documented in a wide range of reports produced during its four-year lifespan. Close-out reports are listed in Appendix 2 and relevant documents are available on the CD-ROM in this publication.

Progress made in priority skills development

The assessment that follows is based on a review of the close-out reports produced in respect of the key JIPSA outputs. These are:

- Engineering

- Artisans

- Tourism

- Town and regional planning

- The placement programme

- National learner record database

- Education management and planning

- Mathematics, science and language literacy

- Agriculture

- Professional bodies.

A high-level analysis of the JIPSA results shows that its mandate produced three types of results:

- **Significant results were achieved in increasing the number of engineers, technologists, technicians and artisans:**

  - The provision of **engineers** grew by 14.11%, the number of **technologists** increased by 15.79%, while the number of **technicians** grew by 3.6%.

  - Between 2006 and 2009 over 41 000 **artisans** went into training or qualified in the priority areas.

  This result was a function of strong cooperation between the social partners as well as close engagement between government, providers and other social sectors.

- **Foundations were laid for strengthening the availability of skills in town and regional planning and in education management.** Associated with this is a plan for producing a **comprehensive and current education and skills data management system** that will provide an annual skills supply data report on human resources development in the country.

  This result emerged from an analysis of the systemic factors that produce a shortage of skills. They include: lack of coordination between different levels of government; gaps in the provision of planning skills; and government departments working in silos.

- **The potential for a much stronger strategic focus was identified in four areas:**

  - The **centrality of mathematics, science and language competency** in human resource development and the provision of professional skills − not only in engineering and technology but also in health, economic sciences, town planning and other fields;

  - The **tourism sector** requires a stronger strategic focus to reduce institutional and planning fragmentation, to strengthen capacity in the hospitality sector, and strengthen the role of FET colleges more generally to meet its human resources needs;

  - The **placement of graduates and other skilled people** needs to become more strategic, up-scaled through a multifaceted approach that harnesses public and private sector resources and advances higher-level skills development;

  - **Agricultural extension officers** have a strategic role to play in increasing the technical and management expertise of commercial and emerging farmers; however, this depends on closer collaboration between the departments of Agriculture, Forestry and Fisheries, the National Agricultural Farmers Union (NAFU), AgriSA, university faculties of agriculture and agricultural colleges.

These outputs were the product of intensive engagement between multiple stakeholders including government departments, SETA representatives, labour and business representatives, supported by the JIPSA secretariat. The close-out reports (Appendix 2) suggest that **three types of processes were mainly at work:**

- In each case the social partners and project owners carefully identified the problem and formulated options for its resolution. This process was supported by evidence-based investigation and recommendations made through multiple studies.

- A range of working groups were convened (advisory groups, business working groups, technical working groups, etc) to interrogate the recommendations and identify the interventions requiring both systemic and project interventions.

- Differentiated strategies were devised to tackle the root causes of skills deficits, particularly in regard to the provision of engineers and artisans, and inadequate capacity in the hospitality sector. Strategies included effecting placements for the achievement of work-readiness, increasing the fit between qualifications and work, upskilling graduates and deploying retirees.

The next four sections outline how these processes took shape over a four-year period across a diverse range of priority skills areas. It analyses the JIPSA outputs in four ways: problem identification in priority skills areas; what significant results were achieved; how the targets were met; and directions for future action.

3.1 Problem identification

The close-out reports suggest that there are two types of root causes for scarce skills in South Africa:

- **Fragmentation within national systems or within sectors.** Fragmentation undermines a holistic and integrated approach to planning. This makes it difficult to achieve coherence between strategic goals, supply and demand. Since stability and predictability are required for investment, growth and inclusivity in skills development, fragmentation constrains the supply and quality of skills produced.

- **Lack of alignment between the producers and users of skills, or between providers, professional bodies and public policy.** The JIPSA results show that unless a responsive interface can be achieved between these players and between the different levels of the system, national skills provision will suffer from duplication on the one hand, gaps in provision on the other, and poorly targeted resource allocation.

These two features manifest themselves across the different components of JIPSA's activities as follows.

3.1.1 Examples of systemic or sectoral fragmentation

- **The education system is not only a supplier of skills, but is also affected by a scarcity of skills** – in this case the supply of policy analysts, monitoring and evaluation capacity, and quantitative analysts (statisticians) in the National Education Planning system.

The research report produced for JIPSA entitled "Towards a Systematic and Coherent National Education Planning System" found that **there is no evidence of a systemic, integrated education planning system across the four tiers of the South African education planning landscape: institutional, district, provincial and national.** Most provincial education department planning units focus on education financing and education management information services (EMIS), although in some cases there is a focus on higher level analytic work and monitoring and evaluation. It was found that planning is sometimes located in a separate unit or may be integrated into line functions, but the practice of driving planning through units and line functions is least common. This makes it difficult to achieve integration in conception, structure and practice.

The JIPSA research found that a strong distinction is drawn in the education system between macro planning (systemic planning focused

on policy) and micro planning (which deals with a defined policy component or geographic area, e.g. teacher supply and demand, spatial analysis, financial planning and modelling). It concludes that there is too little emphasis on macro planning.

- With regard to the **placement of skilled people and professionals**, it was found that the reason why African university graduates (in particular) as well as people with certificates or diplomas are not finding jobs is because of poor quality education, inappropriate qualifications and poor soft skills. Had the quality of these labour market entrants been higher, firms would have hired more graduates.

The JIPSA research report entitled "Feasibility Study for the Establishment of a National Placement Agency for a Graduate and Advanced Skills Placement Programme" indicates that reforms have to start at primary and secondary school level with quality education and good quality teachers, particularly in the areas of mathematics and science. It is crucial to provide students with career guidance and to incentivise students and academic institutions to enrol in the right areas of study. Learnerships may provide ways of closing the skills gap, either through soft skills training or bridging courses that provide not only workplace-readiness training, but also retrain graduates in the right study areas.

In addition, national placement strategies are required in order to:

- Provide opportunities for intensive workplace training and experience;
- Provide students with the work-based and experiential learning opportunities to meet requirements for graduation;
- Improve the employment prospects of unemployed graduates;
- Expose mid-career professionals, particularly women, to international best practice;
- Provide matriculants and semi-skilled youth with opportunities for training in vocational skills, locally and internationally;
- Identify scholarships and other technical exchanges that have not been fully subscribed;
- Unlock existing skills within the economy through local and international placements.

- **While the tourism sector demonstrated impressive growth, this served to increase the visibility of continued institutional and planning fragmentation** in the sector, which in turn impacted on its ability to deliver appropriate levels of service. "Continued institutional fragmentation of the South African tourism sector impacts in particular

on skills availability and standards and ultimately affects investment decisions which spur [its] ongoing growth" (JIPSA 2007: p1).

The Department of Environmental Affairs and Tourism (now called the Department of Tourism) had been addressing these issues, and its presentation to the Technical Working Group meeting in 2007 indicated that it was engaged in strengthening several components of the sector, including customer service, the training of managers, new product development, an integrated information management system and a THETA turnaround strategy. However, DEAT also indicated that improved alignment and coordination across the sector is critical for the next stage of growth and development.

It was thus proposed that (see concept paper on the Alignment and Coordination of the Tourism Sector for the Acquisition, Preservation and Development of Essential Skills on the accompanying CD):

- A five-year national tourism strategic plan be developed, and that it should focus not only on the skills agenda, but should include strategies for marketing, product development, transformation, infrastructure, SMME support, improvement of the knowledge base and others;

- A focused implementation agency be established to ensure the development of hotel and accommodation skills, food and beverage skills and fast/quick service skills; the National Tourism and Sport Skills Development Forum was targeted for support in order to attract strong industry participation, proper funding and to demonstrate good governance;

- A partnership approach should be adopted to jointly plan and implement skills development through an HRD strategy for the sector.

These examples demonstrate how within a sector, such as tourism, or a national system, such as education, fragmentation can undermine efforts to adopt a holistic and integrated approach to planning. Fragmentation makes it difficult to achieve coherence between strategic goals, supply and demand, to resolve areas of specific weakness and to target resources strategically for human resource development.

3.1.2 Examples of the need for alignment between public policy, providers and professional bodies

- Between April 2004 and March 2007 there was a 221% increase in vacancies advertised for **engineers and engineering-related skills**. It was predicted that in hosting the FIFA World Cup™ in 2010, the shortfall

in available engineers, technicians and technologists would be between 67 230 and 93 430.

Through the JIPSA process it was recognised that addressing this skills deficit required alignment between three related elements:

- the framework for engineering skills acquisition;
- funding;
- the provision of training, work placement and other support to students.

Although some initiatives were already in the pipeline, others came about owing to the intensive engagement between the stakeholders through the JIPSA process. By shifting the parameters for the framework, funding and provision for engineering skills acquisition, it was possible to bring about a more responsive approach to the supply of these critical skills.

- **Artisans** provided the second example of the need to create a responsive interface between public policy, providers and other stakeholders such as employers and labour. From 1985 to 1995, the numbers of artisans in development decreased from an annual high of 33 000 in 1985 to just over 22 000 in 1994. By early 2005, this had fallen to around 4 500. In 2007 and 2008, national master scarce skills lists reflected a demand-led increase for 60 000-plus artisans in engineering and construction-related skills.

The principal reason for the shortage of artisans lay in the decline of the apprenticeship training system. Evidence emerged that learnerships tended to focus on operator and process (machine minding) occupations and not on artisan or trades/craft occupations. The learnership system had also not come on stream effectively. Due to changes in work processes and increases in production pressures, there was less time available in the workplace for supervising and supporting learning. In general, schedules of training had not been updated since the advent of the SETAs and there was evidence of variation in apprentice training and assessment standards, and the quality of trade tests. Lack of access to structured experiential learning in the workplace, together with the aging pool of skilled artisans capable of supervising and mentoring learners thus became a central focus for the social partners.

As is outlined in section 3.3, the JIPSA-facilitated response involved multiple strands:

- It put in place a new policy landscape that established a platform for the national recognition of artisan qualifications and gained agreement on different learning pathways to artisan status;

- An attempt was made to secure funding from the National Skills Fund, but this was unsuccessful. Nevertheless funding was sourced from SETA discretionary grants and by amending the tax legislation to establish parity in tax allowances to companies for artisan training;

- Implementation was focused on improving the quality of training and assessment through the Department of Labour and the SETAs, revising trade tests, monitoring the output of artisans and improving skills demand data and forecasting.

- In the case of **town and regional planning**, the lack of interface between policy, provision and professional bodies was addressed as follows: The JIPSA process set up a Town Planning Working Group that held several consultations and meetings with industry players and subject experts to get different perspectives on how to improve the sector. A concept paper was prepared, followed by the development of a business plan and a study that determined the supply and demand for town and regional planners within South Africa (see Appendix 2 and the accompanying CD). This process identified the following weaknesses in the sector:

  - Confusing definitions of town planning and a lack of status for planning;

  - Increased and changing demands on planners;

  - Outdated or confusing planning legislation;

  - The location of planning within the national governance context;

  - Professional body in disarray;

  - Inadequate planning education and the prevalence of professional protectionism.

- In **tourism**, the lack of alignment between policy and provision manifested itself this way: A concept paper on Alignment and Coordination of the Tourism Sector for the Acquisition, Preservation and Development of Essential Skills and a study of an FET College Hospitality Lecturer Personal Development Programme (see Appendix 2 and accompanying CD) found that the sector contains a myriad business and training institutions, resulting in a fragmented provider landscape that produces insufficient skills for the sector. A critical need was identified for sustained skills development in the hospitality industry, which constitutes 67%

of employers and 77% of employees in the tourism sector. FET college lecturers lack up-to-date knowledge of industry practices and needs, and the proposed initiative was thus focused on improving the alignment between the quality of FET college provision and industry requirements.

- In the case of **professional bodies**, a lack of alignment between policy and provision was also identified in a study on "The Role of Professional Bodies in Skills Acquisition in South Africa" conducted for JIPSA (see Appendix 2 and accompanying CD). All the professional bodies except SACPLAN have memorandums of understanding with the Higher Education Quality Committee (HEQC) of the Council on Higher Education (CHE). This means that the undergraduate professional programmes in various fields are accredited by the professional bodies on behalf of the HEQC, but the HEQC retains overall responsibility for the accreditation of the institutions. Because the accreditation requirements of the HEQC and the professional bodies are not aligned, there is duplication of effort, leading to increasing frustration among the educational institutions.

  Another area of misalignment with respect to professional competence was found where professional bodies set standards, but the SAQA standards-generating bodies or task teams write the qualifications. Although professional bodies may be involved in this process to some extent, the lack of alignment between qualifications and registration could be an impediment to the supply pipeline. This is most evident in the engineering and planning professions, which have different levels of registration linked to different qualifications.

These examples illustrate a number of instances in which the JIPSA process found that more alignment between public policy, providers, professional bodies and other stakeholders was required in order to escalate the provision of scarce skills. The examples span a wide range of fields, from engineering, artisan provision, planning and tourism, and extend to professional bodies themselves. While the required alignment was different in each case, the need for coherence and coordination is strongly underlined across the examples.

3.2 Significant results

The JIPSA process delivered concrete results by increasing the availability of skilled people in two key areas of priority skills development: engineering and artisans. In the case of town planning, JIPSA was able

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to formulate an in-depth analysis of the skills constraints in the sector. These are outlined below.

- **Engineering, technicians and technologists**

  Between 2005 and 2007, South Africa experienced the following increases:

  - A 12.55% increase in the number of candidates *graduating* in this field:

    - 3.63% increase in technicians
    - 15.79% increase in technologists
    - 14.11% increase in engineers

      With the exception of technicians, these statistics are generally consistent with the JIPSA assertion that enrolments in the various institutions should not be increased, but rather that emphasis be placed on increasing the graduation of candidates by "improving the throughput".

  - Major increases year-on-year in graduation rates of students in electrical, civil, mechanical, chemical and industrial engineering;

  - Increased numbers of new professional technologists and technicians who registered with the Engineering Council of South Africa (ECSA).

- **Artisans:** Here the results reflect both massive changes in the systemic landscape and increased numbers of artisans:

  - Establishment of a platform for the national recognition of artisan qualifications;

  - Establishment of a national benchmark for all artisan qualifications and the consequent recognition of four learning pathways to artisan status through FET college programmes, apprenticeships, learnerships and recognition of learning through experience;

  - Increased focus by the Department of Labour and the SETAs to address the quality of artisan training and assessment. The SETA/DoL Trade Test subcommittee revised trade tests for engineering-related artisan trades according to JIPSA artisan priorities;

  - Establishment of a platform for the 'professionalisation' and ongoing monitoring of artisans through creation of a national register for artisans;

  - In 2009, additional funds were made available through the National Skills Fund scarce window and the SETA Artisan Development

subcommittee agreed on a benchmark cost for artisan training and on a formula for funding such training.

Most of these gains are reflected in a new legislative landscape, achieved principally through amendments to the Skills Development Act No 97 of 1998 and the establishment and promulgation of parity in tax allowances for companies employing learners in learnerships (Tax Laws Amendment Act, October 2008). These are currently being translated into regulations with accompanying criteria and guidelines, and the platform for artisan development is thus held to be sustainable in the long term.

Through these measures, the training of artisans increased substantially, doubling from 5 600 per annum (average based on 2000-2009 figures) to 10 100 per annum (average based on 2006-2009 figures). Despite the contraction of the economy in 2008, employers indicated that they would continue to train artisans beyond their own needs.

Between March 2006 and June 2009, the number of artisans in training or qualified in the priority areas increased to over 41 000. A step-change in output is anticipated in 2009 as higher levels of new entrants to artisan-related programmes complete their training.

- In the **town and regional planning sector**, an intensive research and consultation process (see documents listed in Appendix 2) produced a work plan in October 2007 with 12 key recommendations. These focused on:

    a. Clarification of the constitutional responsibility for urban planning;

    b. Fast-tracking the definition of planning competencies;

    c. Strengthening the SA Council for Planners (SACPLAN);

    d. Increasing the status of the profession;

    e. Verifying the supply of and demand for planning professionals;

    f. Reviewing the curricula and quality of planning education institutions;

    g. Upgrading town planning skills and experience through continuing professional development courses;

    h. Investigating the merits of more structured apprenticeship programmes and encouraging the mentoring of young planners in the public sector;

    i. Addressing the immediate need for skilled, *experienced* and specialist planners;

    j. Conducting a public marketing campaign focused on the nature and contribution of the planning profession;

k. Benchmarking and accrediting institutions in terms of the Planning Profession Act No 36 of 2002.

The outputs from the remaining areas were as follows:

- In the **tourism sector**, a survey of the FET colleges and the tourism industry produced a strategy for improving the quality of training provided by FET colleges in the hospitality sector (see Appendix 2 and accompanying CD). Based on the notion of continuous professional development, the strategy provides for personal development placement programmes for FET college lecturers to enhance their professional competence and performance, and to ensure that training provision is responsive to the needs of the industry. A number of companies in the hospitality industry committed their support to the project as hosts of industrial placements for FET college hospitality lecturers. It was recommended that the strategy be structured to accommodate part-time engagement with industry in the evenings, on weekends and during college holidays, over an extended period, so as to ensure that students were not disadvantaged by the absence of their lecturers. The sustainability of the programme will depend on the availability of funding.

- In the field of **education management and planning**, it was recommended that a representative Education Planning Commission be established with a permanent secretariat working for both the Department of Basic Education and the Department of Higher Education and Training (see Appendix 2 and accompanying CD).

3.3 How targets were met

As outlined earlier, the JIPSA approach was based on the voluntary involvement of autonomous players in the skills development landscape, government, labour, business, providers and others. Each of these 'project owners' had distinctive roles to play in forging solutions to skills deficits. JIPSA's function was to provide an effective interface between them, coordinating their efforts to achieve the set targets.

It was noted earlier that **JIPSA's approach was practical and focused on problem-solving**. This meant identifying and quantifying skills needs, identifying the constraints to skills acquisition, identifying the relevant project owners and role-players, securing their buy-in and support, and co-ordinating and supporting their collective efforts to address priority skills requirements. Although the approach was largely 'project'-based,

it nevertheless **produced important insights into cases in which the provision of scarce skills depended on greater systemic coherence**, and those in which closer alignment was required between public policy, providers and other stakeholders.

A review of the outputs and how they were achieved shows extraordinary heterogeneity. Each area that JIPSA tackled constituted a unique universe that had to be understood on its own terms. Each focus area differed from the next in terms of problem indicators, the skills to be provided, the power relations between government departments and the extent to which business and labour felt they could play a role in the resolution of the problem. **The investment in time required of JIPSA staff to become experts in these specific fields should not be underestimated.** Although this caused some delays in intervention, the development of an intimate understanding of each of the priority skills areas and its requirements was a crucial point of departure for designing appropriate responses and interventions. This, in part, may account for the differential success rates across the JIPSA projects.

In each case the process took a different form.

- In the case of **engineering**, for example, the process involved working with project owners to unlock the causes of high drop-out rates rather than simply increasing enrolment. Proposals were made to increase engineering graduates through a multifaceted strategy that included improved selection, academic support, academic development, pre-entry support, infrastructure improvements, hiring of additional staff and the provision of student bursaries.

  ECSA developed a candidature programme to maximise the immediate post-graduation experience of engineers and increase their opportunities for registration.

  Significantly, the Department of Education allocated R48m in 2006 and R439m for 2007-2009 to four universities to expand their physical capacity and provide bursaries and loans to expand enrolment and graduation. In the remaining four engineering faculties, plans for 2010 indicated increased engineering graduate output.

  Between 2006 and 2009 the Department of Education made significant funding commitments to higher education institutions for engineering provision. The results in increasing the number of engineering graduates demonstrated that public funds can provide significant leverage in resource-poor institutions and learning environments.

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- In the case of **artisan training**, increased financial and funding incentives for artisan development also played a significant role. These took three forms:

  - Parity in tax allowances for companies employing learners in learnerships;

  - Additional funding for artisan development made available through SETA discretionary grants;

  - Significant public funding for the re-capitalisation of FET colleges.

  However, another key feature of this stream was the increased participation by business and employers in the training of artisans. The principal role of the JIPSA Artisan Advisory Group was to leverage support and proactive engagement from business, labour and government to increase the availability of priority artisan scarce skills. This was particularly evident in the engineering, construction and infrastructure pipeline.

  The activities to leverage support included:

  - Actively canvassing employers to make workplaces available for young people to obtain structured workplace experiential learning;

  - Working closely with the departments of Labour and Education to clarify and align learning pathways (National Vocational Certificate (DoE) and learnership/apprenticeship (DoL)) requirements to access trade tests;

  - Encouraging employers to commit additional resources towards training;

  - Increasing the capacity of workplaces to supervise and mentor workplace learning;

  - Investigating additional investment in skills training.

  Specific artisan development projects reflect the number of large employers that increased learner enrolments by a projected 10 000. This contributed to the goal of replenishing the artisan skills pool in the country by increasing the number of artisans being trained and those qualifying in relevant artisan occupations to reach a national target of 50 000 artisans by 2010.

- In the case of **town and regional planning**, the identification of planning as a priority was an important step forward because it helped raise the status of planning. The JIPSA research contributed to a clearer understanding of the role and contribution of planning, and its specific challenge in the post-apartheid landscape. The JIPSA

process clarified planning competencies, which helped reduce some of the confusion around what a planner does.

Once again, funding support proved critical to moving forward on the development of the sector. As the sector professional body, SACPLAN had an important role to play, but lacked capacity, guidance and accountability. Its relationship with the Department of Land Affairs was not optimal and part of the process thus focused on increasing the involvement and awareness of the national department and increasing the flow of departmental funds to SACPLAN in 2008. As a result of the business plan, LGSETA provided funding to SACPLAN, which led to the establishment of a bursary fund to enable more students to study, as well as the development of town planning competencies.

These examples demonstrate that in three out of four cases (engineering, artisans and town planning), concrete results were achieved through intensive engagement with each field by JIPSA staff, thorough interrogation of recommended lines of action by the project owners, and strong leadership and facilitation through which project owners could commit themselves to achieving the agreed outcomes.

3.4 Directions for future action

The research reports produced for JIPSA (listed in Appendix 2 and available on the accompanying CD) show that directions for future action can be grouped into two categories: **quality improvement** and **systemic coordination** for the increased provision of priority skills.

3.4.1 Quality improvement

a. To improve the quality of provision for **engineers, technicians and technologists**, a number of institutions need to qualify for accreditation with ECSA. This requires ongoing monitoring to avoid a recurrence of the problem of students enrolling in engineering-related programmes that are not recognised by the professional body.

b. In the case of **town planning**, identification of works and a related tighter registration process emerged as one strategy for ensuring that non-planners are not able to perform certain planning tasks. This depends on SACPLAN being able to strengthen its capacity and on developing sanctions against planners who perform poorly.

c. The key role of **professional bodies** is to serve the public interest by protecting the public against incompetent practitioners and unprofessional behaviour. It does so by making registration, for example of doctors and nurses, a condition for being able to work as a professional. However, the practice of compulsory registration is uneven and does not extend to all professionals. For example, accountants: the registration of public auditors is compulsory, but other accountants may practise without being registered or without being a member of a professional body. Very few professionals in engineering and town planning are registered, depending on the type of qualification received in these fields.

For registration to become effective, functions need to be reserved for a particular profession in legislation. In this case, however, professional bodies should refrain from setting fees (even fee guidelines) because this could restrict people's access to professional services. Registration is also compromised by a lack of practical training opportunities in the candidacy phase – most notably in engineering, but opportunities for practical training in medicine and nursing are also restricted by the lack of clinical facilities in state hospitals.

3.4.2 Systemic coordination

a. In the case of **artisan development**, processes currently underway to improve sector and national skills planning and demand forecasting need to be supported and should be integrated into the National HRD Strategy. These are the responsibility of the Ministry of Higher Education and Training, while the HRD Council should have the responsibility for testing out the skills demand and forecasting proposed enhancements with the social partners. The key issue is to ensure alignment with proposed economic growth and development strategies across government and the private sector, balanced with labour concerns about sustainable jobs and access to artisan training and recognition. A coherent **artisan development information system** urgently needs to be established to support this process.

Furthermore, the JIPSA **artisan development priority trade occupations** should be proposed as part of the prioritisation for occupational qualifications review and development. This is underscored by the data analysis, which reflects that over 75% of all SETA-reported artisan development is in these priority areas. The priority list would need to be revised based on the low levels of enrolments in some of the identified priority trades, particularly where there is a drop off in enrolments over the 2006-2008 period, and balanced with artisan-related skill scarcity based on the 2009-2010 national scarce and critical skills list.

b. The research undertaken for JIPSA indicated that **education planning** tends to be associated with data collection and data management to inform policy, research, monitoring and evaluation. An education planning system as such was not in evidence and there was no long-term education sector strategic plan that served as a reference point for the education development agenda in the country. Furthermore, the study found that South Africa has few formal programmes leading to a qualification in education planning. Where these do exist they generally treat planning as a component of education policy modules, which are offered in education leadership and management programmes. There are no undergraduate programmes offered in the economics of education.

The study entitled "Towards a Systematic and Coherent National Education Planning System" recommended that an education planning commission be established to develop a long-range education sector plan with standardisation in terms of expected outputs and the scope, functions and competencies to produce these. It was argued that standardisation would introduce vertical coherence across the spheres of provincial and national government, and lateral coherence across the education subsectors within the Department of Basic Education and the Department of Higher Education and Training. To cater for the sustainable development of education planning capacity, it was recommended that a human resource development strategy be developed for the education system.

c. In the case of **graduate placement and the upskilling of professionals**, the recommendation is to establish a dedicated agency to implement a strategic national initiative, involving a planned programme of local and international placements with a particular focus on raising the skills levels.

A JIPSA research report entitled "Feasibility Study for the Establishment of a National Placement Agency for a Graduate and Advanced Skills Placement Programme" found that: some higher education institutions are failing to adequately prepare graduates for the labour market and the demands of the workplace; there is a need for improved coordination of information to avoid duplication of effort; and skills deployment placements should be managed on a sectoral basis with accountability to the Human Resource Development Council.

There are numerous placement initiatives of various kinds already in existence, most pre-dating JIPSA, which collectively are responsible for a range of placement activities at a level that is far broader in scope and larger in scale than the programme initiated by JIPSA. Going forward, the above-mentioned JIPSA feasibility study suggests the need for a national agency that would coordinate all placement activities to raise the skills levels.

d. With regard to the future role of the **national learner records database (NRLD)**, it was decided that this facility should focus on data relating to its original mandate and should *not* expand its remit to integrate databases from the Department of Home Affairs and Stats SA. Instead, it should consolidate its existing functions and ensure that it is able to meet the criteria outlined with regard to national data sets. This includes, for example, ensuring that there is a clear mechanism for schooling and FET data to be submitted to the NLRD and that a consistent mechanism for higher education data is applied (possibly through the extension of the HEQCIS). It would also ensure that sufficient capacity is built into the system to ensure that the data are both comprehensive and current, and able to track the flow of learners through the system.

This scenario does not preclude the need for a database – which may in reality operate as a virtual database – which relies entirely on information from the NLRD as a key source as well as other databases. This would be determined in terms of the indicators that are contained in the NHRDS. In this case, the function of the 'database' would primarily be on the analysis of this data so that effective reporting against the indicators could take place. This would allow South Africa to generate a report which sets out the status of NHRD in the country on an annual basis. Engagement between JIPSA and SAQA in the course of 2009 has laid the basis for this outcome.

e. The centrality of **mathematics and science** in addressing scarce and critical skills cannot be overemphasised. Whilst the work done under JIPSA in maths and science was not concluded by the end of 2009, it laid the foundation for the HRD-SA, departments of Basic Education and Science and Technology, and other relevant social partners to bring this work to its conclusion.

The approach adopted by JIPSA with regard to mathematics and science showed the importance of a 'joined-up' approach and highlighted the urgent need for meaningful partnerships with government. It also showed that quick interventions are needed, such as the establishment of a database for initiatives in mathematics and science. The work also identified areas that require deeper understanding such as the role of language in the teaching and learning of maths and science.

The following recommendations were thus made in the final report entitled "Towards a National Human Resource Database":

i.   That the NHRDS:

- ensures that the work done by JIPSA is handed over to the Department of Basic Education, which should indicate how it plans to address the issues raised in the various papers for monitoring by the HRD-SA;

- supports the completion of a study on teacher education as well as the establishment of a database through a body that has reputation for working in mathematics and science education projects (like ASSAF);

- works in partnership with the Department of Basic Education to ensure that the recommendations made through the JIPSA concept papers on improving the quality and quantity of mathematics, science and language passes are taken on board and incorporated in the government strategies for improving pass rates in schooling;

ii. In addition to improving the mathematics and science passes in schooling, the Department of Basic Education, in partnership with all the key stakeholders, should investigate the importance and impact of language competency in the improvement of maths and science passes for learners. The efforts being made to improve maths and science should be extended to include language passes in schooling.

iii. It is evident that the reasons for the low pass rates in mathematics and science in schools are still not clearly understood, and that more research is needed to provide clarity around schooling issues with a view to coming up with innovative measures for implementation to resolve the problems. This should aim to determine:

- the level and scope of mathematics and science content offered in pre-service programmes provided by higher education institutions;

- the number of pre-service enrolments and graduates with FET mathematics and science specialisations per phase across universities in the last three years;

- the number of vacancies and posts with un-/under qualified FET mathematics and science teachers in different provinces teaching mathematics and science;

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- what South Africa's national targets for recruitment and graduation rates for pre-service students with FET mathematics and science specialisation should be;

- what recommendations can be made with regard to the alignment of mathematics and science content in teacher education pre-service programmes and the new school curricula.

f. In **agriculture** the training and development of extension officers was identified as a priority for future action, along with support from farmer-producer organisations (or cooperatives), cooperation between commercial and second-economy farmers, and the social integration of small-scale farmers into the farming community. The AgriSETA may be able to make an important contribution in this regard. It was noted that the Department of Agriculture's Extension Recovery Plan and the implementation of the Agricultural Education and Training Strategy for Agriculture and Rural Development in South Africa has an important role to play in meeting these needs, and requires support from sector stakeholders.

g. **The responsibility to ensure a sufficient supply of professionals** in the labour market lies with the secondary and tertiary education systems, supported by voluntary associations in the different fields. However, the study conducted for JIPSA on "The Role of Professional Bodies in Skills Acquisition in South Africa" found that voluntary associations do not have the reach and impact that large-scale government funding and support can have. It was found that the most effective intervention from government's side that would benefit all the professional fields would be to improve the primary and secondary education system, specifically in mathematics, science and language competence.

While professional bodies have a role to play in ensuring a sufficient supply of skills in the different professions, the JIPSA close-out report on professional bodies advises against this for three reasons: (a) none of the councils have spare capacity to take on additional responsibilities; (b) there are a host of voluntary associations that are already involved in initiatives to stimulate the supply of professional skills; (c) becoming too involved in stimulating skills supply may compromise the regulatory role of the statutory bodies.

3.4.3 Changes to the JIPSA focus and areas of slower progress

At the JIPSA *Bosberaad* in November 2007, JIPSA received endorsement from its social partners and was mandated to develop a programme of action for JIPSA Phase Two. The secretariat subsequently arranged a strategic planning session in February 2008 to determine where JIPSA should focus its energies during Phase Two. A seven-point rating scale was developed and each priority area was ranked according to the following criteria:

- Time required;

- Resources available;

- Progress to date;

- Institutional strength of the project owner;

- Return on investment;

- Critical need to the country;

- Coordination challenge.

Flowing from the strategic planning session and the analysis of each area of work according to the ranking system above, the secretariat made the following recommendations to the JIPSA Technical Working Group for changes to JIPSA's areas of work:

- JIPSA had made a range of proposals to the Department of Health for the improvement of health management and planning capacity, improved funding for the public health sector, and improved working conditions of health professionals. It was agreed that the area of health planning and management would be handed over to the Presidency for advice, since at the time it was not possible for the Department of Health to act on them.

- The Business Process Outsourcing area of work was on track with respect to meeting its targets and had succeeded in attracting appropriate levels of funding from the Business Trust. It was thus agreed that JIPSA would keep a watching brief and that this area would continue under the co-leadership of the departments of Trade and Industry and Labour.

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- ICT was handed over to the Department of Communications (DoC), which at the time was setting up a number of policy and implementation structures. It was agreed that once the structures had been established, JIPSA would consult with the DoC to determine how it could support these endeavours to accelerate skills acquisition. These discussions were still in process as JIPSA's term came to an end.

- It was also agreed that in its second phase, JIPSA would focus a moderate amount of time and resources on the following project areas: town planning; placements; tourism; education planning and management; technicians and technologists; and maths, science and language competence in public schooling with respect to the Dinaledi school initiative.

- At the same time, JIPSA sought to make high impact on the following project areas: engineering; high-level engineers; artisans; agriculture; and maths, science and language competence in public schooling with respect to mobilising the business contribution to schooling.

It is worth noting that it was at this planning session where it was agreed that JIPSA should not focus narrowly on biofuels but would rather seek to make a wider contribution towards raising skills levels across the entire agricultural sector.

These recommendations were accepted by the JIPSA Technical Working Group at the end of February 2008.

Other **areas in which JIPSA's progress was slower than envisaged** were as follows:

- Streamlining the **permit process** and building awareness among **Department of Home Affairs** officials about the rationale for importing scarce skills took longer than anticipated and the importation of skills faced bottlenecks. An Operating Manual has now been developed for officials, but more needs to be done in this regard. It was recommended that projected skills shortages should be gazetted and officials should develop permits in response to these categories rather than numerical targets. At the same time, a system is needed to capture and analyse the numbers that have entered the country.

- In **engineering** there was limited success in relation to the **registration of professionals**. The study conducted for JIPSA on "The Role of Professional Bodies in Skills Acquisition in South Africa" identified one of the major obstacles to the registration of engineers as being

a lack of practical training opportunities during the candidacy phase. Furthermore, the lack of articulation between qualifications and levels of registration was cited as an impediment in the supply pipeline. The fields in which this is most relevant are engineering and planning, which have different levels of registration linked to different qualifications.

- Massive changes taking place over the past four years in **higher education institutions** as well as the long, complex planning processes in these institutions, made it difficult for these institutions to implement rapidly the changes required in the field of engineering provision. Indicators need to recognise the real challenges faced by higher education institutions in simultaneously addressing questions of quantity, redress and quality.

  In some cases there were differences around the proposed strategies for increasing outputs. For example, it was initially difficult to find acceptance of the proposed strategy for increasing engineering graduates with the Department of Higher Education, which was capping enrolments. Once a shared understanding around a focus on throughputs was achieved, this was resolved.

- Attempts to increase the numbers of **registered town planners** through SACPLAN were initially constrained by the lack of clarity on town planning competencies. The lack of funds and capacity in SACPLAN further delayed progress in this sector. Two developments helped take this process forward: first, the definition of town planning competencies and, second, funding from the Department of Land Affairs in 2008 which SACPLAN used to advertise and fill vacant posts and start a new accreditation cycle.

- A diagnostic review of the **National Placement Programme**, commissioned by JIPSA and the Presidency, showed that despite good intentions, the programme had evolved over a two to three year period in an unplanned and uncoordinated way (see report entitled "JIPSA Placement Programme Review" on the accompanying CD). No single institution took accountability for the programme, lines of accountability were not clear, stakeholder services were overlapping and the programme suffered from a lack of funding and human resource capacity. Other difficulties were that there were no uniform recruitment and selection processes, and there was no single database with reliable information on individuals available for placement. Without the capacity to monitor and track placements, it proved difficult to gather reliable data regarding numbers of placements effected and how relevant they were.

4. Emerging insights

The JIPSA process was in essence a collaborative one. Through collaboration it was able, in the first instance, to define the scarce skills that had to be prioritised.

The JIPSA close-out reports (see accompanying CD) produce a number of insights about how the collaborative process supported the results that were achieved, lessons learnt over the four years, the importance of cross-cutting systemic engagements and future human resource development needs. This section draws on these conclusions as well as findings from the review of the JIPSA process conducted in 2008 and a set of interviews conducted in 2009 with a number of JIPSA role players.[9]

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[9]   Minister Naledi Pandor, Jacko Maree, Bheki Ntshalitshali, Theuns Eloff, Bobby Godsell, Alan Hirsch.

4.1 Gains achieved through collaboration

This section describes how the supply of priority skills is constrained by two major factors: systemic or sectoral fragmentation, and a lack of alignment between public policy, providers and other stakeholders. In other words, collaboration between the users and suppliers of skills lies at the heart of a coherent, streamlined human resource development effort.

The JIPSA process was in essence a collaborative one. Through collaboration it was able, in the first instance, to define the scarce skills that had to be prioritised. This must be acknowledged as a gain because it meant that agreement was reached among the social partners on a shortlist for action.

Within the different focus areas, the value of collaboration for the achievement of concrete outputs was most clearly demonstrated in the case of engineering, technicians and technologists, artisans and town planning. Collaboration also helped to find a way forward for the national placement programme and professional bodies.

Three critical success factors for collaboration emerge from the JIPSA experience: First, **clear project planning** is essential, with clarity of objectives and roles being in place from the outset. In addition, partnerships across industries and companies; across industry and FET colleges; and between industry, employers, government and SETAs work best where **the roles of each partner are clearly defined**. And finally, the **role of purposeful research** cannot be underestimated in its support for the JIPSA problem-identification process.

The gains achieved through collaboration took different forms, as is illustrated in the following examples:

- In the case of **engineering, technicians and technologies**, collaboration enabled the stakeholders to reach agreement on an integrated strategy focused on three parameters − a framework for skills acquisition, funding and provision − and on the indicators for success. Individual role players then contributed to implementing the agreed strategy to attain the targets, the working of their individual mandates, roles and responsibilities.

Collaboration was critical to ensure that transition points in the skills acquisition pipeline could be smoothly negotiated by engineers, technicians and technologists who completed their formal training and entered the labour market.

Initiatives taken by Business Leadership South Africa in response to the JIPSA process are evidence of one stakeholder playing its part to increase the numbers of engineering and artisan skills. Business and organised labour have a crucial role to play in ensuring that the pipeline is completed.

- Collaboration was also evident in **increasing the supply of artisans**. The JIPSA process encouraged employers with a proven track record in engineering-related artisan development to open up their workplaces and take on additional learners. In support of this development, JIPSA engaged with the Department of Labour to increase SETA activities and skills development funding to support employer commitments to artisan development.

Collaboration was central to the finalisation of the NQF review and the alignment of the technical and vocational aspects of FET college programmes. Together the stakeholders clarified the different training pathways represented by learnerships, apprenticeships and the new FET NCV qualifications, and addressed issues of equivalence and articulation between the different pathways.

BLSA established a Business Leadership Skills Initiative and the chief executives represented in BLSA committed themselves to achieving a significant increase in the number of skilled people in all areas.

- To resolve confusion around the **competencies needed by planners**, JIPSA worked in partnership with SACPLAN and other key stakeholders like the departments of Land Affairs and Local Government, the LGSETA, the South African Local Government Association, Schools of Planning in higher education institutions and town planning employers. Together a decision was taken to fast-track the clarification and development of planner competencies. JIPSA asked all key stakeholders for copies of the planning profiles used to employ planners, as well as documents outlining planning competencies. The report that collated these responses was used to make an input into the Town Planning Standards Generating Body (SGB) as a guide for defining competencies for registration on the NQF.

Emerging insights

The role of leadership in supporting collaboration cannot be underestimated. The leadership provided by the Deputy President and the involvement of senior leadership in business and organised labour helped to overcome initial mistrust and forged commitment to serious collaborative action to address the skills crisis.

Significant leadership figures included Gwede Mantashe, General Secretary of the SACP as chairperson of the TWG, later replaced by Bheki Ntshalitshali, Deputy General Secretary of COSATU. Also active were the chief executive officers of a number of South Africa's largest companies as well as a representative of Higher Education South Africa (HESA). Furthermore, the calibre of experts in the JTT, TWG, reference groups, working groups and advisory groups, and the commitment of JTT and TWG members to achieving the JIPSA objectives, meant that its debates were robust, characterised by close engagement by the social partners.

Furthermore, the facilitative role played by the JIPSA secretariat and the evidence-based approach to problem identification proved critical to bringing collaboration between disparate stakeholders to fruition. As noted earlier, the secretariat had to immerse itself in each of the different fields and develop the requisite expertise to engage the stakeholders knowledgably on their own terrain. This required time, capacity and the requisite information, which was produced by the research commissioned by JIPSA.

4.2 The role of funding in skills development

One theme that emerges from the JIPSA close-out reports is **the need to put funding behind discrete areas for upgrading the provision of priority skills**. Insufficient capacity was evident in attempts to strengthen different focus areas, and significant gains were made by putting the required funding in place to take matters forward. For example, in **tourism**, existing institutions such as THETA were overburdened while FET colleges lacked the relevant capacity in hospitality to provide the relevant skills. In **engineering**, the Department of Education and the National Skills Fund were instrumental in increasing the resources to higher education institutions and employers for provision.

In the **planning** field, SACPLAN was recapacitated following a grant from the Department of Land Affairs, but in **nursing**, the South African Nursing Council (SANC) still faces a lack of staff capacity and is hampered in its efforts to extend the registration of nurses by virtue of the fact that it

still uses a manual system. As registration of nurses is compulsory, the SANC's problems have a direct impact on the supply of skills to the labour market as well as on the lives of individual nurses who are dependent on registration to earn their livelihoods. The SANC thus needs urgent financial and technical support to resolve their problems.

Funding also emerged as a strategy for sustainability with regard to **work placements**. It may have been preferable to put in place a funding strategy to support work placements in parallel with the activities undertaken by business. For example, an accessible grant mechanism to encourage companies to provide increased numbers of work opportunities may have provided greater stability in the system by countering a tendency towards 'short-termism' in business.

Finally, a significant factor in the funding of the JIPSA process needs to be highlighted: JIPSA was funded by the Business Trust and thus had access to a source of funds that was free-standing and not linked into line department budgets. This gave the social partners the flexibility and responsiveness required to action research and implement its strategies.

4.3 The role of research

A review of JIPSA conducted in 2008 found that "JIPSA works on the basis of (analytical) persuasion and general consensus (persuasive power of research and analysis)". Adopting the basic premise that 'knowledge is power', JIPSA prioritised research and evidence-based analysis as diagnostic tools, and placed evidence on the table as a tool for problem identification. Respondents interviewed for the review indicated that the emphasis on making research and analysis available created a better understanding of issues, and contributed to open and honest discussions.

4.4 Quality vs quantity as a factor in priority skills provision

In the engineering field, the JIPSA process demonstrated that throughputs can be improved by improving quality and efficiency of provision. In the case of artisan development, the selection of appropriate candidates, and the management and support of trainees and learners during the qualification process, proved to be critical success factors in increasing the output of qualified artisans.

However, the report produced for JIPSA on professional bodies (see Appendix 2) notes that introducing a new qualifications framework for nursing in the higher education sector carries with it the risk that the availability of trained nurses may decrease. This is because in the past, many people used the system to get an education because they could earn an income while studying, but this is no longer possible under the new dispensation. The costs of higher education are high in comparison to historically 'free' nursing training at nursing colleges and the risk thus emerges that the move to increase quality could lead to a drop in the supply of nurses. The provision of bursaries to learners will be critical in this regard.

It is recommended that challenges related to the **mismatch between the quality of the graduates produced, the expectations of employers and the skills needs of the economy and society** be actively addressed by the Department of Higher Education and Training in partnership with the NHRDS secretariat, the higher education sector and individual higher education institutions. This would entail:

- monitoring qualification-related placements;

- monitoring 'first destination' data on graduates as a way of assessing the quality and/or relevance of HE and FET qualifications;

- creating a temporary institution or function within the offices of the sector, linked to the HEMIS within the Department of Higher Education and Training, to gather and collate information received from individual institutions;

- making graduate output, placement and employment part of the broader system-level planning related to enrolment, retention and throughput;

- improving the performance of higher education institutions and FET colleges.

The issue of **work integrated learning** emerged repeatedly throughout the JIPSA process. Various research reports suggest that strategies for increasing workplace placements include:

- in partnership with relevant SETAs, driving the expansion of internships and learnerships for scarce high-level skills;

- making sure that information on employment opportunities, higher education and training (HET) outputs, and market trends is readily available to higher education institutions, students and graduates;

- considering the benefits of outsourcing a national information service to either a consortium of higher education institutions or a private agency, accountable to the HRD Council and secretariat;

- in partnership with the HE sector, considering the feasibility of developing high-quality work-preparedness course materials in partnership with open and distance learning providers.

4.5 Industry engagement

Industry engagement is essential to ensure successful 'start-to-finish' projects. It involves project planning, securing industry commitment and ensuring work experience and placement opportunities. Industry engagement needs to be supported by commitments from SETAs to support and incentivise training, particularly for industries in distress.

Critical success factors noted in the artisan field include turning commitments into operational plans and ensuring that within companies, line management is committed to the project rather than having it as an HR initiative; providing equipment and technical training resources; and putting funding mechanisms and systems in place. It is also critical for SETAs to have the requisite systems and administrative capacity to support industry engagement.

Sustaining training commitments in periods of economic and financial crisis emerged as a challenge to the momentum that had been developed with artisan training and a public funding mechanism could in future assist in sustaining training during periods of economic downturn.

4.6 Cross-cutting systemic engagement

As has been noted in Chapter 1 and throughout this report, close collaboration between government, the private sector, organised labour and other stakeholders on strategy development, implementation and action emerges as a critical success factor in producing sustainable solutions to priority skills shortages. The importance and the challenges of interdepartmental planning and engagement in government cannot be underestimated.

Emerging insights

For example, the JIPSA reports note that government's economic cluster established a Skills Committee which focuses on validating and approving for publication the Department of Labour's national scarce and critical skills list.[10] This needs to link in with systemic processes in other clusters in order for planning to be aligned across the skills development system. Similarly, it is argued that officials in the Department of Home Affairs, the Department of International Relations and Cooperation, the Department of Trade and Industry and others need to develop a shared understanding of the reasons for importing skills.

As noted earlier, the JIPSA experience shows that the leadership provided by the Deputy President in relation to interdepartmental cooperation proved critical in breaking through the 'silo' mindset in government.

The need for planning to ensure vertical and horizontal coherence applies not only to the education planning sector, but to all sectors. This is because the alignment between policy, proposed growth and development strategies, and programme implementation is critical to the sustained supply of priority skills. It was thus recommended[11] that the improvement in data systems and the alignment of the different reporting formats across the education, training and development systems should be a key area for development in the Ministry of Higher Education and Training in collaboration with the HRD Council.

FET colleges emerged as a weak link in the priority skills supply chain. It was recommended that closer FET college/industry linkages be forged for lecturers to acquire modern work practices and keep abreast of industry developments. For example, it was found that the capacity at FET colleges to train artisans has been neglected because these institutions have not been able to keep up to date with new products, technology and changing forms of work organisation. A similar finding was made in terms of the hospitality industry in the tourism sector. These developments persist despite the recapitalisation of the FET colleges sector, and have resulted in outdated curricula, learning materials, equipment and trainers, which hamper the ability of these institutions to provide such priority skills.

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[10]   The Department of Labour has established the Organising Framework of Occupations (OFO) which clusters all jobs in the South African labour market as occupations at increasing levels of generalisation into eight major occupation groups. The use of the OFO in employer Workplace Skills Plans and Annual Training Reports and SETA Sector Skills Plans has enabled a more reliable identification of occupations experiencing skill scarcity. The Department has also embarked on a detailed forecasting model and SETA capacity building process to improve the identification of skill scarcity.

[11]   Mentioned in the executive summary of the artisan close-out report.

4.7 Future NHRDS needs

The JIPSA close-out reports contained on the CD accompanying this publication and listed in Appendix 2 identify a number of human resource development needs that require attention if the foundations laid by the JIPSA process are to bear fruit. They are itemised below.

a. **Planning** skills emerge as a continued and urgent need in the priority skills landscape (see report entitled "Towards a Systemic and Coherent National Education System"). It is recommended that systemic planning capacity should be the priority focus and that the lack of higher education programmes in **education planning** and the economics of education should urgently be addressed.

In the case of **town and regional planning** professions, three main areas of intervention are required for stabilisation and growth (see report entitled "Town Planning Close-Out Report"):

- Engage the Department of Rural Development and Land Reform to **improve the functioning of SACPLAN** and strengthen the relationship between the two organisations; increase funding available to SACPLAN annually; promote the registration of planners; and prepare a monitoring tool.

- **Develop a retention strategy** to address the need for skilled, experienced, specialist planners and finalise the competency framework.

- **Boost planning capacity in the public and private sectors** by improving the quality of planning provision in higher education institutions, and through in-service training and mentoring, and continued professional development.

b. In the area of **engineering**, the recommendation is to support a curriculum reform task team (see report entitled "Engineering Close-Out Report").

c. The drive to increase the number of trained **artisans** has revealed a number of weaknesses in the provider system that could undermine future outputs (see "Artisan Close-Report"). These are:

- Quality training providers are oversubscribed.

- According to anecdotal reports, the waiting period for trade test dates is between 6 and 12 months. This indicates a shortage of qualified trade test assessors.

Emerging insights

- Schedules of training for designated trades have generally not been updated since the advent of the SETAs and there is evidence of variation in apprentice training as well as assessment standards.

- As noted earlier, the capacity to train artisans has been neglected at FET colleges which have not been able to keep up with new products, technology and work organisation, resulting in outdated curricula, learning materials, equipment and trainers.

- The artisan skills challenge is not simply about numbers, but extends to both quality and systems challenges. Efforts to enhance the quality of artisan training need to acknowledge that the decline in apprenticeship training cannot be addressed simply by increasing intake. It is also necessary to establish mechanisms to retain people who are in the artisan development pipeline and to train them more effectively.

In addition to proposing a doubling of the number artisans qualified and in training by 2010 to 50 000, JIPSA proposed that the priority occupations should be the following: automotive electricians, boilermakers, carpenters and joiners, diesel mechanics, earth moving equipment mechanics, electricians (light), electricians (heavy), fitters, fitters and turners, instrument mechanics, millwrights, motor mechanics, sheet metal trades workers, toolmakers and patternmakers, turners and welders.

At a systemic level, it is noted that processes currently underway to improve sector and national skills planning and demand forecasting need to be supported and should be integrated into the National HRD Strategy. These are the responsibility of the Ministry of Higher Education and Training, but the HRD Council should have the responsibility of involving the social partners in testing out the skills demand and forecasting proposed enhancements. The key issue is to ensure alignment with proposed economic growth and development strategies across government and the private sector.

It is recommended in the "Artisan Close-Out Report" that the JIPSA artisan development priority trade occupations should be proposed as part of the prioritisation for occupational qualifications review and development. This is underscored by the data analysis which reflects

that over 75% of all SETA-reported artisan development is in these priority areas. The priority list would need to be revised to take into account the low levels of enrolment in some of the identified priority trades, particularly where there is a drop off in enrolments over the 2006-2008 period. This exercise should be balanced with artisan-related skill scarcity based on the 2009-2010 national scarce and critical skills list.

d. According to the JIPSA research report entitled "Towards a National Human Resource Database", the **comprehensiveness and currency of higher education** is being addressed by the new Higher Education Quality Council Information System (HEQCIS), in operation since April 2008 as a joint initiative between the Council on Higher Education (CHE) and SAQA. This system is currently focusing on private higher education institutions, of which there are more than 100 accredited by the CHE, but has the potential to be extended to public institutions. As far as the trades and occupations data are concerned (towards the future QCTO), there are several initiatives already in progress.

e. In **agriculture** it is recommended that extension services be strengthened as a priority (see "Position Paper on the Role of Skills Development in Accelerating Growth and Equity in the South Africa Agricultural Sector"). In addition, basic education programmes should be implemented by AgriSETA and other organisations to reduce illiteracy and increase the formal education of small-scale second-economy farmers. Furthermore, most small-scale farmers gained their knowledge through employment on commercial farms where they worked as labourers or through subsistence farming. These farmers lack essential knowledge of management, marketing and finance. Specific challenges in the grain and sugar industries also require attention.

f. The **National Placement Programme** can make an important contribution to the lives of unemployed graduates, students that need work-integrated learning to complete their qualifications, and employers (see "Feasibility Study for the Establishment of a National Placement Agency for a Graduate and Advanced Skills Placement Programme"). However, its institutional framework requires a fundamental overhaul. It needs to be reconceptualised, properly structured and coordinated if it is to restore confidence among users and be fully accountable for its impact.

5. Conclusion

It must be
recognised that
the priority skills
defined in the
JIPSA process
were driven by the
political imperative
for infrastructure
development and
job creation.

Over a four-year period, between 2006 and 2009, the JIPSA process laid important foundations for the future of human resource development in South Africa. The following are the critical success factors for consideration by the NHRDS.

Conclusion

5.1 The role of leadership

The JIPSA experience demonstrates unequivocally that leadership from the Presidency gave the initiative the required authority to enable it to do its work effectively and raised the status of the skills challenges in the national debate. It also helped build working relations between disparate stakeholders, social actors and project owners in order to pursue the agreed goals and achieve the targets set.

It must be anticipated that confidence in the NHRDS will depend on government leadership at the highest level being able to position HRD as a cross-cutting initiative, and to give it the necessary visibility and credibility to secure the trust and investment of the many players required to make the strategy work. The relationship between NHRDS activities and a national vision for the country will form a significant starting point for alignment and systemic coordination.

5.2 Prioritising skills for development

JIPSA demonstrated that significant gains can be achieved if priorities are agreed between stakeholders, and are vigorously pursued. It must be recognised, however, that the priority skills defined in the JIPSA process were driven by the political imperative for infrastructure development and job creation. This suggests that while the availability of comprehensive and accessible data is critical to planning, it is not necessarily the only factor that can drive prioritisation within human resources development.

If the NHRDS is intended to bring about significant change in the human resources landscape, it cannot attempt to manage change across all fronts simultaneously. A lengthy wish list is likely to undermine the focus of its deliberations and cloud its ability to target priorities for action strategically. The NHRDS thus needs to have a long-term focus within which it is possible for various social partners to plan for the development of specific priority skills. The national plan to be developed by the National Planning Commission could provide the context in which specific activities can be prioritised. Within this context, a project-based approach could achieve specific results in support of long-term planning.

5.3 Stakeholder collaboration

As noted at the start of this report, the NHRDS is a government initiative, but it operates within a complex landscape in which universities have

statutory autonomy and ministers have constitutional powers and responsibilities. Strong leadership, coordination and focused planning are required to foster cooperation between this diversity of project owners, and it is likely that the Planning Commission could play a significant role in supporting this process.

JIPSA's experience shows that five elements enabled it to secure the attention and buy-in of a variety of social partners and project owners:

- Its location inside the Presidency whilst simultaneously being able to operate outside the Presidency in cooperation with a range of social partners and project owners;

- Its independence and agility which enabled the social partners to act critically and rapidly take action in respect of the priorities identified;

- The use of well-researched evidence and data to influence the political space for getting agreement between the diverse social partners and project owners;

- The political space and authority that provided the flexibility that line ministries on the supply side may lack in order to take the quick action required to resolve blockages to priority skills development;

- A well-resourced and highly competent secretariat proved to be indispensable in crafting the problem-solving approach adopted by JIPSA and carrying this through to implementation. Its members had to immerse themselves in a diverse range of priority areas in order to commission research that added value to the process of formulating strategies and could persuade the social partners to commit themselves to implementation.

These features need to be taken into account as the NHRDS develops its vision, strategies and operational plans.

5.4 Systemic alignment and integration

The need for systemic alignment and integration across government and between government, the private sector, providers, professional bodies and other stakeholders emerges as a key lesson from the JIPSA experience. The engineering close-out report recommends that the NHRDS needs to be focused on the identification of medium to long-term skills to avoid lurching from one short-term crisis to another.

Conclusion

Close interaction between the users and producers of skills is thus required to ensure that the education and training system is responsive in its ability to produce the skills required, according to the necessary quality and in the required quantities. Given the fast pace at which technology develops, market trends change and workplaces adapt to meet new requirements in service provision, manufacturing and other sectors, it is critical that skills providers constantly 'retool' their knowledge and thinking in order to stay abreast of new developments whilst meeting the country's development agenda.

5.5 The need for reliable data

Research was central to the JIPSA process. It gave expression to the problem-solving approach adopted by JIPSA and was persuasive in forging solutions to the scarcity of priority skills. On this basis, JIPSA was able to identify focused interventions that role players could support in accordance with their mandates and interests. However, doing research for its own sake needs to be avoided. The lesson from JIPSA is that in the most successful results areas, evidence-based data was used to drive action.

5.6 The status of planning

In the first instance JIPSA raised the status of planning in the country and created the conditions for building stronger and more robust systems for planning. Significantly, however, the JIPSA experience shows that planning needs to be specific and focused, not reliant on broad brush strokes. Planning needs to take nuts and bolts into account and engage with the realities that pertain to specific projects, sectors and fields. Evidence-based information is critical to this approach. The JIPSA experience demonstrated that intimate knowledge of blockages and structural arrangements in the different fields, intensive concentration and clear focus are the ingredients required to produce new arrangements, insights and outputs in relation to priority skills. Looking ahead, the lack of higher education programmes in education planning is of particular concern.

5.7 Funding for sustainable skills development

Funding emerges as a significant factor for skills development in two respects. Firstly, JIPSA had access to funds that made it possible to move rapidly and effectively in working with a range of stakeholders. The question now is how will the HRD Council make available funds for projects to be actioned by various players within its ranks? Will external funding be necessary (which may not be sustainable in the long term) or will funding be made available from the fiscus?

Secondly, the JIPSA results show that funding is a critical factor in building the capacity of institutions and organisations to achieve the skills targets required. While this may be self-evident, the extensive funding support provided by the Department of Education to the higher education sector for capital development in support of engineering skills provision, marked a break with past practice and made it possible for institutions to pursue the ambitious targets set. In a different way the funding provided to SACPLAN enabled that organisation to build its capacity and systems in order to play its part in registering planning professionals. Similar support will be necessary for other professional bodies and possibly for providers.

Thirdly, the sustainability of various funding models is an issue that requires closer consideration in skills development strategy. While external or donor funding may have a role to play, this may amount to 'short-termism' and could be counter-productive. For example, funding for the release of FET college lecturers into industry placements must be sustainable if professional development programmes are to have the desired impact on the quality of provision.

5.8 Facilitating or intervening in skills development?

The NHRDS calls for a 'social compact' that extends beyond government's responsibilities, and provides a framework for benchmarking and assessing achievements over time. It seems appropriate that oversight responsibilities – as well as the monitoring and evaluation of graduate placements – be located within this overarching governance structure. However, the JIPSA process indicates that the structures taking decisions regarding higher education planning should involve people who have direct responsibility for provision, e.g. heads of faculties, etc. This makes it possible to move from 'facilitative' and 'catalytic' actions to a stronger interventionist approach in which accountability becomes visible.

Appendix 1: Composition of Joint Task Team in 2008

The composition of the Joint Task Team has changed over the years and in 2008 the following participants were active:

Name	Institution
The Deputy President Baleka Mbete	The Presidency
Minister Naledi Pandor	Ministry of Education
Minister Membathisi Mdladlana	Ministry of Labour
Minister Makhenkesi Stofile	Ministry of Sport and Recreation South Africa
Minister Brigitte Mabandla	Ministry of Public Enterprise
Minister Mosibudi Mangena	Ministry of Science and Technology
Minister Mandisi Mpahlwa	Ministry of Trade and Industry
Minister Charles Nqakula	Ministry of Defence
Minister Nosiviwe Mapisa-Nqakula	Ministry of Home Affairs
Minister Richard Baloyi	Ministry of Public Service and Administration
Mr Bobby Godsell	Business Leadership South Africa
Ms Gail Klintworth	Unilever
Dr Vincent Maphai	BHP Billiton
Mr Jacko Maree	CEO Standard Bank
Mr Pat Davies	CEO Sasol
Mr Mike Wylie	CEO WHBO Construction
Ms Maria Ramos	CEO Transnet
Mr Jacob Maroga	CEO Eskom
Dr Theuns Eloff	Higher Education South Africa
Mr Jamangile Mbana	South African College Principals' Organisation
Dr Sibusiso Sibisi	Council of Scientific and Industrial Research
Mr Dennis George	Federation of Unions of South Africa
Mr Malose Kekana	Umsobomvu Youth Fund
Mr Zwelinzima Vavi	Congress of South African Trade Unions
Mr Floyd Shivambu	Student Representative
Prof Vuyiswa Mazwi-Tanga	Cape Peninsula University of Technology
Mr Bheki Ntshalintshali	Chairperson: Technical Working Group

Appendix 2: List of JIPSA reports contained on enclosed CD-Rom

Agriculture
- Position Paper on Potential Skills Challenges to Train 10 000 Small-scale, Second-economy Bio-fuel Farmers in South Africa
- Position Paper on the Role of Skills Development in Accelerating Growth and Equity in the South African Agricultural Sector

Engineering
- Improving Graduate Output in Engineering: A case study of student performance patterns and their implications for growth
- JIPSA Proposal: Engineering and Intermediate Skills Acquisition
- Increasing the Supply of Engineers and Built Environment Professionals, Technologists and Technicians
- Technicians and Technologists: Is there a skills crisis?
- Graduate Output at the Universities of Technology: An analysis and proposed agenda for improvement
- The Role of Professional Bodies in Skills Acquisition in South Africa
- Close-out Report: Engineering, Technicians and Technologists

Artisans
- Close-out Report: Artisan Development for Priority Skills

Placement Programme
- Review of the JIPSA Placement Programme
- Guidelines for Managing Offers of Placements
- Feasibility Study for the Establishment of a National Placement Agency for a Graduate and Advanced Skills Placement Programme

Appendix 2

National Learner Records Database
- Towards a National Human Resource Database

Town & Regional Planning
- Position Paper on the Role of the Town and Regional Planning System in the Growth and Development of South Africa: Report to the JIPSA Technical Working Group
- Towards a JIPSA Business Plan for Strengthening Urban Planning Skills in South Africa
- Assessment of Planning Skills: Consolidated report of supply and demand data
- Town Planning Close-out Report

Education Planning
- Towards a Systemic and Coherent National Education Planning System

Mathematics & Science
- Mathematics, Science and Language Competency in Public Schooling

Tourism
- Report on the Development of an FET College Hospitality Lecturer Personal Development Programme
- Alignment and Coordination of the Tourism Sector for the Acquisition, Preservation and Development of Essential Skills

General
- The JIPSA Secretariat Review
- High-level Reflections on JIPSA's First 18 Months