

TRANSPORT, WAREHOUSING & LOGISTICS SECTOR SKILLS PLAN



JUNE 2014



NAMIBIA TRAINING AUTHORITY

MESSAGE FROM CHIEF EXECUTIVE OFFICER

We are pleased to present you with the Sector Skills Plan (SSP) for the Transportation, Warehousing and Logistics (TWL) Industry. The aim of this SSP is to guide and inform skills development initiatives in this industry from a skills planning perspective. Sector skills planning is a relatively new process for the Namibian Training Authority. We have therefore adopted a developmental approach to this process. We have aligned the SSP to *Vision 2030*, *NDP4* and the *National Human Resources Plan: 2010 - 2025* of Namibia. Our SSP should resonate with our national vision and policy goals of our government.

Over the last few months we have consulted widely with stakeholders. Many who attended our workshops and focus group sessions participated enthusiastically in the SSP deliberations. We are very encouraged by this, and would like to build strong stakeholder partnerships. The SSP is a living document that should be subject to continuous change and improvement. It should be owned by industry stakeholders.

We have asked the research team to produce a user-friendly plan that will be easily read, understood and applied. The intention is not to write a thesis or peer-reviewed academic journal, but rather to produce a document that will be used by all interested organisations and individuals. We want practitioners and managers in the workplace to read the document. We will achieve this without compromising the integrity of the research.

The primary target audience are employers, managers, unionists, public policy-makers and planners, researchers, career counsellors and education managers as well as others who have an interest or stake in this industry.

We have made a strong start by putting a workable plan on the table for skills development in the Transportation, Warehousing and Logistics (TWL) industry. We are committed to improving the skills of workers and new entrants. Let's join hands and take this industry to new heights.

We hope you contribute to the further development of the SSP in future iterations.

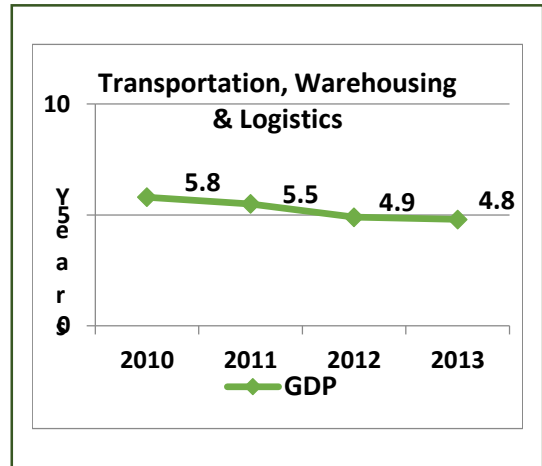
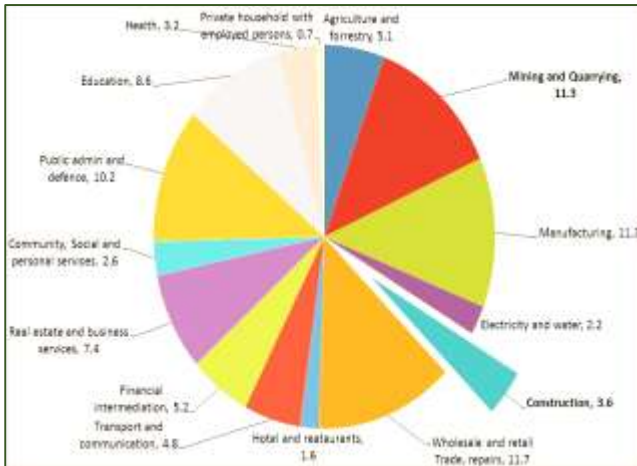
Best wishes!

Ms Ester Anna Nghipondoka
Chief Executive Officer
National Training Authority

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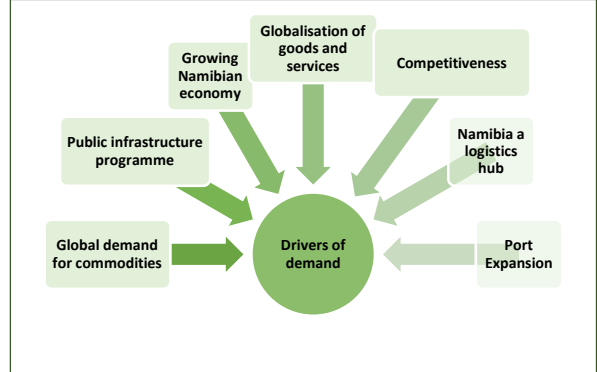
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TRANSPORT, WAREHOUSING AND LOGISTICS SKILLS CHALLENGE



SKILLS ISSUES

Massive job creation potential in the industry	Weak graduate outputs leading to skills shortages	Occupational Health, Safety and Environmental issues key skills priority	Apprenticeship and internship scheme should be promoted	Decent work a priority
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Workforce Size 42 525	76%	24%
Degreed 3 440		
Secondary + VET 20 486	Strong VTC Partnerships Needed	
Primary School 118 599		

OCCUPATIONS IN DEMAND

Engineers	Managers	OHS Specialists	Artisans	IT Specialists	Aviation Personnel	Maritime Personnel
Create Partnerships with VTCs	Prioritise Apprenticeships	Promote Workforce Skills Planning	Access to Occupations in High Demand Training	Occupational Hygiene, Health, Safety and Environment	Offer relevant short courses	

TRANSPORTATION, LOGISTIC AND WAREHOUSING SECTOR SKILLS PLAN

1. INDUSTRY DEMARCATION

According to the International Standard Industrial Classification of All Economic Activities (ISIC) the scope of industry coverage for transportation, warehousing and logistics (TWL) are as follows:

DIVISION	GROUP	CLASS	DESCRIPTION
Division 49			Land transport and transport via pipelines
	491		Transport via railways
		4911	Passenger rail transport, interurban
		4912	Freight rail transport
	492		Other land transport
		4921	Urban and suburban passenger land transport
		4922	Other passenger land transport
		4923	Freight transport by road
	493	4930	Transport via pipeline
Division 50			Water transport
	501		Sea and coastal water transport
		5011	Sea and coastal passenger water transport
		5012	Sea and coastal freight water transport
	502		Inland water transport
		5021	Inland passenger water transport
	5022	Inland freight water transport	
Division 51			Air transport
	511	5110	Passenger air transport
	512	5120	Freight air transport
Division 52			Warehousing and support activities for transportation
	521	5210	Warehousing and storage
	522		Support activities for transportation
		5221	Service activities incidental to land transportation
Source: UNO Revision 4 (2004)			

2. INDUSTRY PROFILE OF TRANSPORTATION, WAREHOUSING AND LOGISTICS (TWL)

The TWL sector is critical to the development of all sectors of the economy and in the promotion of national as well as regional integration. According to NDP 4¹, the following are characteristics of the transport, warehousing and logistics industry sector:

- Namibia has a relatively good core network of national physical infrastructure, including transport infrastructure, electricity distribution lines, dams, telecommunications and mobile communication infrastructure. However, there are emerging weaknesses which, if not addressed over the next five years, could become serious obstacles to higher economic growth.

¹ National Development Plan 4, National Planning Commission

- Current investment levels are insufficient to support higher economic growth, and maintenance programmes, especially in the transport sector, are seriously lagging behind. In December 2011, the effects of underinvestment in the rail system came to the fore when TransNamib experienced a number of derailments that not only affected industries, but also posed safety and security concerns.
- If we do not increase investment in our infrastructure, industries across the board will be affected, including the nascent transport and logistics sector, the manufacturing sector, the agricultural sector, the mineral sector, and the tourism and hospitality sector – all of which have high potential for economic growth and job creation.
- In view of our ambition to become a logistics and distribution hub by 2030, extensive investment will have to be made in all four modes of transport infrastructure, namely road, rail, maritime and aviation.
- By 2017, Namibia shall have a well-functioning, high quality transport infrastructure connected to major local and regional markets as well as linked to the Port of Walvis Bay: 70 % of railway network to comply with SADC axle load recommendation of 18.5 tonnes.

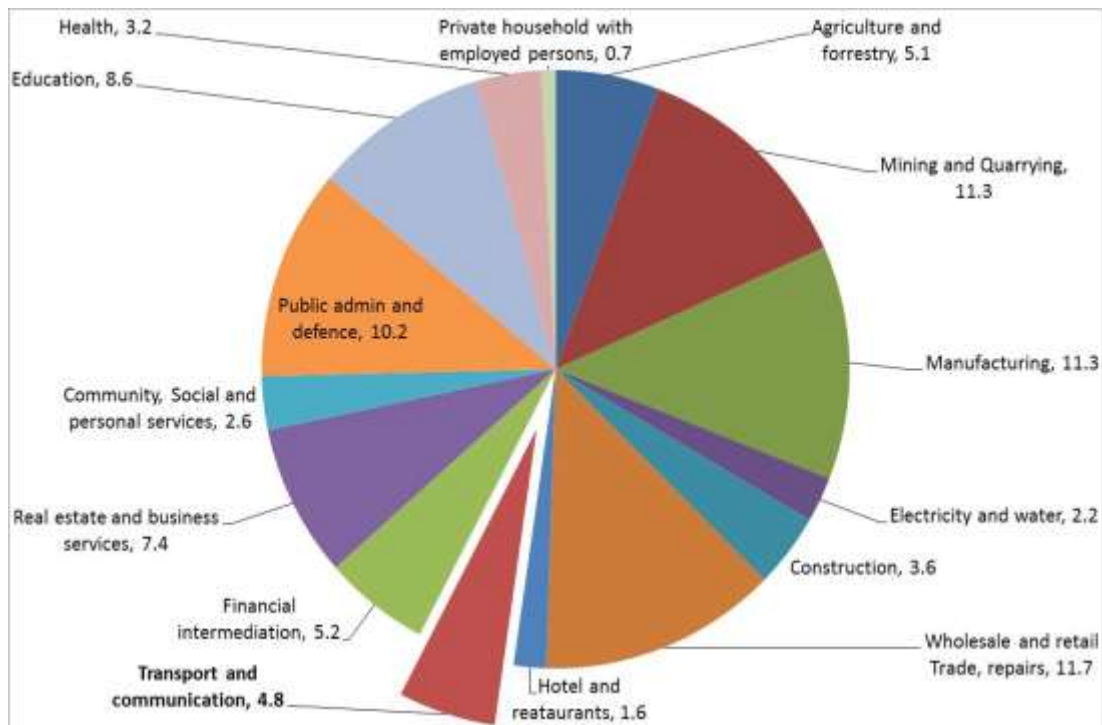
3. ECONOMIC HIGHLIGHTS

- The structure of Namibia’s economy has changed over the past three decades. After the national GDP contracted by 1.1% in 2009 due to the impact of the global economic crisis, the Namibian economy recovered strongly, growing by 6.3% in 2010 and 5.7% in 2011.
- The strong growth was boosted by stimulus measures implemented by the government as of 2009 and the high commodity prices arising from improved global demand for mineral products. Real GDP growth, however, slowed down to around 5% in 2012².

² NPC. 2013. Economic Development Report, Q1 2013.

- In terms of industry contribution to GDP in relation to other industries, the breakdown is as follows:

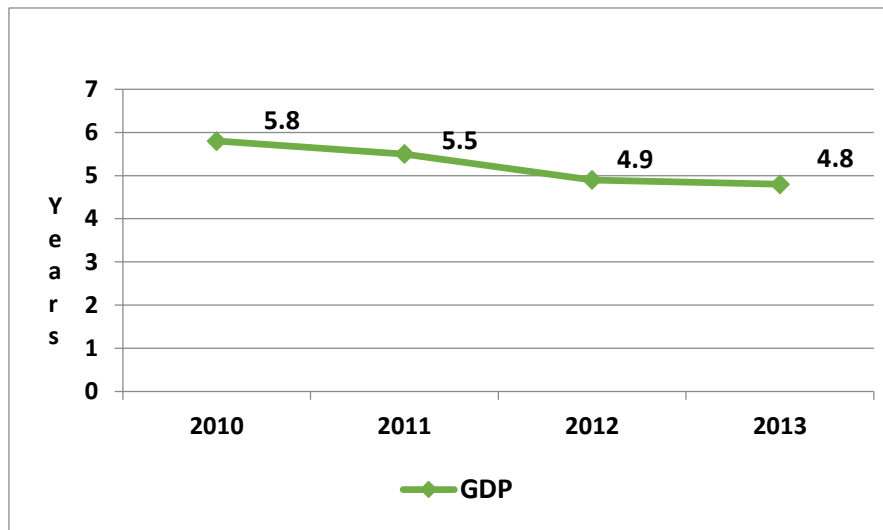
Sector Contribution to GDP



Source: National Planning Commission (2013)

- Collectively, the transport, warehousing and logistics industry sector contributed some 4.8% to GDP growth in Q1 2013.
- The value of the transport industry increased by an average of 8% of GDP per annum for the five years between 2005 and 2010, owing to the increase in volumes through the port of Walvis Bay, cross border trading and the mining industry (NPC, 2013).
- The volumes in the transport and storage industry are expected to be continued to be bolstered by local and international demand from neighbouring countries.

Sector contribution to GDP



Source: National Planning Commission (2013)

- According to Bank of Namibia, the GDP outlook for the industry sector is expected to be 4.3% in 2014.
- Transport GDP is on a downward trend since a high of 5.8% due largely to the slow roll-out of public infra-structure spending.
- According to NDP 4, the GDP outlook for the industry sector is expected to be 5% in 2014/15; 5.4% in 2015/6 and 5.8% in 2016/17.

4. LABOUR MARKET PROFILE

Occupational Breakdown (2012)

Occupational Category	Employed	% of Total
Legislator & Managers	1 935	6.7
Professional	1 691	5.9
Technicians & Managers	3 390	11.8
Clerks	1 815	6.3
Service & Sales	2 425	8.4
Skilled Agriculture	33	0.1
Craft & Trades	811	2.8
Operators	13 595	47.3
Elementary Workers	3 058	10.7
Total	28 753	100

Source: Namibia Statistics Agency (2012)

- The bulk of the workforce is made up of operators and elementary workers according to the Labour Force Survey 2012.

- A concern is the small percentage of craft & trades workers which comprises 2.8% of the industry sector. The challenge is to determine to what extent craft & trades workers are actually artisans with requisite formal qualifications.
- The percentage of 1% for professionals is low, but it could well be that these employees are also captured in Legislators and Managers which appears high.
- Senior personnel at the level of technicians make up 24.4% of the industry sector indicating qualification are high relatively to other industry sectors.

Employment Elasticity

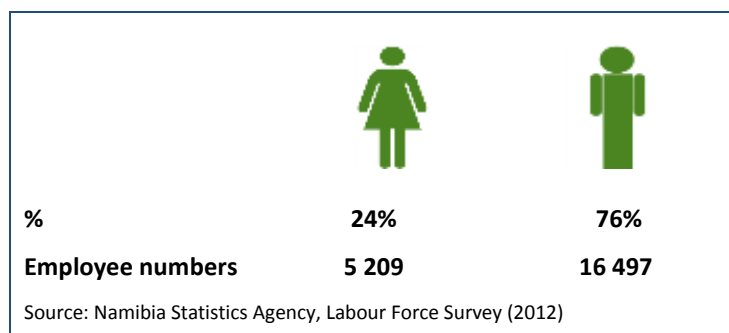
Employment elasticity indicates the percentage change in employment as a result of 1% economic growth.

Employment, by industrial sector	Employment elasticity outcome	Estimated NDP3 (2012)	NDP4 projection	Jobs expected between 2012 and 2017
Transport, Warehousing and Logistics	0.8	17 759	21 706	3 947

Source: NPC (2012)

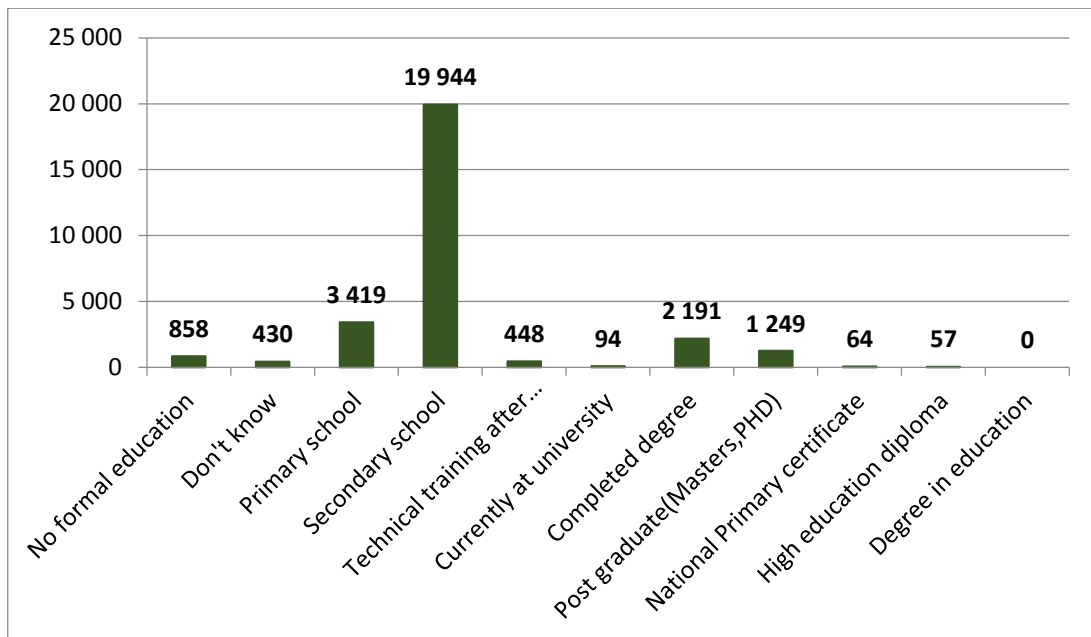
- The number of employed persons is projected to increase from 17 759 at the end of the NDP3 phase to 21 706 by the end of NDP4, i.e. an additional 3 947 jobs.

Gender Breakdown



- There are gender disparities in the industry that should be addressed.

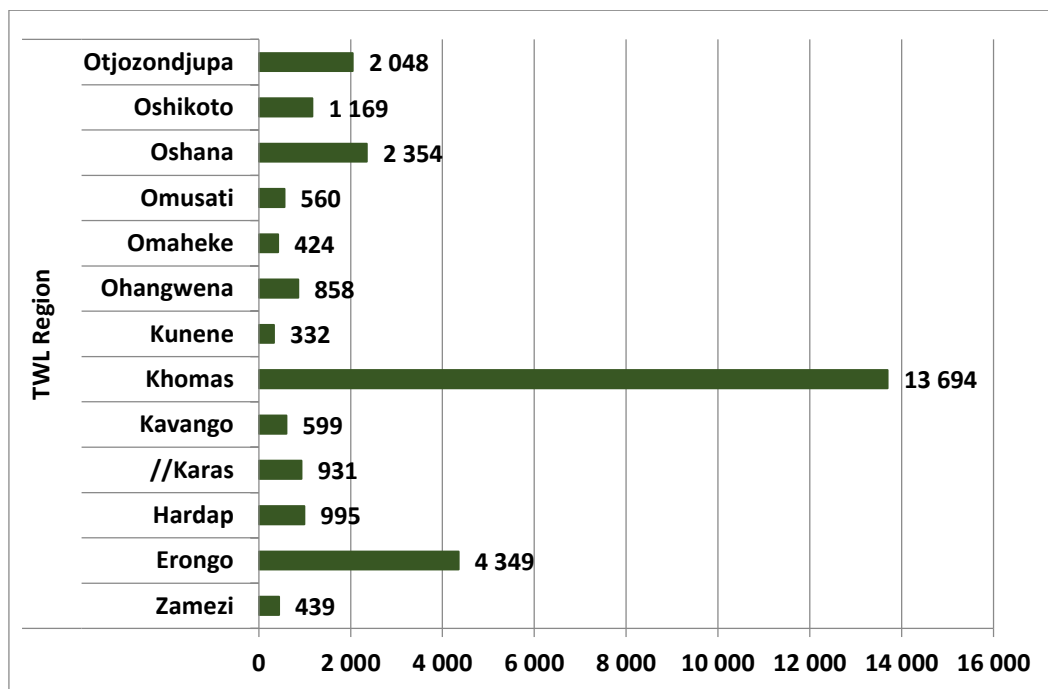
Employee Qualifications (2012)



Source: Namibia Statistics Agency (2012)

- Most employees have a secondary and primary education which is expected of the industry.

Regional Employee Breakdown (2012)

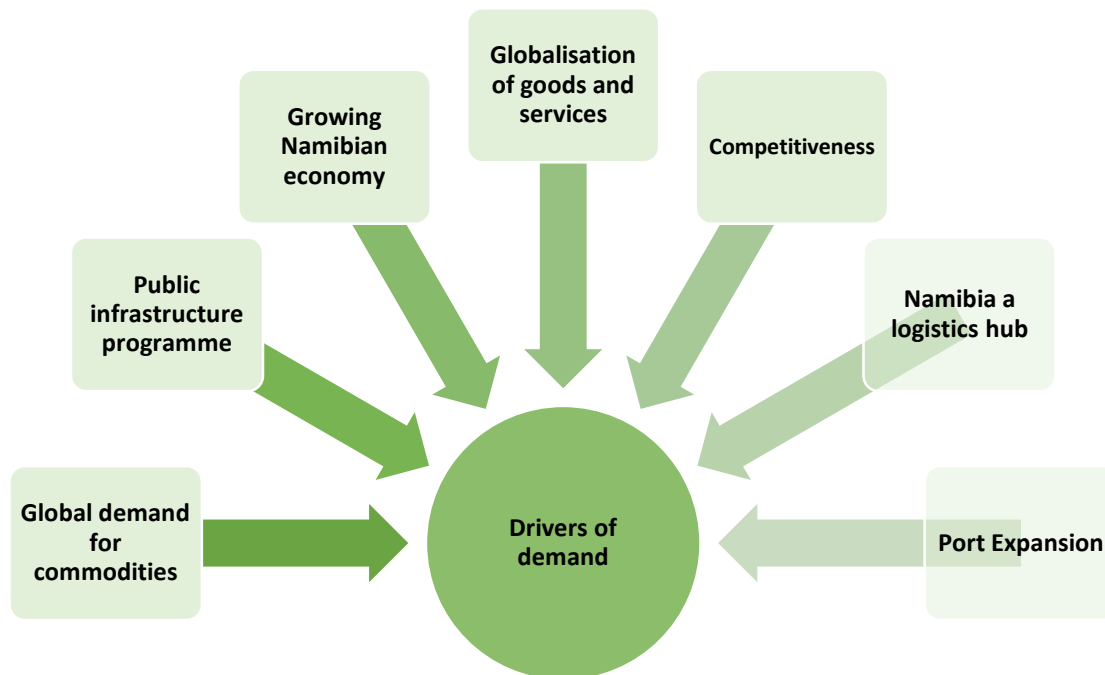


Source: Namibia Statistics Agency (2012)

- The industry is heavily concentrated in Khomas, Erongo, Otjozondjupa and Oshana.

5. DRIVERS OF DEMAND

Drivers of demand for transportation, warehousing and logistics in Namibia are the following:



6. KEY RISK FACTORS

Transportation, Logistics and Warehousing market is fragmented: A fragmented market increases costs and the efforts required for efficient resource utilisation.

Infrastructure: The absence of effective rail network, limited harbour capacity and cost of road maintenance is a challenge facing country.

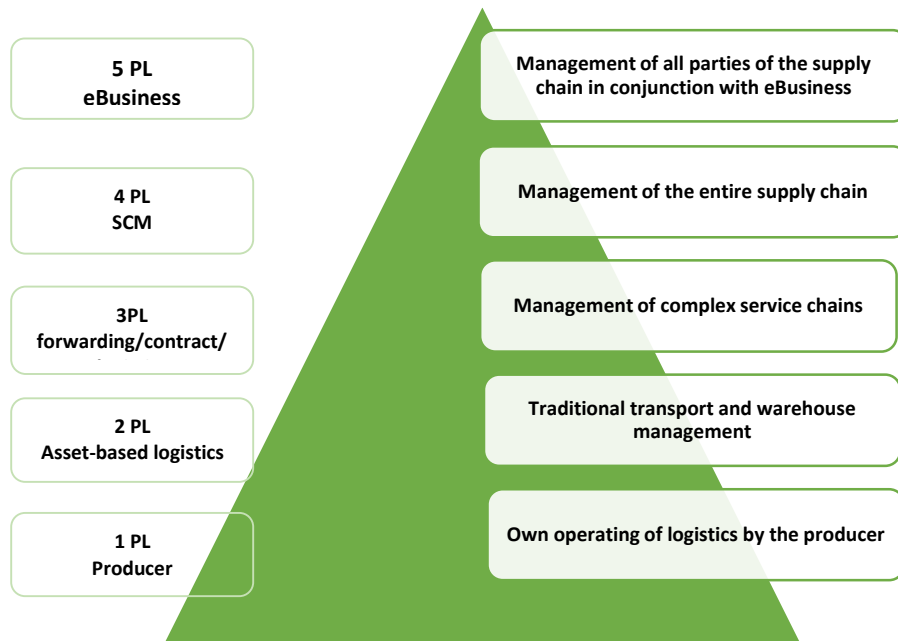
Lack of skilled manpower: The industry sector is considered an unattractive career option and fails to attract skilled manpower.

HIV/AIDS: Employers must consider and plan for the impact of HIV/AIDS on their workforce. In 2012, the adult prevalence rate was an estimated 13.4%.

Poor image: The industry sector appears unattractive to young people and therefore experiences a problem to attract students with good grades.

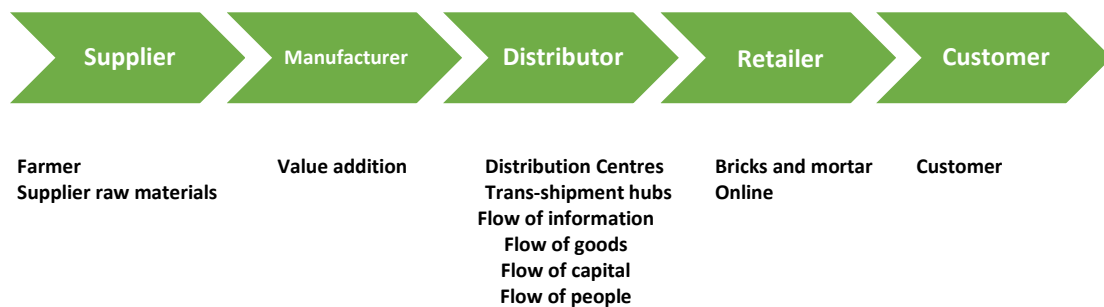
7. VALUE CHAIN ANALYSIS

Service Provider Segmentation

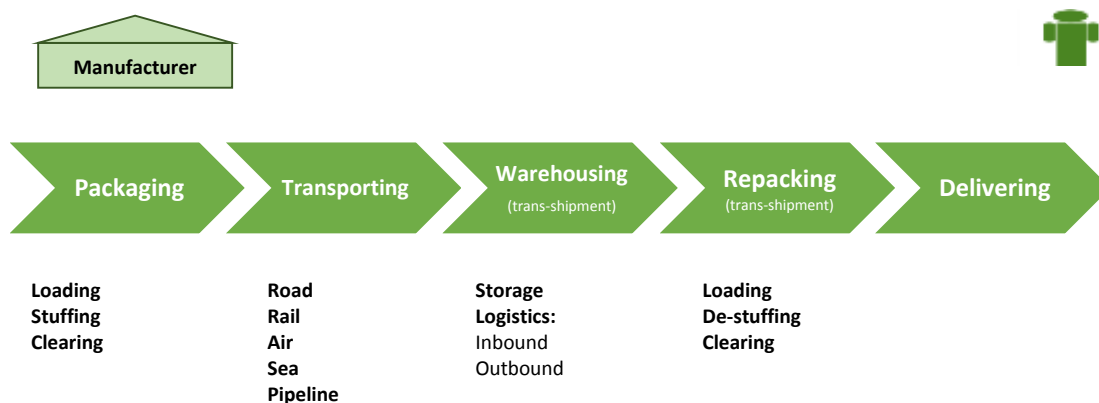


- 3PL services are a combination of all logistics activities - 3PL providers manage all the logistics functions of a company. 3PL could imply the use of *a transportation carrier, a warehouse, or a third party freight manager* to perform all or part of a company's production distribution functions. Demand for integrated 3PL solution providers has grown dramatically over the last several years and they are increasingly becoming an effective way to reduce costs and spread risks for traditional, vertically integrated firms.
- A 4PL provider is a supply chain integrator that assembles and manages the resources, capability and technology of its own organisation with those of the complementary service provider to deliver a comprehensive supply chain solution.
- 4 PLs function as knowledge partners and offer services such as freight negotiations with 3 PL, transport billing, continuous improvement programmes, IT solutions, risk management, insurance and cash flow management.
- They manage different 3PLs and get the best solutions for the clients.

- Logistics is defined as a business planning framework for the management of material, service, information and capital flows. It includes the increasingly complex information, communication and control systems required in today's business environment. It is also defined as the procurement, maintenance, distribution, and replacement of personnel and material.
- The global logistics industry is characterised by high costs of operations, low margins, shortage of talent, infrastructural bottlenecks alongside increasing demand from clients for providing one-stop solutions to all their needs and for investing in progressive technology .
- The entities in a typical supply chain are the supplier, the manufacturer, the distributor, the retailer and the customer. Goods, information and finance move uni-directionally or bi-directionally between these entities.
- A typical supply chain is as shown below:



Logistics Value Chain



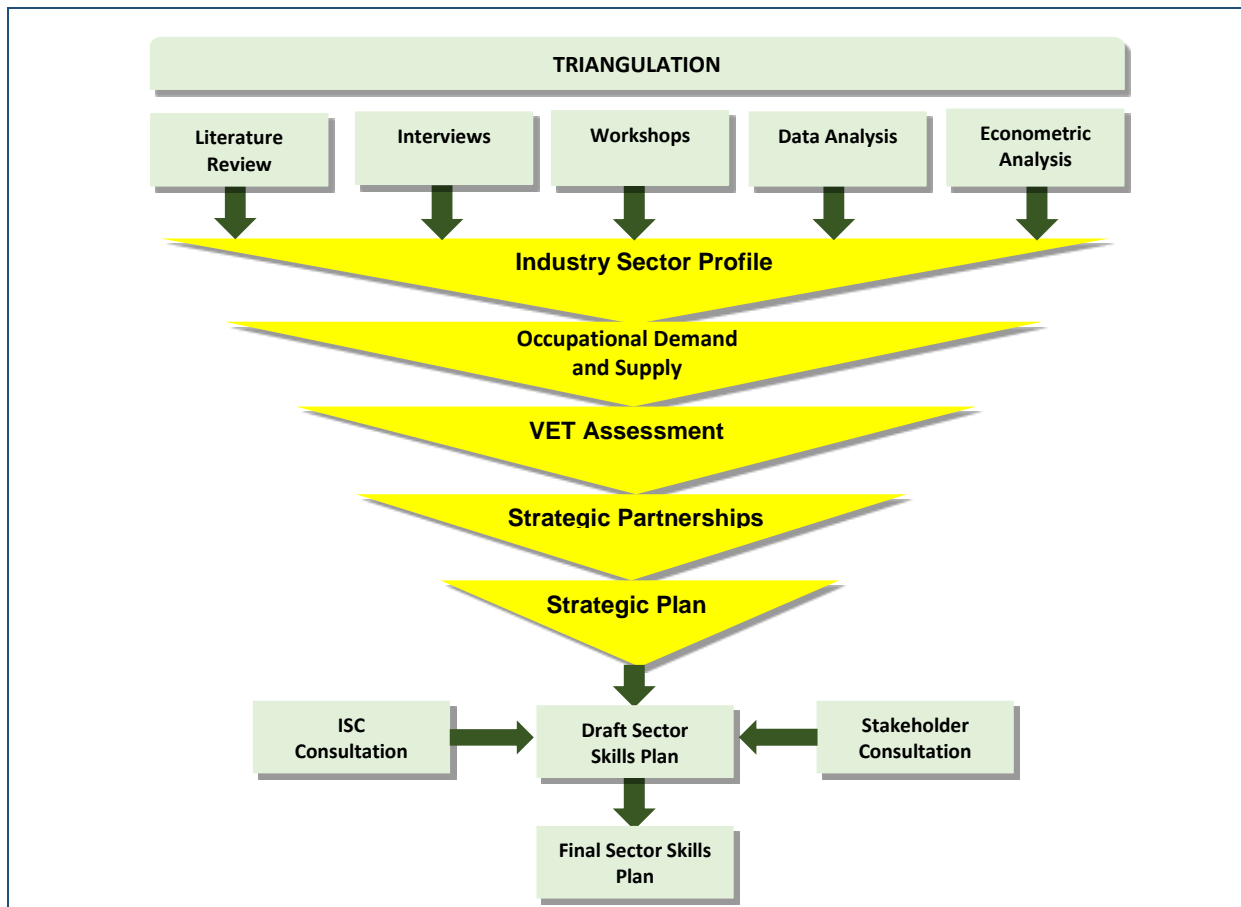
- Goods that are received from the manufacturer are loaded and stuffed into containers of the right size.
- The goods are then transported by any of the modes of transportation (rail, road, air, etc).

- The transported goods are brought to a warehouse and stored. The goods are then re-packed in the format to be sent to the customer, and then finally delivered to the customer.
- Logistics is a critical component relevant across mining, agriculture, manufacturing and service sectors and has to be optimally managed for smooth functioning of production and distribution operations.
- Additionally, logistics cost accounts for a major component of the input costs in all sectors, more so in the case of sectors such as cement, steel, automobiles, FMCG, retail, pharmaceuticals, etc.
- With rising competition in the sectors that use logistics services, it has become even more important to enhance the efficiency of the system and use the cost-benefit in increasing the company's competitiveness.
- Besides, with increasing globalisation a larger number of multi-national companies (MNCs) are sourcing, manufacturing and distributing goods on a global scale, and thus need more complex supply chains to be managed.
- Given such developments, the transportation, logistics, warehousing and packaging sector is expected to become a more specialised and niche expertise area where high premium will be charged for increased quality and quantity of service delivered by logistic service provider.

8. RESEARCH DESIGN AND METHODOLOGY

A well-considered research design, using appropriate methods, is essential to identify and anticipate occupational shortages in designated industries. The design is based on a mixed method approach, which brings together different research methods. This approach uses qualitative and quantitative research techniques. The chosen method is intended to 'triangulate' different information sources to identify occupational skills shortages. This ensures the credibility and legitimacy of the sector skills plan.

The research design is set out as follows:



- Multiple data sources in order to identify occupational shortages and skills gaps in the labour market.
- Information is gathered on the occupational labour market, demand and supply of occupations, skills gaps, VET assessment and strategic partnerships to develop a strategic plan for the industry sector.
- Stakeholder consultations take place at all stages in the SSP development cycle.

Data Collection: Data was collected from the following sources:

Review of existing data and information sources
Literature search of studies in the sector
Analysis of industry market reports
Review of national strategies
Annual Reports of employer associations and companies
Interviews with key informants in the sector
Group discussions with stakeholders
Revision of the Sector Skills Plan
Presentation of SSP to Industry Skills Councils
Adoption of SSP by NTA

To add further value, qualitative research methods were used. Various focus group consultations with stakeholders were held in the development process.

The following research techniques were employed to make a determination on occupational demand:

Interviews: Interviews were conducted with key informants in the industry sector. These individuals were assumed to possess deep knowledge, understandings and insights of skills development in their respective sectors. The interviews were conducted using a semi-structured interview schedule. This kind of interview is partially structured with open-ended questions to elicit information that would not be obtained by closed questions. The interviewer is free to deviate from the questions so long as the issues are covered by the conclusion of the interview.

Workshops: Workshops were held with a larger group of industry sector experts to ascertain their views on skills developments in their respective industry sector.

Literature Review: A review of literature was conducted in the industry sector. Industry publications such as company annual reports, research studies, employer newsletters, economic reports, sector studies, and risk analysis reports were examined to establish evolving trends and skills needs in the industry sector.

Econometric Forecasts: The National Planning Commission undertakes econometric forecasting. The findings were used in this study as research evidence.

By using multiple research methods, it is possible to draw comparisons, establish occupational trends, identify occupational shortages, and make decisions based on the weight of supporting evidence rather than subjective inclinations.

Data Analysis: Data is analysed from a comprehensive array of market-based measures (signals and indicators) in the economy for proposing interventions in education and training.

Reliance on a composite of labour market signals, rather than on a single forecast, allows the researcher to form judgments on the basis of the weight of evidence.

The identification and interpretation of labour market signals require a basic understanding of the analytical processes which can be applied to occupational supply and demand. It also implies the availability of reliable labour market data for: guiding education and training decisions; managing training systems; and planning for education and training.

9. SKILLS IN DEMAND

Road

- With respect to road infrastructure, Namibia has a number of high-quality roads – known as corridors – that link the Port of Walvis Bay with rapidly developing landlocked countries neighbouring Namibia, as well as with Angola and South Africa. To unlock the full potential of economic corridors, new roads need to be built and others upgraded to bitumen standard to ensure efficient flow of goods.
- Increased volumes through corridor traffic are starting to put pressure on the country's road network, impacting in the life expectancy of roads, road users' safety, and increased maintenance costs. These roads will have to be maintained if the free flow of goods to neighbouring countries is to be sustained. A key strategic focus under the NDP4, therefore, will be to strike the appropriate balance regarding the mix of maintenance versus further expansion with regard to road infrastructure.

Occupations in Demand	2015	2020	Barriers to Overcoming Skills Shortages
Managers			<ul style="list-style-type: none"> ▪ An ageing workforce and a lack of new entrants, who are discouraged by an outdated image of the sector or pay and working conditions, have contributed to shortages across a range of occupations. ▪ High turnover of staff is also a significant barrier. Skilled workers are still being lost to the mining and resources industry, with the expansion of the uranium sector exacerbating this situation. ▪ Logistics management is becoming more advanced. Businesses are facing pressure to cope with increased demand, customers are seeking faster service, and there is a need to keep up with technology. ▪ Low operating margins within the Road Transport sector in particular are a barrier to upskilling and workforce development for some operators. ▪ The market is demanding the movement of larger volumes of goods in a single trip, which has implications for licensing requirements. ▪ Smaller operators struggle to compete with larger companies and cannot always see the return on investment in upgrading existing licences. ▪ Some small businesses do not fully understand legislative requirements of compliance management, such as fatigue, speed and chain of responsibility. ▪ Lack of awareness of the opportunities and career paths within Logistics Management, Road Transport and Warehousing is hampering efforts to recruit.
Transport Manager	30	50	
Supply Chain and Distribution Manager	60	100	
HR Manager	50	100	
Financial Manager	50	100	
Marketing and Sales Manager	30	50	
Warehouse Manager	60	100	
Professionals			
Accountant	100	200	
Occupational Health and Safety Officer	150	250	
Driver Instructors	60	120	
Store person	100	200	
Fleet Controller	100	200	
Labour Specialist	100	200	
Loading Supervisor	150	250	
Craft and related trades workers			
Panel beater	100	200	
Spray painter	100	200	
Diesel Mechanic	100	200	
Petrol Mechanic	150	200	
Auto Electrician	100	200	
Plant and machine operators and assemblers			
Crane, Hoist or Lift Operator	120	200	
Earthmoving Plant Operator	200	300	
Vehicle Body Builder	200	350	
Heavy Duty Truck Drivers	200	350	
Forklift Operator	400	750	

Aviation

- As with other modes of transport in Namibia, the aviation industry has also suffered from underinvestment in aviation infrastructure. Initial investment needs to focus on security-related infrastructure in order to ensure that our image as a safe flight destination remains untarnished.

Occupations in Demand	2015	2020	Barriers to Overcoming Skills Shortages
Managers			<ul style="list-style-type: none"> The predicted growth in passenger and cargo traffic over the coming years will provide a challenge in meeting skills and labour needs. The 2012 Boeing Pilot and Technician Outlook Report projects a need for approximately 460 000 new commercial airline pilots and 601 000 maintenance technicians worldwide by 2031. The demand for skills across the globe provides a pull factor for skills and labour. The growth in demand for aviation personnel will require qualified and experienced trainers and instructors with cross-cultural and cross-generational skills. The new generation of aeroplanes and the increased use of new technology, such as remotely piloted aircraft systems (RPAS), will also require appropriate training programmes. With the current shortage of trainers and assessors, solutions will need to be found to fill these gaps. The aviation industry experiences several barriers to entry for pilots. Time and cost of licence training can be prohibitive. A lack of a defined career path for pilots, when compared with a university graduate with a medical or legal degree, can also be a barrier. The mining industry's 'fly in fly out' workforce is creating particular pressures in regional Namibia.
Supply Chain and Distribution Manager	30	40	
HR Manager	20	30	
Financial Manager	30	40	
Transport Manager	30	45	
Marketing and Sales Manager	30	50	
Warehouse Manager	50	80	
Professionals			
Aeronautical Engineer	15	25	
Accountant	50	80	
Occupational Health and Safety Officer	100	150	
Flying Instructors	20	30	
Passenger Pilot	30	60	
Cargo Pilot	20	30	
Technicians			
Electrical engineering technician	30	40	
Electronics engineering technician	30	40	
Mechanical engineering technician	30	40	
Instrumentation Technician	30	40	
Aircraft Engine Mechanic	30	40	
Craft and related trades workers			
Maintenance Fitter	50	60	
Forklift Operator	50	80	
Electrician	30	50	
Load Controller	10	15	
Fire-fighters	20	30	
Paramedics	30	60	

Maritime

- Namibia has two ports, namely the Port of Walvis Bay and Port of Lüderitz. The Port of Walvis Bay is the largest commercial port, handling on average 3 000 vessel calls per year and over 5 million tons of cargo. Facilities at the port include a container terminal, privately operated bulk cargo terminal and six tugboats. The container terminal at the port of Walvis Bay can accommodate grounds slots for 3875 containers with provision for 482 reefer container plug points.
- The Port of Lüderitz is the second largest port, functioning mainly as a fishing port; but has expanded in recent years to ship cargo from the mining industry and to support and service offshore petroleum exploration and diamond mining activities. The Port has the

potential to serve as an important gateway and logistics base for various mineral operations as well as the petroleum industry.

- By 2017, the volume in cargo handling and rail-transported cargo is double that of 2012, and the Port of Walvis Bay has become the preferred African West coast port and logistics corridor for southern and central African logistics operations.
- Regarding maritime infrastructure, the Port of Walvis Bay is already practically running at full capacity. If it is not expanded as soon as possible, the port will become congested, eroding one of Namibia’s key pillars of competitiveness in maritime transport, namely a quick turnaround time.

Occupations in Demand	2015	2020	Barriers to Overcoming Skills Shortages
Managers			<ul style="list-style-type: none"> ▪ The growing number of offshore oil and gas projects is leading to demand for skilled labour that is qualified to work on rigs. ▪ The expansion of ports will also lead to more demand for skilled workers. ▪ Competition from other industries, particularly mining and resources, is providing a barrier to staff retention in some areas of the industry. ▪ The offshore oil and gas sector, for example, is drawing workers with maritime skills to fill roles within development and support phases. ▪ The regulatory requirements of particular occupations can provide unique challenges to recruitment and retention. Factors such as a lack of available training berths on vessels for sea service, lack of awareness by potential new entrants of training and career pathways, and the sometimes excessive time away at sea all contribute to problems. ▪ Employment arrangements for small, near-coastal fleets often do not include time off the job for training or funding assistance for training. ▪ There is also a shortage of trainers, which has a flow-on impact to the provision of training. ▪ An ageing workforce limits the sector’s capacity to meet its skills and labour requirements. ▪ Many port roles have usually been filled by people with a maritime background. With port corporations becoming increasingly sophisticated, evidence indicates that the skills requirements are getting wider and include many of the strategic and operational skills that ports need as critical gateways to national trade. ▪ Port managers and operators need to understand not only their own operations but also those of upstream and downstream elements of the supply chain to remain effective. ▪ As sea transport is the only method to ship mined exports such as coal, ores and liquefied natural gas, the expansion of the mining and resources industry will continue to drive increased trade volumes at ports. ▪ The role of purchasing, for example, has shifted within the complexity of the supply market from just-in-time buying to maintaining strategic relationships with suppliers and keeping a critical inventory of long lead-time items that reflect their maintenance plans and procurement intentions.
Terminal Managers	10	20	
Port Finance Managers and Accountants	30	50	
Port Manager	5	8	
Port Captain	5	8	
Procurement Manager	10	15	
Maritime Lawyers	5	10	
Supply Chain and Distribution Manager	30	40	
Professionals			
Berth and Terminal Planners	10	15	
Marine Engineer	15	25	
Ship’s Master	15	20	
Maritime Trainer/Assessor	50	100	
Marine Pilot	50	100	
Marine Engineer	50	80	
Mechanical Engineer	50	100	
Electrical Engineer	50	100	
Engineers (civil and maintenance)	40	80	
Tug-boat Pilot	15	15	
Fire-fighters	20	30	
Paramedics	30	60	
Craft and related trades workers			
Deck Officer	50	1000	
Stevedore – Crane Driver, Equipment Operators	150	250	
Vessel Traffic Services (VTS) Operator	50	100	
Electrician	100	200	
Boiler maker	100	250	
Welder / Cutter	200	400	
Millwright	100	150	
Cargo Superintendent	150	200	
Fitter	200	400	
Plant and machine operators and assemblers			
Crane, Hoist or Lift Operator	250	350	
Deck Hand	200	400	
Terminal Operators	150	250	
Cook	100	150	

Rail

- Certain sections of the rail infrastructure need urgent replacement. Indeed, certain major shipping lines have indicated that a functioning rail system would be a precondition for them to stop at the Port of Walvis Bay. However, only 46% of Namibia's rail network complies with the SADC recommendations concerning axle load. Only 1,203 km of the total rail network of 2,626 km can carry the standard 18.5-t axle load, whilst the remaining lines are limited to 16.5 t or even only 13.5 t. Thus, certain sections of the current core rail network will have to be upgraded as soon as possible.

Occupations in Demand	2015	2020	Barriers to Overcoming Skills Shortages
Managers	100	200	<ul style="list-style-type: none"> ▪ Demand for rail services is growing, providing a barrier to meeting skills and labour shortages that are already significant in some parts of the industry. The global demand for coal, iron and other resources are causing increased freight movements. Growth in passenger numbers is being driven by mounting petrol costs. Significant investment in rail infrastructure, technological developments, ongoing maintenance and repairs and evolving customer expectations are the major issues identified by the industry and leading to additional or new skill requirements. ▪ The major barriers include: <ul style="list-style-type: none"> • an ageing workforce and insufficient replacements; • the lead time required to train or up skill workers in particularly in specialised roles; • competition from the mining and resources Industry; • shift work; and • poor industry image and lack of understanding of the opportunities available. ▪ While the sector is becoming more technologically advanced, there will still be a need for skilled labour to maintain legacy systems and equipment. ▪ There is an inadequate focus on workforce development and training within some organisations.
Transport Manager	60	120	
Project Managers	250	350	
Supply Chain and Distribution Manager	200	300	
Warehouse Manager	100	200	
Professionals			
Occupational Health and Safety Officer	150	250	
Mechanical Engineer	50	80	
Electrical Engineer	50	100	
Rail Trainer/Assessor	100	150	
Rail Engineers (including Systems Engineers and Analysts)	30	50	
Technicians			
Technicians (Signalling/Overhead Wiring)	100	150	
Railway brakemen, signallers and shunters	150	200	
Team Leader Infrastructure	50	100	
Track Patroller/Inspector	50	100	
Craft and related trades workers			
Railway Track Worker	200	400	
Diesel Mechanic	100	200	
Boiler maker	150	250	
Welder	200	300	
Millwright	100	150	
Locomotive-engine drivers	50	80	
Fire-fighters	20	30	
Paramedics	30	60	
Plant and machine operators and assemblers			
Plant Operator	150	250	
Railway Coach Builder	150	200	

Logistics and Warehousing

Logistics

- One of the great opportunities for Namibia to be positioned as a logistics hub is the fact that economic development in a number of SADC countries is expected to take off rapidly. The export of mineral resources such as copper and coal and the importation of chemicals for mining have started in a number of neighbouring countries. In addition, demand for the importation of various consumer goods has also started to increase rapidly in these economies.
- Timing and urgency are of the essence in this regard – particularly since other countries within the region are also developing their infrastructure to take advantage of the opportunities on offer. Notably, Africa is expected to be the fastest growing region after Asia. This will result in increased trade and hence, cargo volumes. All of these factors illustrate Namibia’s potential to become a logistics hub.
- The logistics industry is an important provider of jobs, either directly or indirectly. Logistics industries create jobs that are difficult to move offshore and lead to economic growth in multiple sectors.

Warehousing

- Warehousing includes repackaging services, order entry, and selection and preparation of transportation at logistics warehouses. Thus, the greater the handling volume is, the higher the number of expected jobs. In addition, it is necessary to develop a logistics hub at an intermediate point from Walvis Bay to inland countries in order to distribute cargo because it is around 1,300 km to the national border of inland countries.
- The development of distribution centres that lie near the borders of landlocked countries will also contribute to rural development and employment creation, as well as mitigate rural–urban migration.

Occupations in Demand	2015	2020	Barriers to Overcoming Skills Shortages
Managers			
Transport Manager	60	80	<ul style="list-style-type: none"> ▪ The present manpower available requires the requisite skills to handle the entire supply chain, and training of personnel will be key to the success of these players. ▪ Information Technology (IT) plays a key role in supporting Logistics Industry. ▪ Technology has crept into all areas of logistics such as product movement (RFID tags for tracking, GPS), warehousing (WMS), etc. Technology helps organised logistics companies score over the unorganised ones, and will be key to their operations going ahead given the competition. ▪ With industry margins under constant pressure and the growing competition, improving operational efficiency will be critical to the success of logistics firms.
Supply Chain and Distribution Manager	100	150	
HR Manager	75	120	
Financial Manager	50	80	
Marketing and Sales Manager	50	80	
Warehouse Manager	60	80	
IT Manager	50	100	
Logistics Manager	50	70	
Customer Service Manager	50	80	
Import and Export Manager	30	50	
Freight Manager	50	80	
Operations Manager	100	150	
Professionals			
Accountant	70	140	
Logistics Planner	100	150	
Supervisor	150	250	

10. SKILLS SUPPLY

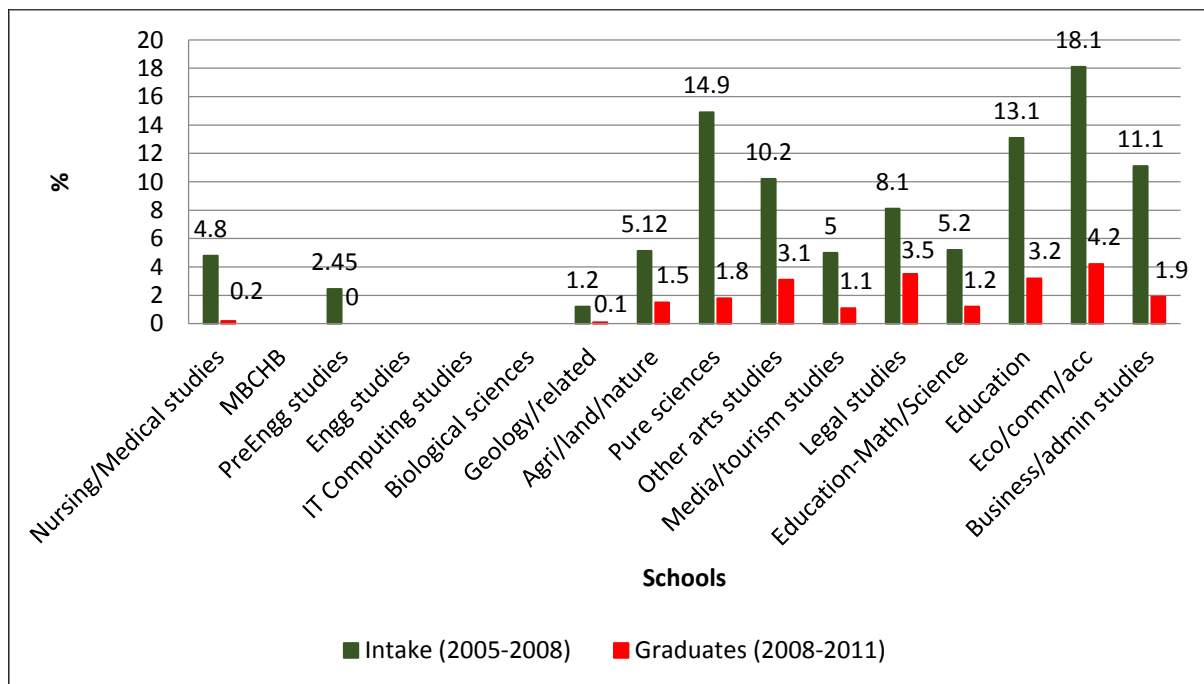
HIGHER EDUCATION

- This section focuses the supply of skills from Higher Education and Training (HET) Institutions and Vocational Training Centres (VTCs).
- The data of HET graduates from the engineering, information technology and science schools (faculties) is analysed because these graduates tend to be absorbed by the industry.
- There are two public HET institutions, the University of Namibia (UNAM) and the Polytechnic of Namibia (PoN).
- VET provision in Namibia is provided through public, parastatals and private vocational training centres (VTCs). In addition, there are public Community Skills Development Centres (COSDECs), KAYTEC and the Katatura Youth Enterprise Centre. Training is also offered through non-profit and private training providers on a smaller scale.

University of Namibia (UNAM)

The figure below provides intake (2005-2008) and graduates (2008-2011) for all schools. However, for the purpose of this industry, the discussion will focus on engineering and IT and science.

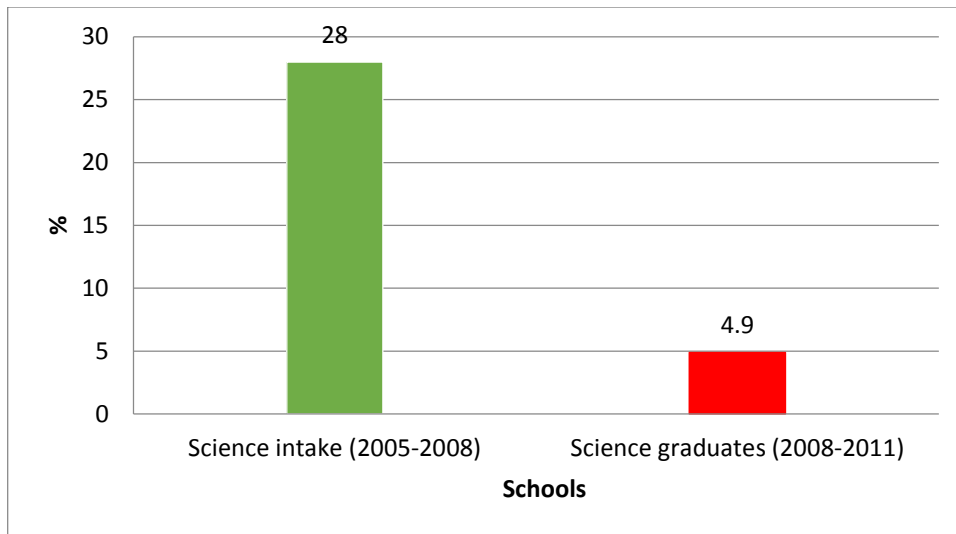
Intake (2005-2008) and graduates (2008-2011) by school



Source: Insight Namibia Report 2012/2013

- There is minimal to no intake in the school of engineering and IT studies for the period (2005-2008).
- Whilst there is a 14.9% intake for science for the same period, the graduation rate of 1.8% is very low.

Intake (2005-2008) and graduates (2008-2011) by school

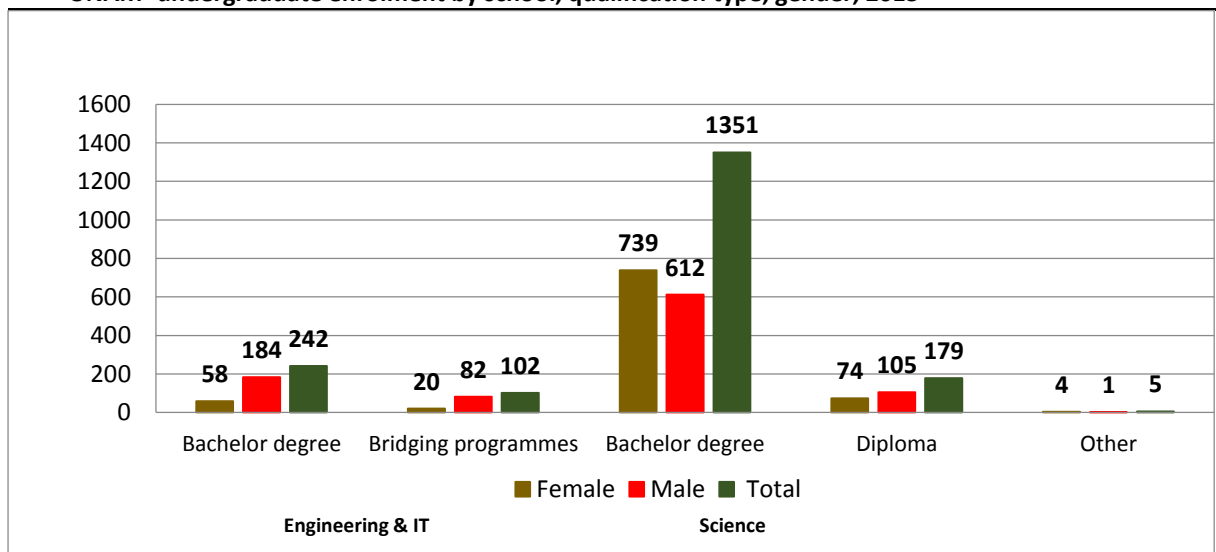


Source: Insight Namibia Report 2012/2013

- The figure above provides further support to the low science graduate rates (4.9%) despite a 28% intake.
- The total undergraduate enrolment at UNAM for 2013 was 17 536. This comprised 10 897 females and 6639 males. A total of 1 879 students, comprising 10.7% of the total student enrolment, undertook programmes in engineering and information technology and science.
- While this is minimal, it does indicate slow but gradual progress in relation to the 2005-2008 intakes.

The figure below provides a breakdown of undergraduate enrolment by school, qualification type and gender for 2013.

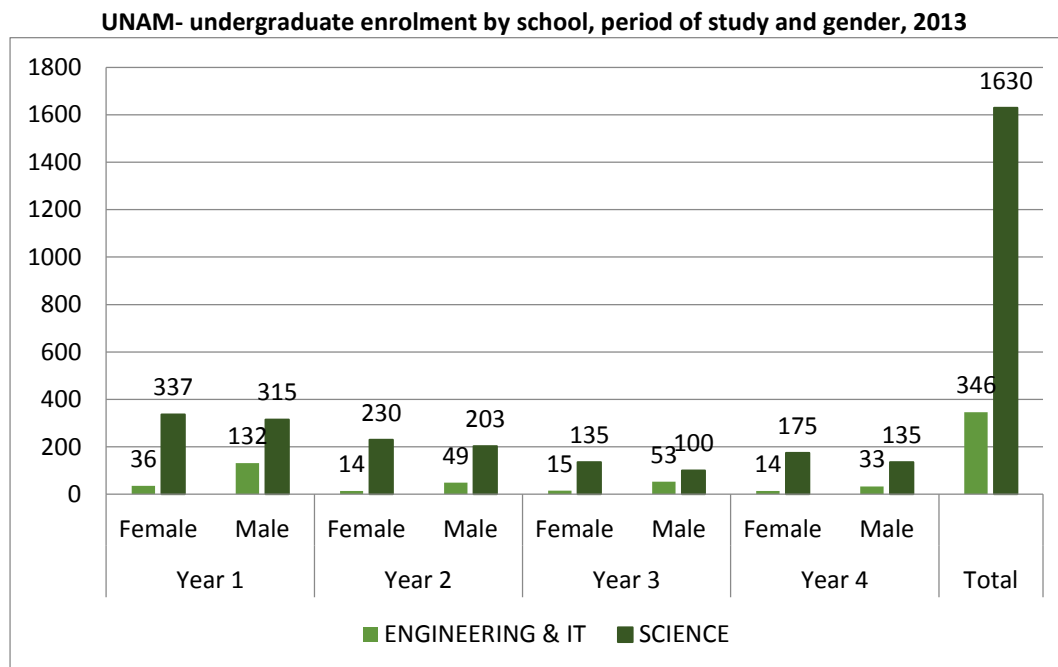
UNAM- undergraduate enrolment by school, qualification type, gender, 2013



Source: UNAM Student Enrolment Report, 2013

- Engineering and IT which includes bachelor degrees and bridging programmes has 0.7% females and 4.0% males. Science which includes bachelor programmes, diplomas and other has 7.5% females and 10.8% males.
- Gender disparity is an issue. This needs to be addressed in order to move towards gender equity in the industry.
- There is a major difference in the engineering and IT enrolment (18.3%) in comparison to science (81.9%), hence confirming the shortage of skills in this industry sector. The higher science intake for this year in comparison to the 2005-2008 indicates progress in this school, a positive sign for the industry sector.

The figure below provides a breakdown of student enrolment as per school and gender from year one to year four.



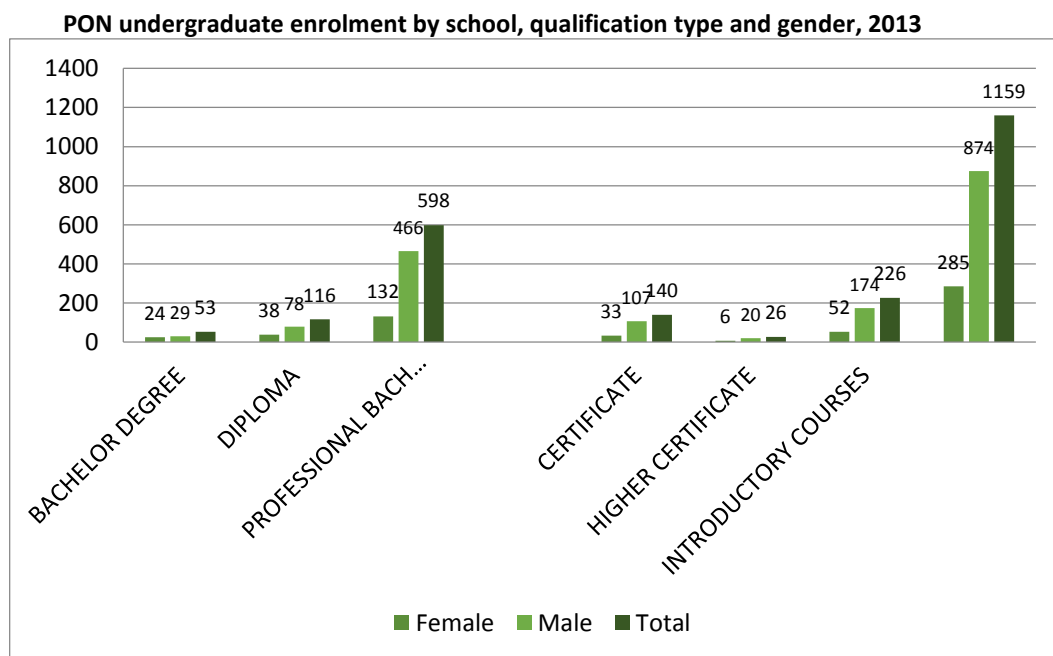
Source: UNAM Student Enrolment Report, 2013

- There are 36 female students in engineering and IT intake in year 1 by year 4 it's down to 14, while male year 1 intake is 132 and by year four is 33.
- The dropout rate from year to year is very high, hence impacting negatively on the throughput rate and increasing the skills shortages in the industry.
- Female science intake in year 1 is 337 and by year 4 it's down to 175, while male year one intake is 315 and by year 4 is 135.
- While there is minimal gender disparity in science programmes, the decline in student numbers from year to year is very high, impacting negatively on the throughput rate and increasing the skills shortages in the industry.
- About 47 students reach the final year of engineering and IT and 310 in the sciences which further highlights the need to increase enrolments.

Polytechnic of Namibia (PoN)

- Polytechnic of Namibia (PoN) enrolled 13 130 students in 2013. A total of 1 159 students, comprising 8.8% of the total student enrolment undertook programmes in the school of engineering.
- The female enrolment is 285 comprising 4% of the total female enrolment, while the male enrolment of 874, compromises 14.9% of the total male enrolment.
- The low enrolments (8.8%) specifically for females indicate a reluctance to take engineering qualifications. This should be addressed as a priority.

The figure below provides a breakdown of undergraduate enrolment by school, qualification type and gender for 2013.

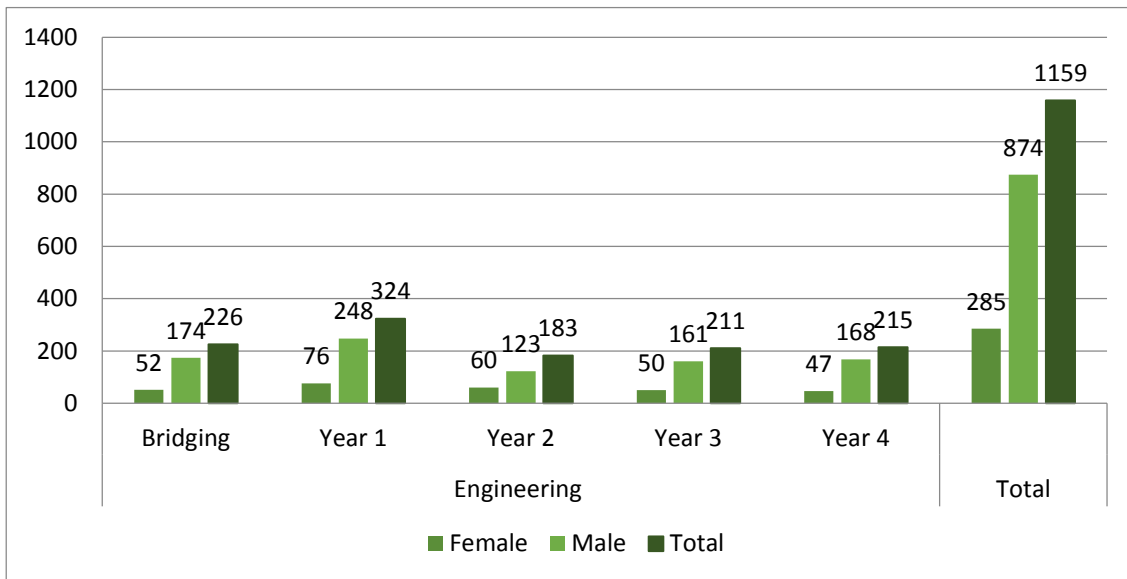


Source: Polytechnic of Namibia, 2013

- Apart from the bachelors degree, there is major gender disparity in male and female enrolment for all other qualifications.
- Female students should be encouraged to take on qualifications offered in the engineering and science fields.

The figure below provides a breakdown of undergraduate enrolment as per school, period of study and gender.

PON- undergraduate enrolment by school, period of study and gender, 2013



Source: Polytechnic of Namibia, 2013

- Female enrolment at the bridging year was 52 (18%) and at year 4 were 47 (16.5%), while male enrolment at the bridging year was 174 (20%) and at year four was 168 (19%).
- Although the enrolment figures in total are low, there is progress to year 4, anticipating a good throughput rate. The same applies for males.

Logistics and Supply Chain Programmes Offered in Namibia

The following programmes are offered by Polytechnic of Namibia:

Programme	NQF Level	Credits	Duration (Years)	Career Possibilities
Masters of Logistics and Supply Chain Management	9	240	2	Management positions in SCM; intermodal transport, legal framework and IT
Bachelor of Logistics (Honours)	8	141	1	
Bachelors of Logistics and Supply Chain Management	7	388	3	
Bachelor of Transport Management	7	388	3	Management positions in road safety and infrastructure, transport economics, legal framework and transport operations

Source: Polytechnic of Namibia

The following programmes are offered in Namibia through a partnership between the Namibia German Centre for Logistics and the Chartered Institute of Logistics and Transport (CILT):

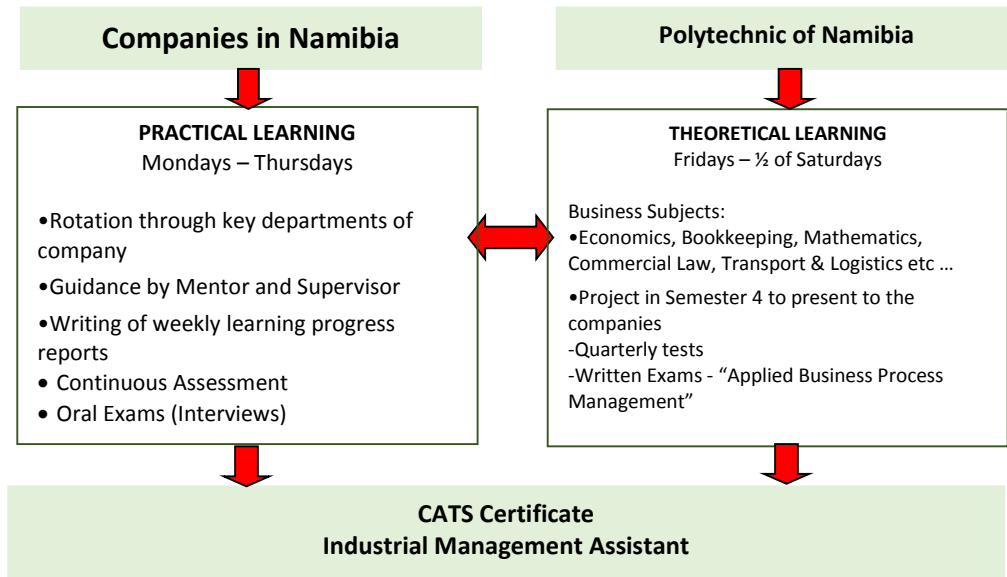
UK Framework Level	Chartered Institute of Logistics and Transport CILT		Equivalent Academic Qualification
	Qualification	Certification	
8			Doctorate / PhD
7	MSc (660 hrs)	Certified Professional Logistician	Postgraduate / MSc
6	Advanced Diploma (660 hrs)		Undergraduate /BA
5	Diploma (480 hrs)		Higher National Diploma (HND)
4			Higher National Certificate (HNC)
3	Certificate (240 hrs)		Advanced A level
2	Introductory Certificate (240 hrs)		GCSE O Level

Source: Namibia German Centre for Logistics and the Chartered Institute of Logistics and Transport (CILT)

BEST PRACTICE: CASE STUDY - COMMERCIAL ADVANCEMENT TRAINING SCHEME (CATS)

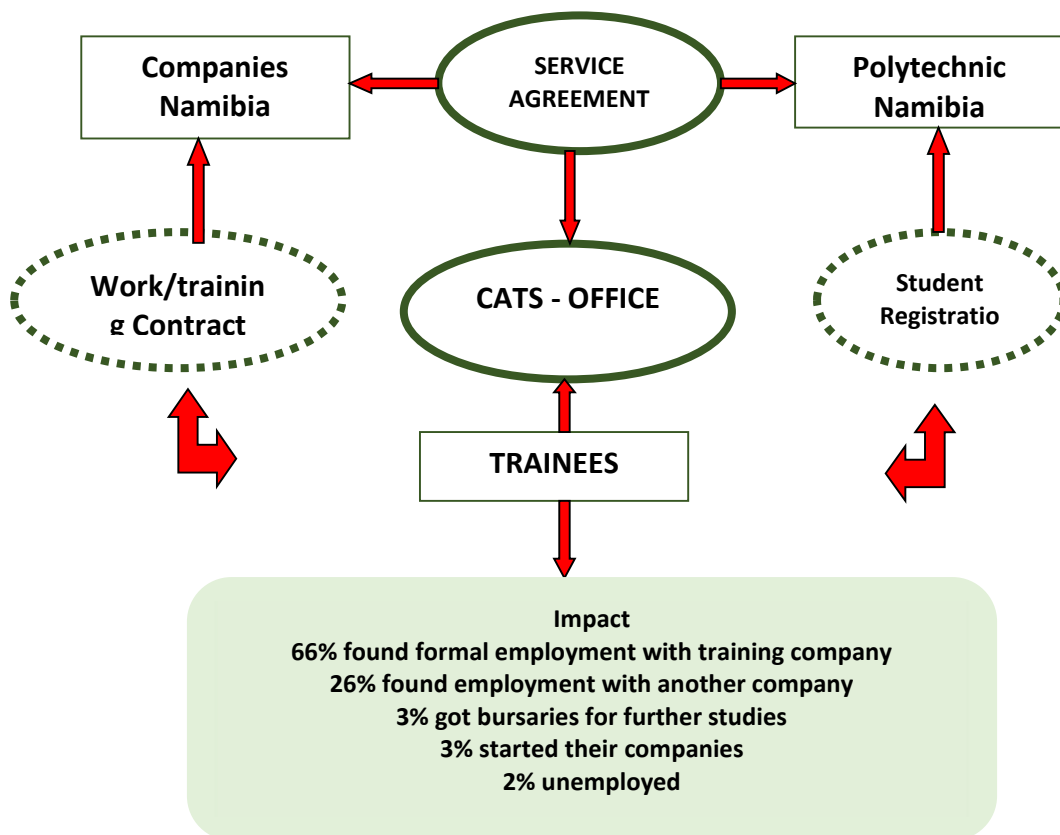
- CATS is a unique training programme, which was established in response to the severe commercial skills shortage experienced by various industries in Namibia.
- CATS is a 2- year Commercial Training Programme based on the German Dual Training System.
- The aim is to prepare young Namibians to participate in the modern Business World in Namibia.
- In South Africa, CATS was established in 1985 by the Southern African – German chamber of Commerce and Industry, based on the “Dual Training System”. The program is accredited as a South African Education and Training Provider (ETP) as well as with the DIHK (Association of German Chamber of Industry and Commerce) in Brussels, Europe.
- After successful completion of the 2-year program, trainees receive an internationally recognised diploma as an “Industrial Management Assistant”.

CATS - Dual Training System



CATS Namibia (2011)

CATS Partnership Framework



CATS Namibia (2011)

The Findings

- The data from UNAM and PoN does not present an encouraging picture of enrolments and graduate rates of students in engineering and IT and science programmes required by the industry.
- Female enrolments are lower than males in both institutions.
- Due to a lower rate reaching the final year, there's a need to increase enrolments.
- According to David (2013)³ at least 26% of graduates who finish their tertiary education end up unemployed. This is according to a tracer study conducted by the National Council of Higher Education (NCHE) in 2011.
- Out of the 5 000 (4700) graduates from UNAM and PoN, 1 500 do not have jobs.
- 60% of PoN graduates have taken up jobs that are not linked to their studies.
- 27% say they have not found employment closely related to what they had studied.
- About 24% of graduates say they have had better prospects in their jobs, which are not related to what they had studied.
- 11.7% of graduates from UNAM, who have completed their respective courses, have not landed any jobs.

VOCATIONAL EDUCATION AND TRAINING (VET)

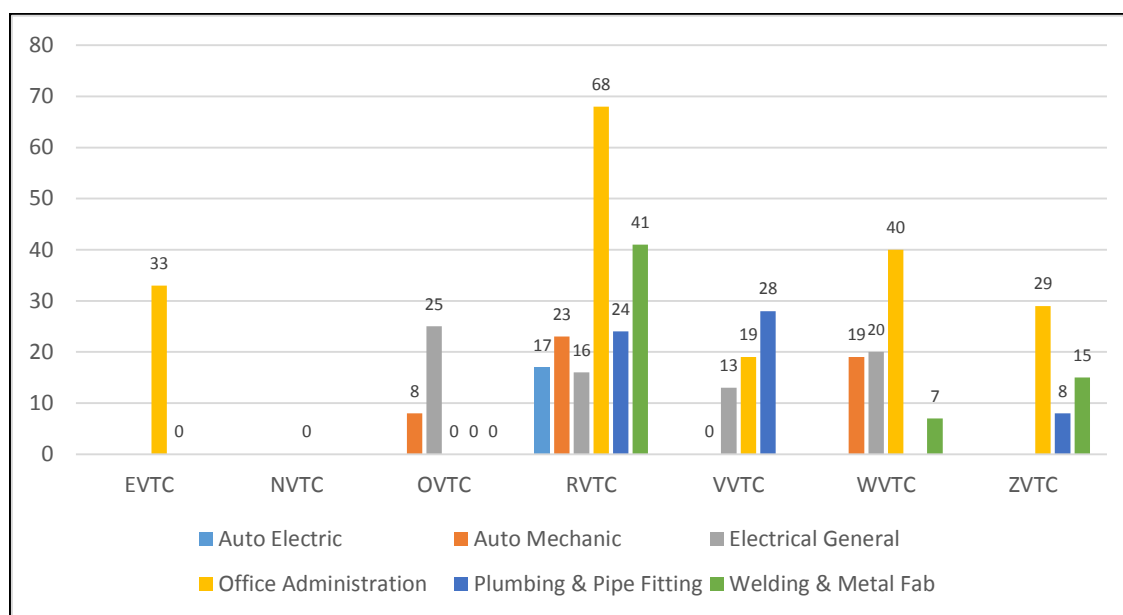
- The VET system is implemented with the intention of addressing skills shortages in the country, particularly technical skills at artisan level.
- Vocational Training Centres (VTCs) in Namibia consist of both state and privately managed institutions.
- The NTA currently oversees the VTCs. Until a few years ago, vocational training was not yet in the focus of the Ministry of Education and substantially underfunded. Even though this has changed recently, most vocational training is still carried out informally in the enterprises without any formal diploma issued for the learner or quality standards being set.

Vocational Training Centres (VTCs)

- Graduates of public and private VET institutions generally transition directly to the labour market.
- In addition, Community Skills Development Centres (COSDECs) graduates also seek employment. However, COSDECs offer mainly unaccredited skills programmes and therefore add little value to the transportation, warehousing and logistics industry sector.
- Enrolments at public VET Colleges for trades in the transportation, warehousing and logistics industry sector are illustrated for 2013 from data supplied by the NTA below:

³ Aurelia David, The Namibian, 2 September 2013.

Trainees per trade by level 3 at public VTCs, 2013



Source: NTA, 2013

The figure above reveals the following:

- the enrolments at the VTCs is very low, with one college not having any trainees in the trades mentioned;
- the very low trainee enrolments at level 3 is an indication that the graduate throughput rates is also going to be low, hence the shortage of qualified VET graduates entering the labour market;
- this situation further exacerbates the present skills shortage in almost all trades except office administration related to transportation, warehousing and logistics;
- total headcount enrolments is low relative to the outputs of Grade 9 (in the region of 46 389);
- the situation gets worse when enrolments for grade 11 and grade 12 comprising 34 255 and 19 082 are considered;
- demand for VET far outstrips supply. Only about 3% of those who complete grade 10 can gain admission to VTCs. The participation of marginalised and designated groups as well as employed rural and urban youth should be increased.⁴
- There is insufficient physical capacity for VTC institutions to accommodate students exiting from the general schooling system.

Private VET Providers

- There are a number of small private training providers offering mainly unaccredited skills programmes. The private VET College sector is about 10% of the size of the public VET College sector.

⁴ Government of Republic of Namibia. ETSIP Report. 2007. P.35.

- The situation is also dire at Private VET Providers. Enrolment figures for 2013 are given below:

Private VET enrolments, 2013

Name of the VTC	Male	Female	Total
Namibia Construction Skills Academy	436	91	527
NATH	47	17	64
Danida Training College	2	13	15
Transnamib	39	0	39
Centre's name Industrial Craft Training Institute	13	0	13
ILSA independent college	90	87	177
Total	627	208	835

Source: NTA Database

- The private sector's role in VET is limited and considerable effort should be made to stimulate involvement.
- Such an initiative should be weighed against the institutional capacity of the NTA to improve the quantity and quality of VET provision.
- It enrolled roughly 835 students with a male to female enrolment ratio of 1:3.
- The private VET College sector is highly undeveloped and cannot support the transition to a knowledge-based economy unless there is a move to grow this sector and increase its absorption capacity.
- Graduate figures for private colleges are not available.

KAYEC Tracer Study (VET)

- A tracer study of 606 graduates was conducted by a VET institution, KAYEC Northern, for the period 2010 and 2012. The purpose of the tracer was to track graduate destinations⁵.
- KAYEC students tend to reside in regions where unemployment is higher than the national averages.
- The tracer study found that 48% of graduates it tracked have gone on to a full vocational training course with a vocational training centre (including NIMT). The destinations of graduates are as follows:

⁵ KAYEC Trust, 2013, Tracer Study

Training being followed by KAYEC graduates

VTC	NAMCOL	College	University	COSDEC	School
48%	17%	15%	12%	8%	2%

Source: KAYEC Tracer Study, October 2013

- While 48% are furthering their vocational training, nearly one fifth (17%) are seeking to improve their school grades through study with the Namibia College of Open Learning (NAMCOL). Notably, some have gone on to university (12%) or college (15%) study. Clearly KAYEC has proved a stepping stone in helping their graduates to extend their academic or vocational qualifications.
- For the 36% who have gone into work, just over half (54%) have found paid employment and 46% have gone into self-employment. While the 54% in paid employment is marginally higher than the national average of those in paid employment, the 46% in self-employment is considerably higher than the 14% who nationally are in self-employment.

NCHE Tracer Study (HET)

- The National Council for Higher Education (NCHE) commissioned a tracer study of graduates from the University of Namibia and the Polytechnic of Namibia who completed their studies in the years 1999 - 2008. The main purpose was to gain information on the current employment and economic status of the graduates, and their assessment of the relevance and quality of their education within their work context. The views of employers of graduates were obtained.⁶
- In total 26% of graduates from UNAM and PoN responded. Forty-three employers were interviewed in both public and private sectors.
- Some of the major findings of the tracer study graduates include:
 - About 50% of graduates obtained employment by applying for a vacant position.
 - 4 out of 5 began the search for employment before graduation. However, nearly 4 out of 5 only obtained work in their second year after completing their studies.
 - Most graduates contacted up to 3 employers before their first employment.
 - However, 23% of UNAM graduates, compared to 15% of PoN graduates contacted only one employer before finding employment.
 - The field of study and area of specialisation were felt to be the most important factors in obtaining employment.
 - More than 60% of graduates received on-the-job training.
 - Nearly 60% of graduates had not changed their employer since graduation.

⁶ NCHE, 2011, Tracer Study

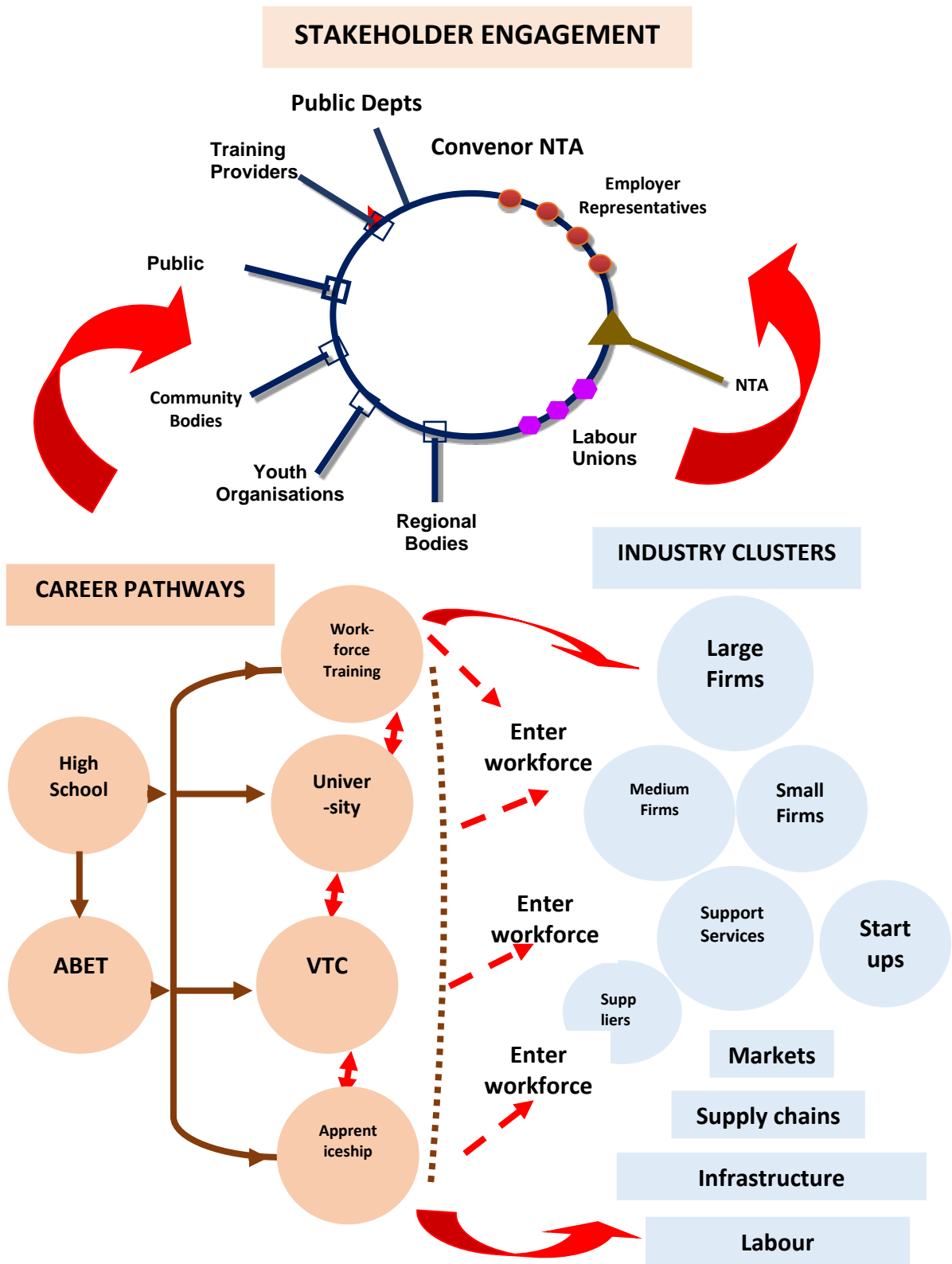
- 78% of UNAM graduates, 70% of PoN graduates, and 92% of those who hold qualifications from both institutions, work for a public employer (including local authorities.)
 - Only 1% of graduates are self-employed.
 - 11.7% of UNAM graduates and 14.4% of PoN graduates are unemployed and seeking employment. This is cause for concern, not least considering the enormous public and private investment in a graduate.
 - There is a tendency for the monthly earnings of UNAM graduates to be slightly higher than those of PoN graduates. This is may be because UNAM graduates on average have higher qualifications than those from PoN.
 - Most graduates considered the course content of their major subjects to be the most useful element of their study programme for their current work.
 - Most graduates feel that they have been able to realise the career that they expected at the time of graduation, that they are using the skills acquired during their studies, and that their position and status is appropriate for their level of education.
 - However, some 60% of PoN graduates have taken up work not linked to their studies; 27% mentioned that they could not find a job closely linked to their studies, while 24% felt that they had better career prospects in their current job. To some extent this speaks of the flexibility of PoN graduates.
- Some of the major findings from employers include:
 - Employers do see benefits from the employment of graduates.
 - However, some employers feel that graduates are not adequately prepared for work. They are seen to lack experience of the workplace.
 - Most employers are apparently not satisfied with the level of written English of graduates. In part this may relate to the level of English with which students enter higher education.
 - According to employers, most graduates are interested in further studies, a tendency that they are willing to support financially and in other ways.
 - It seems that a significant proportion of employers do not feel that they have sufficient in-depth contact with institutions of higher learning, although some satisfactory relationships do exist.
 - It appears that higher education institutions are doing little research in collaboration with employers.
 - Finally, it must be noted that this was the first attempt to conduct a tracer study of graduates in Namibia. It has been shown that such tracer studies are feasible and valuable for the improvement of higher education.

The Findings

- The VET Sector in Namibia (public and private) is not adequate to meet current and future enrolment needs because it is too small.
- With the exception of NIMT, there are quality concerns at VTCs and COSDECs.
- Programmes in the VET sector should resonate with the demand needs of the labour market.
- Since the bulk of the Namibia workforce will need to be trained at VTCs, there is a need for considerable capital expansion.
- An insufficient number of graduates are exiting VTCs.
- The research on tracking should be expanded to all VTCs to get an idea of the relevance of programmes and the confidence of employers.
- There are concerns with the workshop equipment and the quality of trainers expressed in workshops and interviews.

A NIMT model should be considered for other industries which essentially require an adoption of a VTC.

11. STRATEGIC PARTNERSHIPS BETWEEN EDUCATION AND INDUSTRY



FORGING STAKEHOLDER RELATIONSHIPS	
PRIORITIES	ACTIONS
Stakeholder Engagement	
<ul style="list-style-type: none"> ▪ Stakeholder partnership should be formed by the industry to address common skills needs and generate co-ordinated solutions that benefit all stakeholders. ▪ Stakeholders working together create career pathways based on industry needs for workers. 	<ul style="list-style-type: none"> ▪ Stakeholders work together to identify education and training problems and propose solutions through qualifications and programme development. ▪ Stakeholders devise career pathways. ▪ Better utilising of skills and improving the quality of jobs. ▪ Gearing skills development to the specific needs of the industry
Industry Cluster	
<ul style="list-style-type: none"> ▪ Firms in an industry cluster benefit from synergies of association of related to shared infrastructure, supply chains, labour, markets and innovation. ▪ Industry cluster increases bargaining power. 	<ul style="list-style-type: none"> ▪ Pooling of resources for education and training in the industry cluster. ▪ Developing industry standards or benchmarks. ▪ Fostering and adapting new areas of growth.
Career Pathways	
<ul style="list-style-type: none"> ▪ Inputs from industry clusters inform stakeholder discussions. ▪ Effective career pathways requires co-ordination across education and training programmes by the NTA in order to offer a clear sequence of industry coursework and credentials to job seekers. ▪ Workers graduate with industry credentials that enable them to get work. ▪ Workers can progress vertically and laterally in their careers. 	<ul style="list-style-type: none"> ▪ Developing sector skills plans to improve the performance of the industry. ▪ Creating a skilled and adaptable workforce. ▪ Employment progression and career definition.

12. STRATEGIC PLAN

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
STRATEGIC PRIORITY 1: BUILDING EFFECTIVE STAKEHOLDER PARTNERSHIPS FOR SKILLS DEVELOPMENT IN THE INDUSTRY SECTOR			
<i>RATIONALE: Stakeholder partnerships are increasingly becoming the adopted approach to meeting industry needs for skilled workers and workers' need for better jobs. Stakeholder partnerships are forged with industry, government agencies, education institutions, labour, and community organisations to focus on the workforce needs in an industry within a labour market. Partnerships address current and emerging occupational needs and skill gaps. It offers a mechanism to focus scarce resources on industries that are major job providers in an area, as well as to focus comprehensively on the workforce skills, from entry level to advanced, required in the economy. Partnerships provide a means for the NTA and VET institutions to engage directly with industry across traditional boundaries better aligning training programmes and resources. Partnerships help to reduce inefficiencies and streamline state efforts by co-ordinating various projects and braiding various funding streams intended for the same purpose.</i>			
1.1.	Promote partnerships and linkages with employer bodies, education institutions, government agencies, and civic groups to respond to industry and local training needs, build better networks and design responsive training interventions.	<ul style="list-style-type: none"> ▪ The NTA develops a policy implementation framework to promote stakeholder partnerships. ▪ Guidelines and training interventions to support the development and management of partnerships are developed and measured. ▪ The number, type and outputs of partnerships are evaluated and recorded. ▪ Agreements are entered with partners on training projects linked to promoting local economic development. 	NTA/VET institutions/ Employer Bodies/Labour Unions/ Community Groups/Government Agencies/International Donors
1.2.	Establishing and strengthening stakeholder relationships.	<ul style="list-style-type: none"> ▪ Support to establish a Co-operative Learning Unit in each public VET institution is provided. ▪ Workshops to inform stakeholder of different partnership modalities and develop successful partnerships are held in all regions. 	
1.3.	Information is disseminated to partners to keep them abreast of NTA activities to promote skills development.	<ul style="list-style-type: none"> ▪ Information on NTA and ISC activities, training levy, sector skills plan, occupations in high demand and skills gaps in the industry sector are communicated to stakeholders. 	
1.4.	Encourage industry training clusters where large, medium and small firms in a single industry come together and benefit from synergies of association related to shared skills training, instructors, facilities, benchmarking and best practices.	<ul style="list-style-type: none"> ▪ NTA facilitates development of industry training clusters. ▪ The number of training industry clusters established. 	NTA/DTI
1.5.	Encourage public-private partnerships and investment (PPPs) in the VET sector to increase intake capacity and programme choices.	<ul style="list-style-type: none"> ▪ NTA develop a discussion document on PPPs with a view to approval and implementation. 	NTA/Ministry of Education
STRATEGIC PRIORITY 2: Increasing access to occupationally-directed learning programmes to support industry growth			
<i>RATIONALE: To become an industrialised country, Namibia needs to address the problem of skills shortages across all sectors of the economy. The issue of Namibia's skills shortages and mismatches have been well documented since independence. There are considerable skills shortages for middle level artisanal skills and high level professional skills that must be mitigated to transition Namibia to a knowledge-based economy in accordance with Vision 2030. The problem of skills shortages is more pronounced among marginalised groups and in the rural communities. High unemployment, particularly for youth, sits alongside job vacancies pointing to structural unemployment in the labour market. By increasing access to occupationally-directed learning programmes, labour market outcomes of the unemployed, marginalised and youth are improved considerably. Access to learning programmes and recognition of prior learning for employed workers can also improve their skills, productivity and promotional opportunities.</i>			

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
2.1.	Occupations in high demand and skills gaps of the industry should be prioritised to expand access and allocation of resources.	<ul style="list-style-type: none"> ▪ Occupations in high demand are mapped to qualifications and career pathways in the industry sector contributing to improved relevance of training and greater mobility and progression. ▪ Qualifications and accredited training programmes for occupations in high demand are developed, if they do not exist. ▪ Strategies for fast-tracking the development of new qualifications to meet occupational shortages are developed and implemented. ▪ The number of students enrolled for occupational training programmes in high demand are increased annually to meet the demand-side needs of the labour market. ▪ Accredited short skills courses geared towards addressing skills gaps (top up skills) of employees are developed. 	ISC/VETCs/COSDECs/NTA/NQA/Ministry of Education/Ministry of Labour and Social works/Donor Agencies
2.2.	Relevant apprenticeships and traineeships should be developed with the support of industry for occupations in high demand currently not registered under the apprenticeship and traineeship scheme.	<ul style="list-style-type: none"> ▪ A campaign to promote apprenticeship and traineeship in firms is devised. ▪ Competency standards for new apprenticeships and traineeships are developed. ▪ Performance of apprentices and trainees monitored and evaluated. ▪ A national databank of instruments for assessment and moderation of artisan trade tests and traineeship programmes is developed. ▪ A national database of registered assessors and moderators is developed. ▪ Number of apprentices and trainees in VET institutions is increased annually. 	
2.3.	Traineeships and apprenticeships at all public VET Centres will have a liaison officer whose job will be to ensure that the role of the trainee or apprentices both at the workplace or training centre are monitored.	<p>The VET institutions are required to deliver the following:</p> <ul style="list-style-type: none"> ▪ Theoretical training to trainees or apprentices is provided at VETC. ▪ Assessment process of trainees or apprentices undertaken. ▪ Ensure all trainee or apprentices have log books and that supervisors at the workplace sign off the logbook. ▪ All traineeship and apprenticeship contracts are in place. ▪ Provision of traineeships and apprenticeships in firms are increased. 	
2.4	Capacity of COSDECs is improved to offer accredited training programmes.	<ul style="list-style-type: none"> ▪ An improvement plan is developed to upgrade COSDECs to offer accredited training programmes. ▪ The capacity of COSDECs is expanded to accommodate a diverse student population. 	
2.5	Offer skills programmes needed by industry in Health and Safety, Driver training, advanced driver training, transportation of dangerous substances, freight forwarding and handling	<ul style="list-style-type: none"> ▪ Programmes offered by VTCs and tertiary institutions 	

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STRATEGIC PRIORITY 3: Improving the efficiency and effectiveness of the VET sector			
RATIONALE: <i>The VET sector has a contributory role to play in transforming Namibia into an industrialised nation with improved quality of life for all Namibians. VET institutions should be geared to address occupational shortages in the country, particularly for technical, technological and employability skills at artisanal level. Currently the VET system is small, underfunded, undifferentiated with poor quality outputs. In this respect it is not meeting the growing needs of students, employers, workers, and marginalised sections of society. Most of the VET institutions are faced with the problem of where demand for places exceeds the supply-side capacity of institutions. There are a large number of young people that should be accommodated in VET institutions and become equipped with the requisite knowledge and technical skills for productive employment and self-employment. In addition to expansion of the VET sector, access should be made for employed workers wanting to enrol on training programmes at VET institutions whilst in employment. Equally important is the need to align the VET sector to the country's overall developmental agenda with links to various strategies such as Vision 2030, NDP 4 and the National Human Resource Development Plan. This will enable the VET sector to contribute more effectively to the goal of inclusive growth and development, and contribute to reducing unemployment and poverty.</i>			
3.1.	Expand capacity (institutions and infrastructure) to provide training to address occupations in high demand and skills gaps, enabling improved productivity, economic growth and the ability of the workforce to adapt to changes in the labour market.	<ul style="list-style-type: none"> ▪ An audit of VET institutions earmarked as key providers of industry training is undertaken to establish what improvement, upgrading and expansion is needed. ▪ Approval and funding for such upgrading and improvements are obtained. ▪ An audit of potential institutions to become training providers is undertaken to create the required training capacity to meet occupational demand. ▪ Funding for upgrading and improvements for such institutions is obtained. 	NTA/Ministry of Education/ISC/VETC/COSDECs
3.2.	Expand student access and increase the range of training programmes at existing VET institutions in trades and occupations that are critical for economic growth and industry competitiveness.	<ul style="list-style-type: none"> ▪ Student intake at existing VETC facilities is increased using a range of delivery modes (full-, part-time, distance and blended). ▪ Increase the number of accredited private training providers in the VET sector for national qualifications. ▪ A baseline of current training by firms in the industry should be established and a 3 year stretch targets of the number of workers in firms that should be trained by VET institutions should be set. 	
3.3.	Promote differentiation in the VET sector in terms of programme mix and target population.	<ul style="list-style-type: none"> ▪ Grade 9 learners, employed workers, youth and unemployed adults should be accommodated by VET Centres and COSDECs and progressively increased annually. 	NTA/Ministry of Education/ISC/VETC/COSDECs
3.4.	Develop training programmes to grow the pool of VET instructors and improve the subject knowledge and competencies of existing VET instructors.	<ul style="list-style-type: none"> ▪ An audit to establish the number and profile of existing VET instructors is undertaken to determine capacity constraints. ▪ Establish what upgrading and retraining they require to meet CBET and other requirements to be registered as competent instructors with the NTA. ▪ Create the capacity to provide train-the-trainer programmes for those trainers requiring retraining and upgrading. ▪ Number of new VET and existing VET instructors that underwent training. 	

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3.5.	Improve the capacity of VET managers to run institutions effectively and efficiently.	<ul style="list-style-type: none"> ▪ Professional development programmes are offered in: leadership, organisational development, performance management, strategy, marketing, finance, human resources, client relationships management and finance. ▪ The number of VET Managers trained are increased annually. 	
STRATEGIC PRIORITY 4: Supporting workplace-based skills development in firms in the industry sector			
<p>RATIONALE: Planning and implementing skills development in the workplace is essential to identifying current and future workforce needs in firms. The business environment is dynamic, competitive and can change quickly. Firms that support skills development of employees are in better position to grow their business, improve productivity, support job creation and economic development. Skills development motivates employees to do better in the workplace and support business objectives. For policy-makers and education institutions to develop training solutions that meet the needs of firms, employers should communicate workforce training needs to supply-side institutions in the labour market. This will contribute significantly to building the capacity of the VET sector to deliver training programmes that align to workforce needs and ensure work ready graduates that have both the skills and knowledge required by employers.</p>			
4.1.	Encourage firms to invest in upgrading the skills of their employees above 1% compulsory training levy.	<ul style="list-style-type: none"> ▪ A baseline is established of training activity in firms in the industry. ▪ Number of firms offering training to employees is increased annually. ▪ Number of employees receiving training is increased annually. ▪ Number of firms spending in excess of 1% of payroll on training is increased annually. 	NTA/Firms
4.2.	Develop the capacity of individual firms to engage systematically in workforce skills planning and implementation.	<ul style="list-style-type: none"> ▪ The NTA develops a workforce skills planning programme firms to undertake the following: <ul style="list-style-type: none"> ○ Identify workforce training needs ○ Align business objective to skills development ○ Develop a workplace skills plan and training report ○ Advise firms on top-up skills, occupations in high demand, accreditation, sourcing training providers, apprenticeships and traineeships, RPL and the use of the training levy ○ Appointing skills development facilitator ▪ The programme is delivered in all regions annually. 	
4.3.	Promote skills development in small businesses.	<ul style="list-style-type: none"> ▪ A national database of small businesses supported with skills development is established and the impact of training reported on. ▪ NTA through skills planning research identify the skills needs of small and emerging businesses in their industry and promote relevant training programmes through incentives. 	
STRATEGIC PRIORITY 5: Addressing unemployment and employability skills to eradicate poverty and build sustainable livelihoods			
<p>RATIONALE: High unemployment, particularly for youth, is a major challenge for Namibia. The other challenge is high levels of poverty among the population. To transform Namibia into an industrialised country with improved living standards it is necessary to eradicate poverty, high unemployment and underdevelopment. Skills development provides opportunities for the unemployed and marginalised to acquire employability and self-employment skills. The training of workers in the</p>			

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<i>informal economy on basic and generic skills (such as literacy and numeracy) as well as entrepreneurial skills facilitate the transition from self-employment in the informal economy to micro-enterprise development in the formal economy.</i>			
5.1.	The Skills Fund is effectively used to address unemployment, develop employability and entrepreneurship skills, and build sustainable livelihoods.	<ul style="list-style-type: none"> ▪ Develop and implement training projects that target the unemployed, marginalised and rural communities to secure employment and build sustainable livelihoods. ▪ Numerical targets to reach vulnerable groups are set annually. ▪ NGOs working in local communities are supported. ▪ Link programmes such as TIPEEG with skills development. ▪ Training activities to improve employability and entrepreneurship skills are designed and offered. 	NTA/NGOs/VETC/ COSDECS
5.2.	Support the development of low skill, low wage workers for skills development and career advancement	<ul style="list-style-type: none"> ▪ Number of training projects focused on low skill, low wage workers implemented. ▪ Number of worker given recognition of prior learning. 	
STRATEGIC PRIORITY 6: Establishing institutional research capacity for national skills planning			
<i>RATIONALE: There is a need to build institutional skills research capacity and improve labour market diagnosis within the NTA, Industry Skills Councils and VET Centres to analyse skills imbalances and make appropriate funding allocations. The NTA has an important role in conducting industry skills research, gathering statistics and disseminating findings to the public. Their close contact with government agencies, industries and VET institutions puts them in a good position to skills trends, undertake national training needs studies, develop baseline labour market indicators and postulate solutions. Strong research capacity will improve the capacity of decision-makers to determine industry skills needs and guide education and training investments effectively and efficiently. By establishing institutional research capacity, an evidence-based policy-making culture will be developed in the skills development environment.</i>			
6.1.	Develop a three year Research Strategy and Implementation Plan (2014-2017) that will include the following: institutional research aims and objectives; research activities; capacity-building interventions; information management; establishment of a research committee; and communication and dissemination of information.	<ul style="list-style-type: none"> ▪ Research strategy and implementation plan approved by NTA Board. ▪ One national skills conference per year. ▪ One tracer study and one employer survey every two years consecutively. ▪ A sector skill plan per industry sector is updated annually. ▪ Occupational mapping analysis per industry is undertaken. ▪ Two industry sector workshops are held annually. ▪ Number of staff research training interventions. ▪ Number of research partnerships developed. ▪ Research Committee established. ▪ Number of research internships recruited. 	NTA/ISC/Board
6.2.	Strategic planning in VET institutions and COSDECS are responsive to labour market shortages	<ul style="list-style-type: none"> ▪ The research skills of VET education managers are improved to analyse training needs in local labour markets. ▪ VETCs and COSDECS conduct employer surveys and tracer studies annually. 	

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
6.3	Industry skills research is required to inform sound decision-making, monitor industry labour market trends, and measure the impact of interventions and funding allocated.	<ul style="list-style-type: none"> ▪ Research on relevant areas are commissioned and conduct as agreed by the ISC and distributed to stakeholders. 	