Final research report for MERSETA OEM chamber:

Empowering people with disabilities project

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Acronyms and abbreviations

ABET	Adult Basic Education and Training
ALS	Assisted listening stems (ALS)
AT	Assistive Technologies
ATR	Annual Training Report
B-BBEE	Broad-Based Black Economic Empowerment
BCEA	Basic Conditions of Employment Act of 1997
CCMA	Commission for Conciliation, Mediation and Arbitration
CEO	Chief Executive Officer
CSRI	Corporate Social Responsibility Initiatives
CSIR	Council for Scientific and Industrial Research
DTI	Department of Trade and Industry
EE	Employment Equity
EEA	Employment Equity Act of 1998
EEP	Employment Equity Plan
Fasset Seta	SETA for Finance, Accounting, Management Consulting and Other Financial Services
FET	Further Education and Training
ILO	International Labour Office
JAWS	Job Access With Speech
KEAD	Korea Employment Agency for the Disabled
LCG	Learnership Cash Grant
LL	Lifelong Learning
LRA	Labour Relations Act of 1995
MS	Multiple Sclerosis
MSA	Manufacturing Skills Australia
merSETA	Manufacturing, engineering and related services SETA
NGO	Non-Governmental Organisation
NQF	National Qualifications Framework
NSDS	National Skills Development Strategy
OEM	Original Equipment Manufacturers
OHSA	Occupational Health and Safety Act of 1993
PAYE	Pay-As-You-Earn
PEPUDA	Promotion of Equality and Prevention of Unfair Discrimination Act of 2000
PTSD	Post-Traumatic Stress Disorder
SABS	South African Bureau of Standards
SARS	South African Revenue Service
SCG	Strategic Cash Grant
SDL	Skills Development Levy
SETA	Sector Education and Training Authority
SMME	Small Medium and Micro Enterprises
SSP	Sector Skills Plan
TAG	Technical Assistance Guidelines
WHO	World Health Organisation
WSP	Workplace Skills Plan

List of tables

Definitions

Disability	A disability is a condition caused by an accident, trauma, genetics or a disease which may limit a person's mobility, hearing, vision, speech, intellectual or emotional functioning. Some people with disabilities have one or more disabilities (Department of Labour, 2002).
Handicap	A handicap is a physical or attitudinal constraint/barrier that is imposed upon a person, regardless of whether that person has a disability. Some dictionaries define handicap as "to put at a disadvantage" (Department of Labour, 2002).
Scarce and critical skills	Scarce and Critical Skills refers to an absolute or relative demand, current or future, for skilled, qualified and experienced people to fill particular roles/professions, occupations or specialisations in the labour market (Department of Labour, 2002).
Scarce skill	'those occupations in which there is a scarcity of qualified and experienced people, currently or anticipated in the future' (Department of Labour, 2002:).
Critical skills	Defined as 'specific key or generic and top-up skills within an occupation'. Critical skills include key or generic skills (including SAQA critical cross-field outcomes) e.g. cognitive, language, literacy and mathematical skills. (Department of Labour, 2002).

Table of contents

Introduction

This report is a summary of the research conducted in the Original Equipment Manufacturer (OEM) chamber of the merSETA.   The purpose of the research was:

> "To identify the best way to recruit, train and deploy people with disabilities (PwD) on MERSETA scare skills learnerships within the automotive manufacturing sector (OEMs)."

The research objectives were as follows:

- **Objective 1:** To employ a qualitative methodology to establish and describe the experiences of PwD employed within the OEM sector;
- **Objective 2:** To link the experiences of the PwD to the literature that describes the employment of PwD to ensure validity of research;
- **Objective 3:** To identify 'best-fit' disability for each selected scarce and critical skill.
- **Objective 4:** To identify scarce and critical skills that can be filled by different categories of PwD;

- **Objective 6:** To identify enablers and inhibiters in the workplace that can be addressed to promote the hiring and retention of PwD;
- **Objective 7**: to design of a toolkit to promote the hiring and retention of PwD;

1. Literature review

1.1 National and international disability statistics

Statistics South Africa (Stats SA) estimated from the 2001 census that 5% of the population suffered from disabilities (Stats SA 2005). Prior to this, the 1997 Department of Health National Baseline Survey estimated this figure at 5.9% of the population and the 1996 census claimed that 6.5% of the national population were disabled.

The 2011 National Census from Stats SA can be read to say that between 20.24% and 12.34% of the nation is disabled – which is far higher than previous census figures. This increase is largely due to the fact that "disability" was redefined in 2011 as having "difficulties" with a series of tasks such as seeing, hearing and walking. Respondents were required to indicate if they had "no difficulty" OR "some difficulty" OR "a lot of difficult" OR "impossible to do" in relation to certain tasks. Even if a more severe notion of disability is used ('A lot of difficulty' or 'Unable to do'), an estimated 12,34% of the South African population have a severe enough activity limitation (or disability) that probably warrants services of some form or another and/or provision of assistive devices.

According to The Child Health Policy Institute (2001), "In South Africa the exact number of people with disabilities is contested". The Child Health Policy Institute, however, considers that a minimum of 10% is a reasonable estimate for purposes of employment equity planning, and this opinion is supported by the Department of Labour (2002).

By comparison, the World Health Organisation (WHO) has estimated that an average of 10% of the world's population experiences some form of disability (WHO 2006:1) whereas the United Nations Development Programme (UNDP) 1990 figures were 5.2% (Caga 2011:1).

There are large variations in disability statistics regionally, locally and globally, with lower and middle income countries showing a lower prevalence of disability than high income countries (Schneider & Couper 2007). This can be partly attributed to the greater longevity of citizens in wealthier countries, where there is a marked increase in numbers of people with disabilities over 60 years of age. However, by and large it is difficult to make comparisons between data on disability from different countries as these are not necessarily measuring the same thing. Some of the inconsistencies in what is being measured can be explained by methodological factors, such as the different ways questions are worded in survey instruments; the definitions of disability used; the survey methods (self-reporting vs. medical reports / observations); and the level of industrialisation of different countries[1] (Schneider & Couper 2007).

In order to understand disability more clearly at a national level in South Africa, and disability statistics internationally, Stats SA has been developing and testing a survey instrument that will allow for more accurate data collection (Schneider & Couper 2007). The data obtained from this should allow us to make more accurate comparisons of South African figures with international figures – such as whether the 12% of the population considered to have disabilities in South Africa represents the same thing as the 14% claimed

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[1] Schneider and Couper (2007) report that this is related to the greater numbers of motor vehicle accidents in more industrialised, higher income countries and the availability of health care to treat severe injuries, resulting in people becoming disabled rather than dying from their injuries.

to have disabilities in Australia, and if this means that there is a higher proportion of disabled people in Australia and why.

When it comes to quantifying different kinds of disability, the South African 2001 census revealed that the most common disability was visual (32% of those people with disabilities), that 30% of disabilities were physical, 20% related to hearing loss, and that emotional disability stood at 16%, mental disability at 12% and communication disabilities at 7%.

1.2   Definitions of disability

Caga (2011:5) describes how, historically, people with disabilities have been viewed as being deficient in ability in some way, and how services for them have been organised around a medical approach, to try and correct or cure the problem. This medical model of disability assumes the perspective of personal inadequacy of the 'patient' and focuses on their individual functional *limitations*. Premised on this model, South Africa used to have a particular health and welfare approach which viewed the disabled as different from able-bodied people, unable to be productive and in need of care. It created a system of dependency on state support and ultimately disempowered people with disabilities by isolating them from their communities and mainstream society – for example by excluding children with disabilities from mainstream schools and segregating them in special schools (Integrated National Disability Strategy White Paper 1997). This also sent out negative messages to society about people with disabilities.

However, a more recent social model of disability that views disability in terms of the problems encountered by the person with the disability in different contexts, has come to be recognised as more helpful and realistic. In this model, the focus is on the way the environment is organised to accommodate people with disabilities. It promotes the removal of physical and institutional barriers as well as for society's attitudes to disability to be transformed for this sector of the population to be able to function optimally. In contrast to the medical model, it emphasises the shortcomings of our society in the negative way it responds to disability and "the abilities and capabilities of people with disabilities" (Caga 2011:6). The Employment Equity Act no.55 (1998: 5.1) captures this perspective well: "The scope of protection for people with disabilities in employment focuses *on the effect of the disability on the person in relation to the working environment*, and not on the diagnosis of the impairment" (emphasis added).

This social model or human rights perspective underpins the Integrated National Disability Strategy White Paper (1997), which uses the definition of the ILO Convention 159 of a disabled person as being "An individual whose prospects of securing and retaining suitable employment are substantially reduced as a result of physical or mental impairment" (ibid: Appendix B). A similar approach has been taken by key international organisations such as the WHO and the Disability Rights Movement in the USA. The WHO defines disability as "the outcome or a result of a complex relationship between an individual's health condition, personal factors and external factors that represent the circumstance in which an individual lives" (Caga 2011:6). The Disability Rights Movement takes a stronger human rights stance on disability as being "the disadvantage or restriction of activity caused by the way society is organised which takes little or no account of people who have physical, sensory or mental impairments" (ibid).

It is particularly important to recognise the complex nature of disabilities, that they can range widely in severity of expression, and that people frequently live with more than one, often inter-related, disability. This is particularly relevant as there is a tendency to view people with disabilities as a single, homogeneous group, represented by people in wheelchairs (Integrated National Disability Strategy White Paper, 1997). The Employment Equity Act no.55 (1998: 5.1) specifies the criteria for disability as

- being of a long-term (at least 12 months) or recurring nature;
- being expressed in a physical or mental impairment; *and*
- substantially limiting a person from doing a job *"in the absence of reasonable accommodation by the employer" and despite medical treatment / interventions to "control or correct the impairment" and its adverse effects* (emphases added)*.*

The Act further elaborates on what is meant by 'recurring' and 'impairment'. First:

5.1.1 (ii) A recurring impairment is one that is likely to happen again and to be substantially limiting (see below). It includes a constant underlying condition, even if its effects on a person fluctuate.

(iii) Progressive conditions are those that are likely to develop or change or recur. People living with progressive conditions or illnesses are considered as people with disabilities once the impairment starts to be substantially limiting. Progressive or recurring conditions which have no overt symptoms or which do not substantially limit a person are not disabilities.

5.1.2 Impairment

(i) An impairment may be physical or mental.

(ii) 'Physical' impairment means a partial or total loss of a bodily function or part of the body. It includes sensory impairments such as being deaf, hearing impaired, or visually impaired and any combination of physical or mental impairments.

(iii) 'Mental' impairment means a clinically recognised condition or illness that affects a person's thought processes, judgment or emotions.

The Act emphasises in 5.1.3 that an impairment constitutes a disability only when it is substantially limiting:

(ii) Some impairments are so easily controlled, corrected or lessened, that they have no limiting effects. For example, a person who wears spectacles or contact lenses does not have a disability unless even with spectacles or contact lenses the person's vision is substantially impaired.

This would include hearing impairments that could be rectified by hearing aids, and certain other conditions or impairments that could be accommodated easily or treated successfully. The Act goes on to specify in 5.1.3 (iv) those conditions or impairments that may not be considered disabilities, but these will not be listed here.

These definitions are useful but it is necessary to try and understand disabilities and their severity more precisely for employment purposes.

1.3   Understanding disability more precisely

In order for people with disabilities to be meaningfully employed, it is important to be able to classify disabilities and understand the range of symptoms that people experience. Industry Canada, a Canadian Government Ministry website (http://www.ap-toolkit.info/) that among other things[2] provides information on products that can be procured to accommodate people with disabilities in the workplace, provides a useful and detailed list of disability types and their definitions, (see a summary in Appendix A). The broad categories of disability that they use and that are relevant here are:

- Cognitive impairment
- Dexterity impairment
- Hearing impairment
- Learning disability
- Mobility impairment
- Speech and language impairment
- Visual impairment

However, it is interesting to note that they specify learning disabilities as a separate category and do not seem to have a category for mental / psychological disabilities (mental illnesses, mental disorders), whereas in other typologies learning disability is often included as a sub-type of mental disabilities, or as a developmental disorder.

It is repeatedly claimed in the literature that one of the difficulties in understanding disability is the lack of a precise definition regarding degrees of disability. However, it is difficult to be precise because of the variability of symptoms and effects on sufferers' lives, and because of the difficulty in getting agreement on how to measure the severity of a condition, as this has both subjective and objective aspects. There are a number of complex instruments and scales that have been developed by health professionals to measure disability for different purposes, but one that might serve the purpose of understanding disability better in the manufacturing sector is the Modified Rankin Scale (mRS). This is a fairly commonly used scale that has been developed to assess the degree of disability or dependence in the "daily activities" of people who have suffered a stroke or other causes of neurological disability (Wikipedia).

The scale runs from 0-6, with 0 signifying perfect health with no symptoms.

- 0 - No symptoms.
- 1 - No significant disability. Able to carry out all usual activities, despite some symptoms.

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[2] The Accessible Procurement Toolkit (APT) web site was designed by the Assistive Devices Industry Office (ADIO) of Industry Canada as a resource for federal government purchasing agents, as they are required by law to purchase technology and equipment that can accommodate people with disabilities, or be adapted to accommodate them, whether they have employees with disabilities or not. [http://www.apt.gc.ca/ap10009E.asp]

- 2 - Slight disability. Able to look after own affairs without assistance, but unable to carry out all previous activities.
- 3 - Moderate disability. Requires some help, but able to walk unassisted.
- 4 - Moderately severe disability. Unable to attend to own bodily needs without assistance, and unable to walk unassisted.
- 5 - Severe disability. Requires constant nursing care and attention, bedridden, incontinent.
- 6 - Dead." (Wikipedia)

As can be seen, this scale is useful for disability associated with mobility, but less so for other disabilities and especially not for cognitive, mental or communication impairments. Also, in the automotive manufacturing sector, it would probably only be practical to consider employing people with disabilities in the range from 1 - 4. These categories could be amended slightly for the workplace to include a range of different disabilities as follows:

- 1 - No significant disability. Able to carry out all usual activities, despite some symptoms.
- 2 - Slight disability. Able to look after own affairs without assistance, but unable to carry out all previous activities.
- 3 - Moderate disability. Requires some workplace accommodation, but able to work unassisted.
- 4 - Moderately severe disability. Requires significant workplace accommodation and unable to perform certain tasks / functions without assistance / assistive devices.

South Africa has specifically tried to address the status of people with disabilities and the social challenges they face through legislation and various policies, which are briefly mentioned below.

1.4   SA policies related to disability

The rights of people with disabilities are protected by the most powerful legislation in the land: The Constitution of the Republic of South Africa, 1996. This states that neither the state nor anyone else may "unfairly discriminate directly or indirectly against anyone on one or more grounds, including race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, *disability*, religion, conscience, belief, culture, language and birth" (RSA 1996: 9.3) (emphasis added). The Constitution further advances their protection by stating that "National legislation must be enacted to prevent or prohibit unfair discrimination".

The Integrated National Disability Strategy White Paper (Office of the Deputy President, 1997) was the product of broad consultation with organisations representing the interests of disabled people and reflected the thinking of the government at the time on "what it can contribute to the development of disabled

people and to the promotion and protection of their rights". The Employment Equity Act no. 55 (1998) focuses on the removal of policies which result in inequalities in employment practices, disability being one of these: "Specific emphasis is placed to ensure equity, the right to equal protection and benefit of the law, *inter alia,* by people with disabilities" (Department of Labour 1998). The (Draft) Code of Good Practice on Key Aspects of Disability in the Workplace[3] (Department of Labour 2001) takes the Employment Equity Act further and focuses specifically on how to implement equality of opportunity for people with disabilities in the workplace. It sets out to "guide employers and employees on key aspects of promoting equal opportunities and fair treatment for people with disabilities" and to "understand their rights and obligations" …"to ensure that people with disabilities can enjoy and exercise their rights at work" (ibid #1).

The Code of Good Practice (Department of Labour 2001) covers the definition of disability in some detail; what is meant by "reasonable accommodation" of people with disabilities in the workplace, and examples of such accommodation; how to avoid unfair discrimination and achieve employment equity; and confidentiality and disclosure, among others. It impacts on disability-related workplace policy and practice, particularly in the areas of recruitment and selection, medical testing, safety, industry-employee relations and employee benefits and speaks to the need to re-align policy in terms of a planned change strategy. The Code of Good Practice provides a business case for employers to reduce employment costs as well as presenting a compliance case for promoting equity and implementing social change, so that both employers and employees with disabilities can benefit.

In addition, the Department of Labour (2002) has published Technical Assistance Guidelines on the Employment of People with Disabilities (TAG) "to assist employers, employees, trade unions and people with disabilities to understand the Employment Equity Act of 1998 and its Code of Good Practice on the Employment of People with Disabilities". These guidelines include non-discrimination and affirmative action measures and how to implement them. "The human rights approach to disability thus focuses on the removal of barriers to equal participation and on the elimination of discrimination based on disability. The broad objective of the social model is thus to integrate people with disabilities into the mainstream of society" (National Office on the Status of Disabled Persons (OSDP) 2003:5). It emphasises that people with disabilities are entitled to the same rights and freedoms as everyone else in society, and that they are not objects of charity or suffering from a dangerous malady, and thus to be avoided or excluded.

This framework of legislation, together with other policies, provides the enabling context for attaining the target of 2% set by the Department of Labour for the inclusion of people with disabilities in the country's workforce. However, it is of grave concern that 81% of people with disabilities nationally were unemployed in 2001 (Statistics SA, 2005:21), and as at 2010, the actual national figure of people with disabilities in employment stood at 0.5% and was said to have been declining

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[3] Hereafter referred to as the 'Code of Good Practice'

(South African Labour Guide, 2010). The 2010 figures come from a report on a study of employment equity in South Africa by Global Business Solutions (2001) (South African Labour Guide, 2010). The study of over 100 large and small companies, covering more than 150 000 employees, found that less than 1% of the total workforce in South Africa is reported to be made up of people with disabilities. In addition to this, only 0.35% of new appointments appear to be people with disabilities. This points to the legislation being disregarded and people with disabilities not being given due consideration in the employment equity process. Indeed, the Department of Labour (2002) asserts that "South Africans with disabilities are both under-represented and under-utilised in the workforce".

These figures beg the question of why people with disabilities are being passed over for employment. Some of these factors are explored in the next section of this report.

1.5   Barriers to the employment of people with disabilities

The Integrated National Disability Strategy White Paper (Office of the Deputy President, 1997) posited that the extremely high levels of unemployment amongst people with disabilities could be attributed to a number of factors:

- low skills levels due to inadequate education;
- discriminatory attitudes and practices by employers;
- past discriminatory and ineffective labour legislation;
- lack of enabling mechanisms to promote employment opportunities;
- inaccessible public transport;
- inaccessible and unsupportive work environments;
- inadequate and inaccessible provision for vocational rehabilitation and training;
- generally high levels of unemployment;
- the fact that menial labour is often the only option for poorly skilled job-seekers;
- inadequate access to information, and
- ignorance in society."

While many of these factors may still hold true, a study conducted in 2005 into the effectiveness of disability legislation on employment in South Africa revealed that poor implementation of policy was the major reason for people with disabilities remaining unemployed. Factors affecting effective implementation of policy were cited as unreliable and inadequate data on the employment of people with disabilities; the undermining of employers' commitment to implementation by the inadequate linking of performance management to policy requirements for disability mainstreaming; and insufficient funding allocated from organs of the state for implementation (Caga 2011).

International research publications on barriers to employment for people with disabilities have tended to focus on the perspective of the employer, rather than

from those of disabled persons, and this is the perspective that is explored here first. Local and international studies reveal that various barriers are identified by employers to employing people with disabilities, frequent responses – some of which echo the points made above - being that:

- Disability is not sufficiently clearly defined;
- There is poor physical access into and within buildings for people with disabilities and that infrastructure generally does not cater for the disabled;
- People with disabilities do not apply for posts;
- There is a lack of suitably qualified and experienced people with disabilities applying for posts;
- People with disabilities tend to avoid disclosing their status;
- Social barriers, such as stereotyping and stigmatisation are a problem and the disabled are discriminated against under the assumption that they are not capable of doing the job (Caga 2011).

However, it will be shown that all these so-called barriers can be directly addressed by employers themselves, and are not cogent reasons for excluding people with disabilities.

A Deloitte (2010) report on the findings of roundtable dialogues on diversity in the Canadian workplace - that were held with a broad range of interested people from the business community, government agencies, special interest groups such as community-based diversity and disability organisations, current and former paralympic athletes and Deloitte partners and colleagues - noted additional barriers experienced by people with disabilities. These included access to information, such as publications not being available in large print; technological barriers caused by a lack of adaptation of technology to support assistive devices; and organisational processes or policies, such as recruitment policies, that discriminate against people with disabilities.

A corollary to this is that if suitably qualified individuals with disabilities are appropriately matched to jobs, and if they receive the support and reasonable accommodation they need to perform the job effectively (as with all employees), then they can become a significant asset to a company. However, if the disability is not disclosed and their support needs are not readily apparent – as in a long-term or mental illness – and are not met, then their work performance may well suffer, leading to termination of employment (Unger 2002).

A South African study on factors affecting people with visual disabilities in employment (Caga 2011), found that they experienced numerous challenges in society and the workplace over and above the daily physical challenges of their disability. They reported experiencing a general lack of respect from non-disabled people and that they were generally discriminated against because of their disability by their co-workers, employers and by society at large, despite the legislation that protects their human rights. They experienced problems with access to information, such as not having access to media and communications in Braille, and identified a lack of training and other resources, including appropriate work equipment, as hindering their productivity and employability. Inaccessibility of transport, buildings

and educational provision and resources also presented problems for them. The participants in the study particularly urged that libraries or information centres and the provision of education be made accessible to people with visual disabilities (Caga 2011: 2).

Moreover the Code of Good Practice on the Employment of People with Disabilities (2001) stipulates that people with disabilities should have reasonable access to employment advertisements, and that these advertisements should be circulated to the relevant organisations where appropriate and practically possible. However this seems to be a shortcoming in employment practice in South Africa.

Many of these barriers to the employability and effective work performance of people with disabilities are due to a lack of knowledge of non-disabled people, as is elaborated in the following section.

1.6   Perceptions of disability in the workplace

Attitudes are said to play an important role in integrating people with disabilities into the workplace, and the Deloitte White Paper noted that it was not just the attitudes of others towards people with disabilities that was problematical, but of the self-perception of the disabled themselves, who "must challenge their ideas of themselves and their own strengths and weaknesses, as well their compromised self-esteem or self-confidence" (2010: 5). However, this perception seems to 'blame' the person with disabilities, rather than acknowledging that their self-esteem may be directly related to how society perceives them.

The attitudes and perceptions of employees regarding people with disabilities play an important role in the effective recruitment - whether they are employed in the correct job for their abilities - and retention of disabled employees, and their integration in the workplace. A common misperception is that colleagues will have to pick up on work that their disabled colleagues cannot manage. Ironically, the Deloitte White Paper (2010: 7) points out that, on the contrary, "people with disabilities are often more productive, dependable and loyal than their co-workers without disabilities and staff retention is significantly higher among persons with disabilities". This retention is a direct benefit to companies who are able to save millions of dollars annually in training and hiring costs.

Misperceptions are most often a result of lack of exposure to people with disabilities in the workplace. Unger (2002) maintains that most research studies are based on the views of employers, human resource personnel and workplace staff towards hypothetical staff with disabilities, or their general perceptions of people with disabilities in the workplace, rather than on their specific experiences of working with them. However, Unger's study (2002) on the perceptions of front-line supervisors of the performance of people with disabilities found that those supervisors who had direct experience in managing or supporting workers with disabilities were quite satisfied with their work performance. Among other things,

they were described as being as good as, or better than, non-disabled staff and as "conscientious, consistent, dependable and prompt" (Ibid: 41). Similarly, employers who frequently interacted with employees with disabilities tended to rate their work performance, as well as their attendance and safety records, as equivalent to or superior to non-disabled workers. Thus, in the large, national businesses surveyed, workers with disabilities were perceived to be "exceedingly capable employees whose work performance contributes to organisational productivity and profitability" (ibid). The one reservation held by the supervisors in this study was that workers with disabilities often do not complete their work as quickly as their non-disabled colleagues, but that their work tended to be of a higher quality. Therefore employers should consider trading off their slightly lower productivity against other traits, such as commitment, dedication, reliability and job retention (ibid).

A South African research study into managers' perceptions on potentially accommodating deaf employees in the automotive industry (Smit & Brand 2011) found, amongst other things, that communication and safety issues would probably present the biggest problems, especially with clients, suppliers and with their colleagues from Japan and France, but also communication between employees and with managers. Meetings were identified as posing particular problems for deaf employees, such as when different people in the meeting talk at the same time or look away from the deaf person while talking. The managers participating in the study felt that deaf people should not be employed in a supervisory or managerial position because of a range of potential communication difficulties and that, similarly, reception or personal assistant jobs would be unsuitable unless the appropriate technology to assist communication was provided. The jobs suggested as most suitable for deaf employees were administrative positions where communication barriers would be less of an issue and would be easier to address; repetitive tasks such as data capturing, computer work or working on the "trim-line" which require little verbal communication; engineering; or mechanical work (ibid:27).

Some managers perceived that deaf people would be "weaker" (ibid: 26) than their non-deaf counterparts but admitted that this might well be a misperception arising from their own lack of knowledge. Their concerns about safety issues were perhaps not unfounded, as more injuries are said to occur among disabled production workers than among general office workers (ibid: 27), and moving vehicles on the manufacturing floor, such as forklift trucks and other electrical vehicles, pose a safety risk to all employees. These vehicles are equipped with sirens to warn workers of their approach, but these of course would not be heard by deaf workers, as would be the case with fire alarms. A perception amongst some managers was that deaf workers would have slow response times to safety issues and that they might work more slowly, although productivity was considered less important than safety.

A positive perception of participants in the study was that deaf employers would work harder than their non-impaired colleagues as they would not be distracted by the noisy environment and would consequently be able to concentrate better on the task at hand. It was suggested that they would pay more attention to detail and have better developed visual and tactile senses than individuals with normal hearing and

would therefore be good at identifying risks and weaknesses in manufacturing processes.

Finally, this research into a hypothetical employment situation was found to have the effect of raising the awareness of managers about deaf people, and they indicated interest in improving their knowledge and understanding of disabilities. The study therefore had the unintended consequence of contributing "to changing managers' misconceptions about employing deaf people in a manufacturing environment" (ibid: 27).

The next section of the literature review provides some brief international case studies of manufacturing companies who are successfully employing people with disabilities, as possible examples to South African companies.

1.7   International case studies of people with disabilities being employed in the manufacturing sector

By way of introduction to these international case studies, it was estimated that, in 2003 in Australia, 20% of the working age population had disabilities but less than 12% were employed (MSA 2011). Of these, 11.4% were employed in the manufacturing sector, the second biggest employer of people with disabilities. Within manufacturing, 10.9% of unskilled and 10.6% of semi-skilled labour jobs were filled by people with disabilities.

The automotive manufacturing industry in South Africa employs a significant number of workers and original equipment manufacturers (OEMs) in this sector have, in particular, been responsible for the creation and maintenance of a growing number of jobs. According to the Industrial Policy Action Plan (RSA 2011) "(a)n estimated 160 000 direct jobs will be created in the industry within the next ten years". Employment equity and social development requirements make it increasingly necessary for the automotive OEM industry to explore the contribution to the sector that can be made by people with disabilities.

The following case studies of companies in the manufacturing sector have been published by the International Labour Office (ILO) (2010) and could inform the approach of the OEM sector to employing people with disabilities.

Grundfos, a Danish company, is one of the largest manufacturers of water pumps in the world, employing more than 16,000 people in 45 countries. Grundfos has anti-discriminatory and equality policies and is actively committed to at least 3% of its workforce being people with disabilities. It has established "flexible workshops" (ILO: 26) in China, Denmark and Hungary for people with disabilities and other "socially disadvantaged groups" (ibid), that are similar to its other production facilities but that specifically cater for each individual worker's abilities. In addition, people with disabilities are also employed in a wide range of other areas in the company, from research to production and administration. Grundfos makes every effort to

reasonably accommodate the individual needs of its workers with disabilities, such as allowing extra rest time; providing specially adapted chairs, adjustable desks and other adapted equipment; and providing easy access to the workplace. In addition, all managers are trained in the company's diversity values, of which disability is one aspect, and supervisors are specifically trained to assist disabled employees.

Honda Motor Co. Ltd, situated in Tokyo, Japan, is the largest manufacturer of motorcycles worldwide as well as being a leading automotive manufacturer. Honda has a non-discrimination policy for all its companies and in particular provides jobs to people with disabilities through its many subsidiary companies. One of these, Honda Sun, which manufactures motorcycles, motor cars and power product components, was established especially to expand employment opportunities for people with disabilities and to promote their independence. The decision to actively employ people with disabilities was taken by the founder of the company after he had observed how they could be productively employed. Honda Sun opened a new plant in 2008 that was designed in consultation with each of its disabled workers to specifically take into account their needs and provide a barrier-free working environment. Two more of Honda's subsidiary companies accommodate people with severe disabilities, one of which manufactures and sells engine parts, transport equipment and agricultural machinery using computer-aided design (ILO: 29).

Nokia, one of the world's largest manufacturers of mobile phones and supplier of mobile networks (ILO: 53) is based in Finland and also has an anti-discriminatory and equal employment opportunity policy. Although its approach to diversity is said to underpin its business success, it has only recently begun employing people with disabilities but is steadily integrating them into their headquarters' workforce as well as in its local manufacturing plants. Nokia's largest global factory in Hungary is pro-actively employing people with health problems and moderate disabilities, offering them flexible working hours or shorter working days if necessary. A major selling point of Nokia products is offering maximum usability and accessibility to the greatest number of people, including those with disabilities.

Samsung Electro-Mechanics (SEM), an affiliate of the giant Korean Samsung Group, manufactures high technology electronic components and is the leading manufacturer of core parts for mobile phones, personal computers, electronic games etc. (ILO: 56). By 2009 the company employed over 19,000 people worldwide. In line with Korea's Disability Discrimination Act, SEM not only implements equal opportunity practices but has a preferential points system for disabled job seekers, based on the severity of the disability, to lower entrance barriers to employment for them. Since 2005 SEM has been working with the Korea Employment Agency for the Disabled (KEAD), to proactively employ more people with disabilities. To this end it has conducted an analysis of existing jobs and their associated tasks, has worked with KEAD in designing a customised education and training programme to equip workers with disabilities with the particular skills required for these tasks and has made the necessary workplace adaptations to accommodate them. SEM has also established a "Place and Train" programme to ensure the best job match in the company for people with disabilities and to expose individuals to different types of

work prior to employment, so as to maximise their productivity and skills. It provides vocational and personal counselling through qualified counsellors to support employees with disabilities and to help address their workplace challenges.

Some SEM products are specifically targeted at people with disabilities, such as their 'Soundopia' computer (ibid: 57) for people with visual impairments, as well as Braille keyboards and scanning devices for converting text into voice.

Sony has its headquarters in Tokyo, and, together with its subsidiaries, develops, manufactures and sells audio and visual products such as LCD TVs, computers, and mobile phones; is active in film and television production, including video games; and has recording contracts with artists to produce music and music videos (ibid: 62). Sony employs in the region of 168,000 people worldwide. Sony also has a strong commitment to diversity, which includes people with disabilities. In 2009, people with disabilities made up 2.29% of Sony's Japanese workforce, surpassing the national legal minimum requirement for large companies of 1.8% of total workforce. Sony ensures its housing for employees, in the form of corporate dormitories, meets the accessibility needs of all its workers and provides a disability support system to its companies, through its human resources and administrative divisions, to assist them in accommodating disabled staff. Sony Taiyo, one of Sony's subsidiaries, creates customised workstations for its employees with disabilities, uses sign language interpreters during meetings, and allows flexible working hours, among other accommodations. Sony is also incorporating design features in its products to enhance their accessibility to people with disabilities, such as providing a narrative soundtrack for one of its LCD televisions to accommodate visually-impaired users, and teletext for people with hearing impairments.

These case studies provide examples of the sorts of ways in which people with disabilities can be accommodated in the manufacturing sector and lead in to the next section, which discusses strategies and interventions for accommodating people with disabilities in the workplace generally, but that would also be applicable to OEMs in the automotive industry.

1.8   Considerations for accommodating people with disabilities in the workplace

A critical consideration that is widely emphasised in the literature is that each disability is different and differs in severity, and therefore different measures may be required, or not, to accommodate each individual in the workplace. Ordinarily, in order to maximise productivity, employers make every effort to ensure that there are no unnecessary obstacles to impede the productivity of their regular workforce and that the working environment is safe. The same considerations need to be extended to workers with disabilities.

It follows that the key to employing workers with disabilities effectively is to match the correct person to the job and to be flexible in allocating job tasks, restructuring

the job if necessary to best suit the abilities of the person with the disability (MSA 2011). The focus should be on the abilities and capabilities of the person, their strengths, as with any other employee, and not on their disability-related weaknesses. A recurring theme in the literature is that employees with disabilities should be consulted as to the sorts of accommodations they require and any restructuring of job tasks that might need to be considered, as they would know this best (Department of Labour 2001; Caga 2011; Deloitte 2010; FASSET 2009).

As mentioned previously, many of the barriers to employment for people with disabilities are as a result of lack of knowledge and understanding, which results in discrimination against them. This is underscored in the foreword to the Department of Labour's Draft Code of Good Practice on Key Aspects or Disability in the Workplace (2001):

> Widespread ignorance, fear and stereotypes cause people with disabilities to be unfairly discriminated against in society and in employment. As a result, people with disabilities experience high unemployment levels and, in the workplace, often remain in low status jobs and earn lower than average remuneration.

> Unfair disability discrimination is perpetuated in many ways. There are many unfounded assumptions about the abilities and performance of job applicants and employees with disabilities. Employers set criteria for selection that exclude disabled people. Workplaces are inaccessible and training is inappropriate for people with disabilities or not available at all.

> Employees who become disabled are often dismissed for poor performance or incapacity or they resign unnecessarily. They are often encouraged or forced to apply for disability benefits and they tend to retire earlier than other employees do, although if their needs are reasonably accommodated, they can continue as productive employees.

> *However people with disabilities can demonstrate their ability and contribute equally alongside fellow workers if enterprises remove unfair discriminatory barriers to their employment and make reasonable accommodation for their needs* (emphasis added).

It is important to note the emphasis given in the Code of Good Practice for recruitment practices to focus on the *abilities* of people to fulfil the essential functions of the job, which should apply equally to the disabled and non-disabled, as non-essential tasks can be re-allocated: "Employers should not include functions that are not essential to performing the inherent requirements of the job because selection based on non-essential functions may exclude people with disabilities unfairly" (ibid: #7.1.6)

The quote above also reminds us that making 'reasonable accommodation' for the needs of workers with disabilities "*to perform the essential functions of the job*"

(own emphasis) (ibid: #6.5) does not just apply to new applicants to a job, but to workers who have become disabled in some way while employed in a company, and may be temporary or permanent, depending on the nature and severity of the condition. Specific reference is made to the retention of employees who have become disabled, recommending that they are re-integrated into their job where possible, which may require "vocational rehabilitation, transitional work programmes and where appropriate, temporary or permanent flexible working time" (ibid: #11.2). Alternatively, and if practicable, "the possibility of alternative employment appropriate to the employee's capacity" (ibid: #13.1) or other reasonable accommodations should be explored, so that they are not forced to discontinue working and live on benefits, becoming a financial drain on public social security and occupational benefit schemes.

The Code of Good Practice (ibid: #6.9) provides examples of reasonable accommodation of the working environment for people with disabilities as follows:
- adapting existing facilities to make them accessible;
- adapting existing equipment or acquiring new equipment, including computer hardware and software;
- re-organising work stations;
- adapting training and assessment materials and systems;
- restructuring jobs so that non-essential functions are re-assigned;
- adjusting working time and leave;
- providing readers, sign language interpreters; and
- providing specialised supervision, training and support.

It is emphasised, however, that such accommodation should not cause the employer "unjustifiable hardship" by impacting on the viability of the business, by entailing excessive expenses, or by disrupting business operations (bid: #6.12). Indeed, the Code recommends that the most cost-effective solutions be implemented. By illustration, it has been found that the average cost to companies in the U.K. for providing reasonable accommodation is less than five hundred pounds sterling per employee (FASSET 2009: 26), and in Canada "20% (of accommodations) cost nothing and 50% cost less than 500 dollars" (Deloitte 2010: 10).

The South African Bureau of Standards (SABS) has also published specifications regarding national building regulations to accommodate people with disabilities, that should be taken into account when building new premises, improving or refurbishing existing premises, or workplace restructuring is undertaken. These include detailed guidelines for canteens, ablutions, accessibility to and within buildings, layout of working stations etc., that can be consulted (SANS 00246:1993; SANS 10400-S: 2011).

That society generally lacks knowledge and understanding of disabilities, and that such knowledge and understanding is key to accommodating people with disabilities in the workplace, it follows that education and raising awareness of leadership and management staff, recruitment / personnel staff and workers is clearly the first step in addressing the needs of people with disabilities (Caga 2011, FASSET 2009). This would help to correct people's misperceptions and attitudes and significantly reduce

both conscious and unconscious discrimination in the workplace. As Caga's study of the barriers to employment experienced by people with visual disabilities revealed, "most barriers that were reported by the organisations…were barriers of a social nature. These included behaviours of co-workers such as stereotypes, incorrect preconceived notions and stigmatisation of people with disabilities" (Caga 2011:83). She notes with concern that social barriers are especially difficult to overcome. A powerful example of the effect of sensitising society to the productive capacity of people with disabilities, in this case in the manufacturing sector, is highlighted by the Honda case study, where the CEO was profoundly affected by being exposed to how people with disabilities could be actively employed and came to realise the potential of such employees for his own company.

Many workplaces in South Africa already conduct diversity education for their workforces, and education around disabilities and disability issues should be merely an extension of this. An Employer Disability Toolkit designed for the Sector Education and Training Authority (SETA) for Finance, Accounting, Management Consulting and other Financial Services (FASSET), to "help to raise the profile of people with disabilities within our sector" (FASSET 2009: Foreword) covers a range of topics. The majority of these include the broad legal and policy framework and guidelines / codes that relate to employing people with disabilities, a detailed definition and discussion of what is meant by disability for employment purposes, the benefits to companies of skills development (education and training) for people with disabilities, what is meant by reasonable accommodation with practical examples, good employment practices including recruitment and retention strategies, and strategies for integrating people with disabilities into the workplace. The Toolkit demystifies disability, explains it from the perspectives of both the disabled person and the employer, through illustrative case studies, and provides a context to understand the implications of employing people with disabilities – benefits and obligations - for all parties.

Some additional examples given in the Toolkit for accommodating people with disabilities in financial sector workplaces are as follows:

- Time off for treatment;
- Space for a guide dog;
- Reader software computer programmes;
- Extra training time;
- Sensors on sliding mechanised doors;
- Allowing for "assisted devices" in the workplace, height adjustable chairs, special computer mouse, etc.;
- A vibrating cell phone;
- Loop system for hearing aids for meetings and TVs;
- Audio signals for lifts or Braille floor numbering;
- Wide parking space;
- Attention to escape and emergency practices and provisions (i.e. fire escapes, hand rails, etc);
- Care taken when choosing outside conference/meeting/presentation venues.

Specific examples of assisting the integration of people with hearing disabilities are also provided (ibid: 32), such as providing sign-language interpreters to facilitate communication in certain circumstances, such as during interviews, performance appraisals, training and staff meetings. Debriefing a deaf employee after meetings / presentations can also assist in making sure they have understood what was discussed.

A number of technological solutions are available, such as captioning the audio component of a video production into text – which can also be done in real time during meetings by typing the verbal input into a computer, which then displays the text onto the screen. Computer technology includes instant messaging and e-mails, speech synthesisers (for blind people), automatic voice recognition software which converts speech into written computer text and, related to this, computer-assisted note taking. Assisted listening systems (ALS) help people with hearing impairments, especially in noisy environments or situations where several people may be talking simultaneously.

Other simple ways of accommodating people with hearing disabilities / difficulties could include:
- Changing/adding lighting to enhance visibility (this could also assist people with impaired vision);
- Blocking out extraneous noise to eliminate disturbances;
- Posting directional and safety signs as well as room numbers;
- Adding vision panels to doors and walls to improve lines of sight;
- Using round or oval tables for group discussions;
- Installing convex mirrors at corridor intersections, especially those frequented by electric vehicles (ibid: 32).

The Deloitte White Paper (2010) also suggests a range of ways in which people with disabilities can be accommodated, such as installing a ramp access to a building; ensuring that corridors are wide enough for wheelchairs and electric scooters; ensuring that washrooms are accessible – "simple things like being close to the photocopier or the washroom could make a significant impact…" (ibid: 10); and even just securing a keyboard firmly to make typing more comfortable.

Finally the Toolkit (FASSET 2009) recommends a number of strategies to assist integrate people with disabilities into the workplace:
- Make a corporate commitment to include people with disabilities.
- Commitment from the Chief Executive Officer (CEO) will assist in creating a disability-friendly workplace.
- Ensure that corporate policies, procedures and practices specifically provide for proactive employment of people with disabilities.
- Ensure that procedures are in place to promote qualified employees with disabilities to management and supervisory positions.
- Include persons with disabilities on your management board.

- Employ people with disabilities at all levels, including senior management positions.
- Train and advance workers with disabilities.
- Recruiting staff from disability-related organisations.
- Educate all staff about disability issues, including orientation for new staff.
- Train co-workers how to welcome workers with disabilities.
- Ensure that co-workers know who to contact for questions regarding working with employees with disabilities.
- Use employees with disabilities to mentor new recruits who do not have disabilities.
- Provide continuous information on disability issues.
- Ensure that staff are familiar with legislation pertaining to disability issues.
- Include information about disability routinely in the company newsletter or Intranet.
- Establish relationships with community agencies serving applicants with disabilities, and encourage staff to build relationships with these agencies.
- Create a budget for providing reasonable accommodation for applicants and workers with disabilities.
- Ensure that employees are informed about provisions and assistance for reasonable accommodation adjustments.
- Ensure that buildings, parking areas, workspaces and communication systems are accessible to people with disabilities.
- Ensure that training material is available in alternative formats such as large print, Braille and captioned.
- Project a disability-friendly image so as to attract candidates and customers with disabilities.
- Market your products and services to customers with disabilities.
- Establish a Disability Support Group and allow the group to make recommendations to management (ibid: 34)

The social model, or human rights approach to disability that has been adopted by South Africa, and by many other countries worldwide, promotes the equal participation of people with disabilities in society and the workplace, and ways in which their integration can be enhanced rather than blocked. This literature review demonstrates how people with disabilities can contribute their skills and abilities to the economy and society, as well as more specifically to the automotive manufacturing industry. The simple goal for all companies, organisations and institutions in South Africa, with our diverse populations and cultures, should be to create an inclusive culture that favours all employees.

"Our workplaces should mirror our communities. To ensure that people feel comfortable in their work environment, organisations need to develop a healthy workplace – not just for people with disabilities, but for all employees" (Deloitte 2010: 11). It also makes good business sense to do so (FASSET 2009; Deloitte 2010).

Build your business case. Ensure that senior leadership, as well as middle management and recruiters, understand the business case for diversity – and why it is a priority for your organisation. By encouraging and celebrating diversity, organisations will ultimately benefit from the talents and skills of people from all communities, including people with disabilities (Deloitte 2010: 11).

2. Methodology

The empirical study followed a mixed design, using both qualitative and quantitative methods of data collection and analysis.

The first intention was to explore the work experiences of a sample of people with disabilities who are currently employed in scarce and critical skills occupations in the automotive manufacturing sector in South Africa, as well as the perceptions and experiences of their managers and supervisors with regard to people with disabilities. This required a qualitative approach and semi-structured interviews were held with the relevant personnel.

The second intention was to obtain analyses of the scarce and critical skills occupations that were occupied by staff with disabilities in the companies sampled, and to compare these across the data set. It was anticipated that this would require interviewing the relevant health and safety personnel, supervisors, training personnel etc, and to observe appropriate work areas, to be discussed and arranged with the companies individually. Based on the data gathered from these interviews and observations, the next step would be to explore the 'best fit' between job type and disability, and any accommodations or assistive devices required, with a view to recommending particular learnerships for people with certain disabilities in order to alleviate the scarce and critical skills gap. This required both qualitative and quantitative data collection and analysis.

In addition, a substantial amount of documentation was sought from the companies for quantitative analysis, such as:
- The company's staff and training disability profile;
- Disability related policies;
- Job descriptions, specifications and analyses for the different scarce and critical skills areas of work;
- Ergonomic specifications for the different jobs identified;
- Medical specifications for the different jobs; and
- Health and safety regulations for the different jobs.

In order to gather this amount of data, it was anticipated that two visits to each of the companies would be needed: an initial visit and meeting with the relevant personnel where the purpose of the research would be discussed and as many interviews as possible held: starting with people with disabilities and their managers. The outstanding data would have to be gathered at the subsequent visit, with the consent of and as arranged with the companies.

The automotive manufacturing companies that were targeted for this research were the seven largest, national groups in South Africa, namely Volkswagen, Ford, General Motors, Mercedes Benz, Nissan, BMW and Toyota. However, it was not possible to arrange a meeting with Toyota South Africa and so data was collected from only six of the companies. Discussions took place with a range of personnel at the different companies, as summarised below.

	BMW SA	Nissan SA	VW SA	Mercedes Benz SA	GM SA	Ford
Manager	2		1	1	2	
HR				1		1
Training		2	2	1		
Health & safety		1			2	1
Labour reps		1	1	2		
Medical		1		1	1	
Biokinetics	1			1		
Other	SDF; BBBEE specialist		Finance manager		Finance manager	Engineer; plant security

Considerable amounts of data were obtained at the first visits to these companies. However, despite on-going attempts to set up a second visit, to conduct additional interviews and observations, especially with personnel who were not available at the first visit, this has not yet been possible so the data are not as comprehensive as anticipated. In addition, very few of the documents that were requested and promised have been forthcoming, in spite of repeated reminders to the people responsible. In particular, there are almost no data on job analyses / specifications on the scarce skills occupations identified, which makes it very difficult to match these particular jobs to types of disability.

3. Findings

3.1 Disability profiles of companies sampled

Employment Equity legislation requires companies employing more than 50 people to have plans in place to address employment equity issues and to report on these plans, their workforce demographics and their skills development plans and activities to the Department of Labour. Employment Equity also forms part of a company's BBBEE scorecard and they are required to meet minimum demographic representation quotas (women, disabled, black) across a broad spectrum of categories, such as equity ownership, representation at employee and management level (up to the board of directors), procurement from black-owned businesses and social investment programmes, amongst others.

Despite these annual reporting requirements, most of the companies sampled in this study were reluctant or unable to divulge specific data on their employees with disabilities, such as numbers of employees with disabilities, the types of disabilities and the jobs being performed by these people.

One of the companies included being HIV positive under the umbrella of disability, which might explain their sensitivity towards divulging information their staff with disabilities. However, the Employment Equity Act (no. 55 of 1998) specifically states that infection in itself does not constitute a disability: "People living with progressive conditions or illnesses are considered as people with disabilities once the impairment starts to be substantially limiting. Progressive or recurring conditions which have no overt symptoms or which do not substantially limit a person are not disabilities" (5.1 (iii)). Nonetheless, the Act is quite specific about the need for confidentiality of employees' health and disability status, and the circumstances in which this information can be disclosed as well as the extent of the disclosure, which could be a reason why this information was generally difficult to obtain from the companies. In fact, it may have been difficult for the companies themselves to access this information as the Act requires that "…records of private information relating to the disability of applicants and employees (must be kept) confidential and separate from general personnel records" (14.1.2).

Two of the companies were able to provide information on their employees with disabilities, the most common disabilities shown in the table below.

Most common disabilities	Company A 61 PwDs[4]	Company B 43 PwDs
Deaf / impaired hearing	13	20
Blind in one eye/ Impaired vision	9	10
Physical deformity of some sort (polio, club foot, deformed hand, osteo-arthritis, spondylosis, etc)	13	2
Amputation	10	2
Epilepsy	7	2
Asthma/emphysema		5
Psychiatric	1	1
Spinal fusion, spondylosis	2	
Speech / communication	1	1

Table 1: Most common disabilities reported by two companies in the study sample

As can be seen, the most common disabilities related to visual or hearing impairment, followed by physical deformities, amputation of a limb or part of a limb, epilepsy and asthma. There were no paraplegic or hemiplegic employees.

As can be expected in the automotive manufacturing industry, most of the staff with disabilities from the two companies were male:

	Company A 61 PwDs	Company B 43 PwDs
Male	48	41
Female	13	2

Table 2: Gender demographics of two companies in the study

One of these companies attested that people with disabilities currently comprised 1.25% of their workforce, and that they were actively involved in a recruitment drive to increase this to 2% of the workforce, and specifically to recruit 35 black women with disabilities to attain their B-BBEE target. Another company in the sample claimed that they currently employ approximately 20 people with disabilities, less than 1% of their workforce, but that there were probably many more who had not declared their disability. In such cases, where these disabilities had gone undetected, it can be assumed that these would comprise people with an 'invisible' disability, such as a mental impairment or a long-term illness.

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[4] PwD = people with disabilities

3.2 Recruitment of people with disabilities

Two of the companies in the sample had developed a policy for recruiting people with disabilities, but most of them were using the guidelines for recruitment as laid out in the Employment Equity Act (RSA 1988) and the Occupational Health and Safety Act (RSA 1993). Whatever the case, the companies reported that very few qualified people with disabilities were being hired for vacant posts and that the majority of their staff with disabilities had acquired these during their employment with the company, although generally outside of the workplace.

It was said that all automotive OEMs in South Africa have their own training centres, where recruits complete trade and plant training before being employed, and this was found to be the case with the companies sampled in this study. Most of the companies seemed to recruit their new workers directly from their own training centres, which take in students from the FET colleges with whom they have a close working relationship, and FET colleges may even groom students specifically for different companies' needs. In addition to training relationships or partnerships with FET colleges, one of the OEMs in this study had a research and development partnership with a local university of technology, where both the company and the university research units were benefiting.

The students from the FET colleges complete the practical, apprenticeship aspect of their training at the OEMs, but because the colleges generally are not able to keep up with technological advances, the companies then give them further in-house training before they are employed. Therefore, the OEMs are reliant on the college student intake, which may or may not include young people with disabilities. One company reported that because very few matriculants have maths or science as senior certificate subjects, it had introduced a bridging programme in these subjects to broaden access for potential recruits.

The OEMs sampled are involved in various types of training, including apprenticeships, learnerships and multiskilling existing employees. Several of them were embarking on large-scale training drives to meet their manpower requirements for new manufacturing projects. One company mentioned that it had recently specifically recruited and trained 15 people with disabilities as technicians, and they had all been permanently employed after the one year of training.

Other than employing people from designated groups, companies can improve their employment equity profile and their B-BBEE scores through social investment projects. Four of the companies in the study were or had been involved in training people with disabilities on NQF levels 2 and 3 Business Administration learnerships, but not necessarily for their own company: one had been training secretaries for schools in the Eastern Cape for some time. Case studies of two companies involved in this type of training are provided below

Case study 1
Company C
Company C was running the National Certificate in Business Administration NQF level 3 learnership for learners with a range of disabilities, from limited mobility to visual impairments. The learners were all in administrative roles in the human resources department or in assembly-related administration: for example, data capturing, and some were working shifts. Their training involved three days theoretical training and two days simulated, practical training[5].

Case Study 2
Company D
In 2007/8 Company D embarked on training people with disabilities in the Business Administration NQF Level 3 learnership through a private provider. Before commencing, a full workplace audit of all the departments in the company was carried out by occupational therapists to ascertain the accessibility of the workplace to people with disabilities. Their report detailed where the general accessibility requirements, as laid out in the SABS Code of Practice: Accessibility to Buildings to Disabled Persons (01246: 1993), were not being met and possible difficulties people with different disabilities might experience. The idea was that each of the 20 departments would participate by hosting a learner on the learnership so as to gain real work experience. However, in the end only 18 departments were able to participate and 18 learners with various disabilities were selected. Their disabilities included paraplegia, hemiplegia, cerebral palsy, partial paralysis, polio-related disabilities and visual impairments related to albinism.
The training took place over a full year, with learners doing their internships in the different departments in which they were placed and attending monthly training classes. In the learners' first week of being in the workplace, occupational therapists carried out individual ergonomic assessments with them at their workstations in order to determine any reasonable accommodation needs that they might have. In addition, the learners attended a group life coaching session at the commencement of the learnership, after their induction sessions, and were each allocated a life coach with whom they were to meet regularly throughout the duration of the learnership.
After the training was completed, six learners' contracts were extended. Thereafter three learners were appointed at the company but only one of them are still there – the other two have left for better prospects.

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[5] The only negative reaction to people with disabilities encountered in this study was from a human resources staff member from this company, who commented that these learners unfortunately seemed to have a sense of entitlement due to their disabilities, but this allegation could not be corroborated.

The provider also provided the company with a number of draft policies and procedures regarding people with disabilities, for their consideration.

In some cases companies reportedly use specialised recruitment agencies when recruiting people with disabilities for learnership training, specifying the types of disability/ies that would suit the job. In one company the human resources department advertises positions and specifies the abilities necessary for the job, such as the need for mobility and the use of both arms. In this particular case, the union signs off the advertisement before it is placed and a union representative also attends the interviews.

3.3 Work experiences of staff with disabilities

One of the objectives of this research study was to establish and describe the experiences of people with disabilities in the companies in which they were employed. These data could then allow for recommendations to be made on which disabilities might be best suited to different occupations, on suitable accommodations for people with disabilities and to inform workplace training on disability.

The experiences of the staff with disabilities that were interviewed were - almost without exception – positive and they reported that their companies and their colleagues were very accommodating. Those with more minor disabilities, such as one person who had a prosthetic limb, emphasised that they do not see themselves as disabled. There was a strong feeling amongst the interviewees that they did not want to be seen as tokens, but to be given real opportunities in the workplace. In this respect, their companies seemed to provide the same opportunities to everybody and to treat all their staff in the same way, including those with disabilities having to undergo the same training and having to meet the same performance criteria for their jobs as everyone else.

However, one deaf interviewee felt that he was not being given the same opportunities as other workers as he had repeatedly been passed over for training at their overseas training facilities, which meant that he could not be promoted. He emphasised that communication was difficult for deaf people, and that managers, supervisors and team leaders could be trained in sign language to facilitate this, but that such training is perceived by companies to be expensive. He felt that, in his case, the managers could be more involved and accommodating.

The staff with disabilities who were interviewed believed that sensitisation or awareness training in the company is important as non-disabled staff can have a negative attitude to people with disabilities, especially initially. It was alleged that this was mostly a result of a lack of education and exposure and of having never worked with disabled people before. Nonetheless, one of the interviewees said that, in his experience, there had been a significant improvement in general awareness of disability over the years. The view was also

expressed, as in the literature, that ultimately the onus is on people with disabilities to change their own attitudes and self-perceptions: "It's all about personal determination".

3.4   Experiences and perceptions of managers of people with disabilities

The managers of staff with disabilities who were interviewed for this study were unanimous in their praise and support, saying things such as "they are team players" and they are "of the best problem solvers". They claimed that they would happily hire people with disabilities again as they are such hard workers and do not have an attitude of entitlement.   No manager reported experiencing staff with disabilities as being a 'burden' to the team, although they acknowledged that people with disabilities need a lot of mentoring in the first three months, especially to orientate them to a business and factory environment and help them fit in. They confirmed that all staff has to meet the same performance standards, disabled or not, but that people with disabilities do need support, even if they are not treated differently in other ways.

The managers expressed varying opinions about the need for sensitisation or awareness training in their companies, with one of them responding that having people with disabilities around created awareness in itself. Some felt it was important for general awareness training to be carried out for the whole company; others felt that it should only be done in the areas where staff with disabilities were working; and others felt that there was no need for awareness training at all. It was even suggested by one of the managers that staff who have disabilities should attend sensitisation training.

None of the managers interviewed expressed concerns - from a health and safety point of view - as to the suitability of people with disabilities on the job, as they indicated that, firstly, it was important that the right person be matched to the right job, and secondly, that the machinery could be adjusted to accommodate the type of disability. For example, if a measuring technician is hearing impaired or deaf, the sound can be adjusted for them to still be able to perform their job successfully. Another example was given of a job that required climbing a ladder, and where the person hired for the job was an amputee whose prosthesis gave him the necessary mobility.

One problem that was mentioned was that, depending on the type of disability, promotion could be difficult due to the new position's job requirements.

3.5   Accommodations

Despite the positive experiences reported by both staff with disabilities and their managers, the workplaces – and especially the older buildings – were said to not be disability friendly in terms of general access or ease of movement. In particular, not all ablutions were adapted for people in wheelchairs. Moreover the manufacturing

operations tended to be geared to manual labour, although some companies were becoming more automated which might make it easier to accommodate people with disabilities. However, they did make certain accommodations, such as wheelchair ramps, when required by individual staff, although an example was given of where special signal lights should have been installed to accommodate a deaf team leader, but no accommodation was made and he and his team had had to develop their own way of communicating with each other.

An interviewee in another company, where there seemed to be a lack of commitment to accommodating staff with disabilities, reported that it was very difficult to reintegrate staff into the company once they had become disabled, as it was either not possible to match them to jobs or there were no suitable vacancies. The interviewee also claimed that this company does not do enough to keep staff with disabilities who are fit and able to continue to be employed.

It was emphasised by one of the shop stewards that training must take into account the needs of people with disabilities and the accommodation they require. Furthermore, people with disabilities need to be given serious consideration for upskilling and promotion. Accommodating deaf people in group training does pose challenges, but sign language could assist with this.

There were instances where companies were being pro-active in addressing the needs of workers with disabilities. For example, one company was considering installing lifts to accommodate people with limited mobility. Another company had reportedly designed its new offices to be fully disability compliant. In addition, they were conducting job analyses and drawing up job specifications for able bodied people as well as for people with disabilities for the manufacture of a new series automobile. They would be training people for numerous positions in this plant and multiskilling them.

The data identified safety factors as being the primary limitation in employing people with disabilities, and that if these can be satisfied by matching the person to the right job, then accommodation measures can be considered to facilitate their performance where necessary.

3.6   Environmental analyses

Three of the companies took the research team on a tour of the factory and through the different work areas. They were guided by the relevant staff (such as health and safety representatives, but also some shop stewards and trainers), who explained the challenges of employing people with disabilities in the different work areas in terms of the safety measures required. It was emphasised that certain types of disabilities would be unsuitable for certain jobs for safety reasons; for example the body shop / main assembly line would be unsuitable for people with mobility

disabilities because of the physical strength and agility required, the pressure and the speed of the work.

3.7 Job analyses

Most of the companies sampled were in the process of conducting, or had conducted, detailed job analyses in collaboration with their health and safety personnel, to understand the ergonomics of the different jobs and write job specifications. These analyses are able to provide the specific information needed to match a person with a disability to the job and the types of training and accommodation that might be needed, and were therefore of vital importance to this study. However, the research team was not able to obtain this information, despite promises from the companies to do so.

Feedback from the health and safety personnel in the companies was that most jobs required a high degree of mobility, so it would be easier to accommodate staff with disabilities who were mobile. Because safety in the workplace is paramount, the nature of manufacturing work means that people with less severe types of disabilities would be most easily and safely accommodated in the factory environment.

There was a noticeable emphasis on a healthy workforce, and thus a safer workforce, with workers undergoing regular medical assessments so as to reduce absenteeism. One company in particular was setting targets to improve the fitness of its workers using wellness tests at its Wellness Centre, especially workers with disabilities who were being motivated to attain the same levels of fitness as the non-disabled workers. Facilities offered by other companies to encourage a healthy workforce were on-site doctors, nurses, a pharmacy, physiotherapists, a gym and biokineticists.

3.8 Scarce and critical skills

One of the objectives of this research study is to match particular types of disability to jobs that are difficult to fill because there is a critical scarcity of people with these skills.

The companies participating in this research mentioned a range of different scarce and critical skills that were related to specific jobs they were having difficulty in filling. The six most critically scarce skills mentioned were 'ding men' (paintless dent removal or 'soft' panel beating), mechatronics technicians, millwrights, spray painters, electricians and auto-electricians. Other skills for which a need was mentioned were:
- CO_2 / MIG welders and setters
- Fitters
- Metal finishing technicians
- Motor mechanics

- Paint mark-up inspectors
- Panel beaters
- Sealer application, wiping & brushing
- Systems engineers
- Tool, jig & die makers
- Measuring technicians
- Buy-off inspectors

One of the reasons given for these skills being scarce, especially good spray painters and 'ding men', was that these skills used to be taught by the old Technical High Schools, but that few of these exist anymore. Another challenge is that so few learners have adequate maths and science marks, which are required for qualifications such as mechatronics. Two of the companies mentioned that multiskilling their staff is a way of coping with absenteeism, where they can deploy staff to fill a gap left by an injured or absent worker where necessary.

One way of meeting these scarce and critical skills is by recruiting people with disabilities for the appropriate apprenticeships or learnerships. The qualifications related to the scarce and critical skills identified are listed in the table below. There are learnerships for four of these qualifications and various FET colleges offer the theoretical training for these qualifications. Mechatronics is not offered as a learnership because of its academic components.

Scarce skill	SAQA ID	Learning programme ID	Qualification
Automotive electrician; Electrician (general) • Armature winder • Electrical mechanic • Electrical fitter	78944 78923 78883	Learnerships available	National Certificate Autotronics (NQF 2, 3,) FETC: Autotronics
Mechatronics technicians	67629 67609 67649		National Certificate in Mechatronics (NQF 2,3,) FETC (NQF 4) (maths a requirement)
Millwrights (Electrical mechanic fitter / electromechanicians)	58269	66769: National Certificate electro-mechanics: manufacturing and engineering (NQF 2)	National Certificate electro-mechanics(NQF 2)
Spray painting	64410	Learnerships are available	National Certificate: Automotive spray painting (NQF 2)

'Ding man' (paintless dent repair)	64529 64709	There is a skills programme for qualified artisans who want to specialise in paintless dent removal	National Certificate Automotive Body Repair (NQF2,3)

Table 3: Matching targeted scarce skills to appropriate qualifications

This study aims to suggest which of these qualification would be the most appropriate for people with disabilities, based on detailed job analyses which were supposed to be provided by the companies, but as mentioned these documents are still outstanding. Instead, an internet search revealed a broad overview of job specifications and requirements that the Pace Career Centre provides on their website Gostudy South Africa (www.gostudy.mobi/careers/), and those that are relevant to people with disabilities are listed in the table below

Job	Job requirements related to disability
Automotive electrician	• Working in a standing or stooped position • Good health and manual dexterity • Good vision and colour discrimination
Mechatronics technician	• Good communication skills • Ability to work as part of a team • Strong intellect • Long qualification time
Millwright / electro-mechanician	• Working long hours in a dirty, noisy environment • Manual dexterity • Physical strength • Good hand-eye coordination • Able to work high above ground and in confined spaces • Able to work under pressure
Spray painting	• Physical strength and stamina • Manual dexterity • Good hand-eye coordination • Good vision and colour discrimination
Paintless dent removal	• Physical strength • Manual dexterity • Good hand-eye coordination • Good spatial and form perception

Table 4: Job specifications and requirements for jobs according to the Pace Career Centre

These guidelines can help people with disabilities select a suitable occupation and apply for the training, although it would seem that because most of these

qualifications require good eyesight and physical strength, the majority of disabilities would be excluded. Mechatronics is an academic qualification requiring many years of study and is a more desk-bound occupation, and would be suited to a much larger range of physical disabilities.

The effectiveness of establishing a list or database of specific jobs suited to specific disabilities was questioned by two of the interviewees, who cautioned that people with disabilities are all unique and need to be assessed individually as to their abilities to perform particular jobs. It seems, therefore, that broad guidelines as to the requirements for particular occupations or jobs would be more appropriate. This was underscored by one of the managers interviewed who emphasised that in his experience it was a waste of time to recruit trainees with disabilities for particular jobs and only once they have completed their training is consideration given to matching them to jobs in his company.

It is interesting to note some of the technical training initiatives that the companies sampled are currently involved in. Mercedes Benz South Africa (MBSA) has embarked on a partnership with St Anthony's College in Reiger Park and the Merseta, to run a three-year Certificate in Automotive Repair and Maintenance (NQF level 2-4) for 24 learners, especially targeted at disadvantaged young women living in the area. Mercedes Benz will provide internships for the learners at its various dealerships as well as in-house practical training, and successful completion of the programme could lead to possible permanent employment at MBSA (http://www.south Africa.info/business/economy/development/benzskills-270112). However, no mention is made of recruiting learners with disabilities onto the programme.

Another technical training initiative is the construction of the Gauteng Automotive Training Academy (GATA), located in Rosslyn, Pretoria, which has just begun. This is being undertaken by the Gauteng provincial government along with Nissan South Africa (SA). It is claimed that the first classrooms will be available at the end of January, with the entire project scheduled for completion by May 2013. It is reported that the academy will feature a training simulator, including body welding and vehicle spray painting areas such as can be found in the Nissan SA plant. The government-owned institution is expected to train around 1 000 students a year. However, again no mention is made of recruiting learners with disabilities and it is not clear to what extent scarce and critical skills will be addressed at the Academy (http://www.south Africa.info/business/investing/Nissan-250310).

4. Conclusion

4.1 Introduction

The primary research question for this study was:

What is the best way to recruit, train and deploy people with disabilities on MerSETA scarce skills learnerships within the automotive manufacturing sector (OEMs)?

This has required two distinct areas of exploration:
- Factors that impact on the successful recruitment and deployment of people with disabilities in OEMs;
- Scarce skills learnerships that are most appropriate for different types of disability, as identified by the automotive manufacturing sector.

Drawing on the literature and the empirical data gathered in this study, the first area explored showed that there are both internal factors, within companies, that impact on the successful recruitment and deployment of people with disabilities in the automotive manufacturing sector, as well as external factors that may be beyond the control of the company.

4.2 Factors that can impact on the successful recruitment and deployment of hiring *of* people with disabilities

4.2.1 Internal factors

Recruitment policies
The South African government employment target for people with disabilities is 2%. In other words, people with disabilities should make up 2% of the workforce. However, the statistics show that the reality is much lower than this target despite employment equity quotas with which companies are expected to comply and a range of enabling legislation which is intended to assist companies in addressing equity issues.

There are many reasons for companies not recruiting people with disabilities, but perhaps the most important are a lack of knowledge around how to integrate people with disabilities into the workplace and a lack of internal policies and a strategic implementation plan for doing so. Company policies that were in place in the sample studied were found to be largely based on the employment equity legislation, rather than being tailored to the companies' needs and strategic positioning, so that by and large people with disabilities were not hired or specifically trained up to fill vacant positions. On the contrary, those people with disabilities who were working in OEMs sampled in this study were found to have mostly become disabled whilst in

employment. The retention of people who become disabled while working in this sector was not explored as it was not within the ambit of this research, although it was established that companies were not always as accommodating in trying to retain these staff as they could be.

Perceptions and attitudes

The literature and the data have both shown that a lack of knowledge of the abilities and capabilities of people with disabilities can lead to negative attitudes towards them, to perceptions by able-bodied management and staff that they cannot perform the job as well as able-bodied people, and that they may be a burden on others in the team who may have to take on the additional work. This deficit model of disability underlies the dearth of company policies and strategies for recruiting or training people with disabilities. This lack of knowledge, which must also contribute to companies' difficulties in understanding definitions of disability, can be addressed through sensitisation or awareness training. This was strongly supported by the workers with disabilities interviewed in this study, although there were varying degrees of support from their managers. Indeed, the literature and other studies and surveys emphasise that such awareness training is an important factor in enabling people with disabilities to become well integrated into the workplace and to optimise their performance. The arguments emerging from the literature is that disability needs to be normalised, and not perceived as difference but as another dimension of social diversity which is manifesting in the workplace, and approached accordingly.

Environment and accommodations

A more current social conceptualisation of disability than the deficit or deficiency model, that is informing policy on disability worldwide, views disability as the way the environment is organised to enable people with physical, sensory or mental impairments to function optimally. In this model, the emphasis is on how the environment – here the work environment - can be organised in the most cost-effective way to accommodate people with disabilities. The environment is both social and physical, so the company needs to have a positive attitude towards disability and diversity and ensure that all staff are well-informed around these issues, as well as address physical access and accommodations.

Many of the older buildings in which the OEMs in this study were located were found not to be disability-friendly, and facilities such as washrooms were adapted for wheelchairs, or ramps were added, only on as-needs basis. In some cases no accommodations were made, which in one instance was potentially unsafe for the employee and in another frustrated the employee's desires for advanced training and promotion. However, it was encouraging that the new building for one of the companies had been designed to be fully disability friendly, and it is to be hoped that other OEMs will follow suit as they upgrade their infrastructure.

A point that was strongly made in the literature was that employees with disabilities should always be consulted first as regards any accommodations they might need, as they are likely to be the most knowledgeable as to what is available and appropriate.

A range of possible accommodations are outlined in the literature review, and there is continuing growth in new technology and industrial design worldwide to accommodate different needs in the workplace, although most accommodations are relatively simple and cheap. Most importantly, the building regulations that have been drawn up by the South African Bureau of Standards for accessibility and for facilities for people with disabilities (SANS 00246:1993; SANS 10400-S: 2011) provide comprehensive information for ensuring the workplace is disability friendly and should be consulted before embarking on any building projects or workplace improvements / restructuring.

4.2.2 External factors

There are also a multiplicity of factors external to the workplace that can impact on the successful recruitment and deployment of people with disabilities in OEMs.

Type of disability
Firstly, the type of disability is an obvious factor as some jobs are more suited to certain types of disability than others, and this is where job specifications, health and safety regulations and ergonomic analyses can assist in deciding on the right person for the job. Among all else, matching the right person to the right job in terms of their *abilities* is the most important consideration, rather than making decisions based on limited paper-based criteria that do not take an holistic view of the individual person into account. Indeed, this approach should be applied in the recruitment and redeployment of *all* staff to maximise their potential and productivity, and not just to people with disabilities.

Availability of people with the right training
The data indicates that there are areas of scarce and critical skills in the automotive industry, and that finding properly qualified people with disabilities to fill vacant posts is virtually impossible. However, it would seem that this could be an opportunity for automotive companies to partner with FET colleges, private providers or with higher education and training institutions, to target people with disabilities for education and training programmes in these particular scarce skills areas, as so many of them are already doing for non-disabled youth.

Non-disclosure of disabilities
Companies may be unaware that they are employing with disabilities if they have an 'invisible' disability, such as a long-term debilitating illness or a mental / psychological disorder, that the person does not disclose. Not only does this skew the statistics on disability, but it also means that possible accommodations cannot be made in the workplace for these people.

Given the misperceptions about people with disabilities and negative attitudes towards them, it should not be surprising that they avoid disclosing their status on their application, or in an interview, if their disability is not obvious. For the same reason people with disabilities may well give up applying for posts if they experience

constant rejection, deciding to rather avoid the humiliation of being turned down or overlooked. This is where company policies that actively and openly embrace diversity can make a difference in encouraging disclosure by applicants and staff alike, and assist in the recruitment of people with disabilities.

Self-image of people with disabilities
Finally, people with disabilities who have a poor self-image has been cited as a substantial barrier to their successful recruitment, training and deployment. Equally, a sense of entitlement can prevent companies from recruiting or retaining people with disabilities, but this would also be the case for able-bodied staff. However, again it is not surprising that people with disabilities should have a negative self-image if society treats them as lesser human beings, and this is where education and awareness training around disability could go a long way in normalising their conditions and valuing them for their abilities and capabilities.

4.3   Scarce skills learnerships

Although the OEMs in this study were able to identify scarce and critical skills in the sector that affected their production, it was not possible to obtain information from them to make recommendations on the most appropriate types of jobs, and learnerships training, for different types of disability, as intended. However, information obtained from Pace Career Centre suggests that the scarce skills areas of spray painting, millwright / electro-mechanician and paintless dent removal all require physical strength, manual dexterity, good vision and good hand-eye coordination, which would exclude certain visual and physical disabilities. Electricians and automotive electricians, although not requiring physical strength, do require good vision and colour discrimination, manual dexterity, and the ability to work for long periods in cramped spaces. The other most commonly identified scarce skill, that of mechatronic technicians, does not exclude people with physical disabilities as it is a more desk-bound, intellectually challenging job, but it does require good communication skills and many years of study, and requires an aptitude for mathematics and science.

This study has emphasised that the most important factor to consider when recruiting staff, and especially people with disabilities, is to match the right person to the right job, although it was said that this should only be done *after* recruits had completed their training. It is suggested, therefore, that any learnership training undertaken for people with disabilities in OEMs should consider their abilities and disabilities quite broadly when selecting them, and that they are only assessed for particular jobs once their training is complete. It is also essential that any training programme, including workplace internships, should accommodate the particular disabilities of the learners, to enable them to achieve to their true potential.

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Appendix A

http://www.ap-toolkit.info/

This web site has information on products that can be procured to accommodate people with disabilities in the workplace. The website includes:

General Categories

Select a category from the list:

1. Documentation, instruction and technical support — *Definition*

2. Hardware — *Definition*

3. Media and Content — *Definition*

4. Meetings and Training — *Definition*

5. Office Furniture and Supplies — *Definition*

6. Software — *Definition*

7. Telecommunication Products — *Definition*

8. Web Sites / Web Applications — *Definition*