

WOMEN
IN MANUFACTURING
 GENDER EQUITY RESEARCH

RESEARCH REPORT | 2022

WOMEN IN MANUFACTURING GENDER EQUITY
 AND SOCIAL INCLUSION (GESI) RESEARCH

Funding Partners

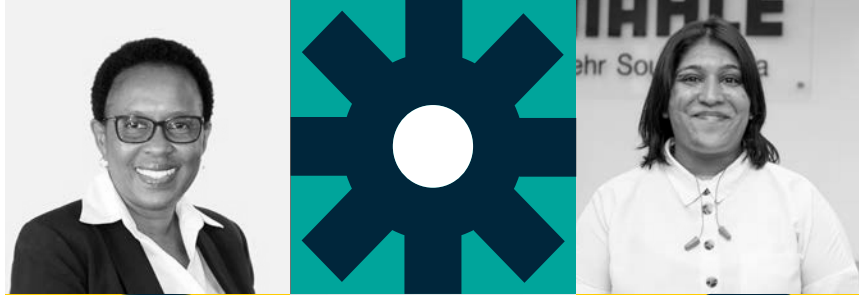


Implementing Partner



National Partner





**HIGH GEAR
FINDING INSPIRATION:
TOWARDS GENDER
INCLUSIVE ENGINEERING
WORKPLACES IN
THE SOUTH AFRICAN
AUTOMOTIVE COMPONENT
MANUFACTURING
INDUSTRY.**



Contents

Section 1: Background	4
1.1 Introduction	5
1.2 Objectives of the research initiative	6
1.3 Methodology	6
Section 2: Findings: Perspectives of young women in advanced manufacturing	7
2.1 Pathways into, and experiences of advanced manufacturing courses and careers	8
2.1.1 Exposure to the industry	8
2.1.2 Paving the way	8
2.1.3 Changes in responsibility	8
2.2 Perceptions of gender issues	9
2.2.1 Challenges and barriers	9
2.3 Lessons: Advice from young women for young women	11
2.3.1 Internal success factors	11
2.3.2 External influences of success	12
Section 3: Employer-led approaches to further gender equity	14
3.1 Initiatives that champion gender equity and increase the representation of and retention of young women	15
3.1.1 Programmes focused on women	15
3.1.2 Mentoring and a company culture that supports women	16
3.1.3 Developing the next generation of engineers	16
3.2 Motivations for introduction of these initiatives	16
3.3 Use of merSETA funding to support gender equity	17
3.4 Lessons: Advice from employers to employers	17
3.4.1 Industry perceptions of women and their representation	17
3.4.2 Recommendations from employers for enhancing women's representation and career growth in the sector	17
Section 4: Learnings and recommendations	18
4.1 Key learnings	19
4.2 Recommendations	21
Section 5: Annexures	23
5.1 High Gear Gender Equity Research Interview Guides	24



1. BACKGROUND

1 BACKGROUND

The National Association of Automotive Component and Allied Manufacturers (NAACAM) and the Department of Higher Education and Training (DHET) are the lead national partners of High Gear, an exciting four-year (2020-2024) initiative managed by the International Youth Foundation (IYF) that is advancing South Africa's public Technical, Vocational, Education & Training (TVET) college system.

High Gear draws on industry knowledge and skills imperatives—along with IYF curricula enhancement tools—to strengthen the market relevance of select public TVET college courses. Ultimately, High Gear aims to demonstrate a model for greater industry involvement in TVET course design and delivery that generates enthusiasm from TVET educators and industry, while also generating positive returns for young people and employers.

NAACAM, through High Gear, has partnered with IYF on a research initiative focused on exploring critical gender equity and social inclusion (GESI) issues within the South African automotive component manufacturing sector. The core focus of the research is to understand GESI issues from the perspective of young women and employers.

1.1 Introduction

The vision for South Africa's automotive sector, as outlined by the South African Automotive Masterplan 2035, is "A globally competitive and transformed industry that actively contributes to the sustainable development of South Africa's productive economy, creating prosperity for industry stakeholders and broader society." As outlined in a recent High Gear report, this vision places an explicit focus on transformation, a key focus of which is addressing the gender imbalance in the industry.

The manufacturing, engineering and related services sectors are male dominated, with an overall gender profile of 77% men and 23% women, and the only occupational category in which women are the majority is that of clerical support workers. The National Association of Automotive Component and Allied Manufacturers

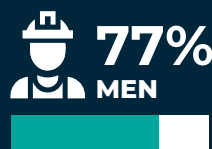
(NAACAM) survey in 2021 indicated that women accounted for 33,4 % of the component sector's workforce. This is marginally up from 29,8 % in the 2016 survey but NAACAM focus groups have reported slow progress with increasing the number of women in the sector.

There has also been some positive change in relation to female engineers: the number of female registered persons in the Engineering Council of South Africa (ECA) was standing at 2252 in 2017/18 financial year, which increased to 2400 in the 2019/2020 financial year. In addition, the female candidate engineer's registrations increased from 5402 in 2017/2018 to 8905 at the end of the 2019/2020 financial year.

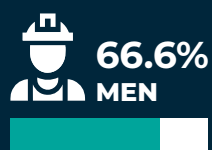
This report reflects the research commissioned by IYF as part of High Gear and undertaken by Singizi Consulting Africa. The research is intended to contribute to the learning around how to speed up the achievement of gender equity in the South African automotive component manufacturing sector. It focuses on the experiences of young women who are pursuing their studies and careers in engineering as well as the experiences of employers who are actively supporting and advocating for the increased participation of women in engineering occupations in the automotive component manufacturing sector.

These stories aim to inspire young women students, young women already working in the engineering profession, and further employer interest in gender equity initiatives. They also provide insights into what it takes to successfully undertake this journey as a young woman and how workplaces can best create an enabling environment for women to thrive in their companies and in the industry more widely.

THE MANUFACTURING, ENGINEERING AND RELATED SERVICES SECTORS



THE AUTOMOTIVE COMPONENT SECTOR WORKFORCE



* NAACAM survey 2021

1.2 Objectives of the research initiative

This research initiative has three key objectives:

1

Document young women's individual pathways into advanced manufacturing production careers, the barriers and opportunities that they encountered and their recommendations for advancing similar young women's representation and career growth in the sector.

2

Document impactful employer-led approaches to furthering gender equity through initiatives and innovations within their respective skills and training departments, especially those initiatives co-funded with Sector Education and Training Authority (SETA) grants.

3

Disseminate compelling content from the research that

- Inspires young female TVET students and prospective students to consider careers in advanced manufacturing; and
- Promote employer-led gender equity approaches in the automotive component manufacturing sector.

1.3 Methodology

The research approach followed an adapted version of the Most Significant Change methodology, as we wanted to surface unexpected changes and reveal a rich picture of GESI issues in the sector. The aim was to gather stories from young women and companies through interviews. Criteria for companies to be profiled included that they were in the advanced manufacturing sector and championed gender equity to increase the representation of young women in production roles. NAACAM contacted companies based on these criteria. Interested companies each proposed two interviewees, one company representative and one young women employee. TVET engineering students from Elangeni College who were in the High Gear Programme were also approached for interviews.

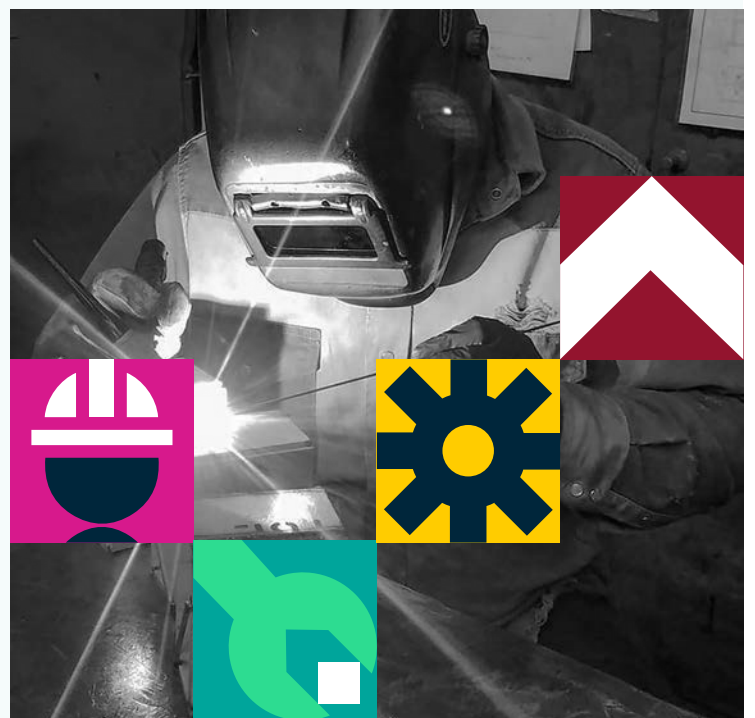
Due to the intensely personal nature of the research, and the fact that the research respondents were going to be publicly profiled, a conscious 'do no harm' approach was adopted with regard to the young women respondents.

This included ensuring that the young women respondents (employees and students):

- were provided with a safe space in which to conduct the interview so that they didn't filter their stories in advance and felt free to speak their own truth;
- gave informed consent to the process in which they were participating;
- were empowered to engage in editing and commenting on the content of the interview prior to it being finalized, to review and revise any content which concerned them;
- were contacted after the publishing of the stories to ensure that there had been no push back.

Semi-structured interview guides were designed to encourage a storytelling approach, and were used in interviews conducted with three students, seven young women employees and representatives from seven companies in KwaZulu Natal, the Eastern Cape, and Gauteng. Interviews were transcribed and written into individual case studies, and interviewees were given the opportunity to review and edit their stories before they were passed to BrandCode, High Gear's communications firm, for copy editing, visual design, and social media dissemination.

This report consolidates the findings from the research, highlights the key lessons learned, and makes recommendations for the automotive component manufacturing industry.





2. FINDINGS: PERSPECTIVES OF YOUNG WOMEN IN ADVANCED MANUFACTURING

2

FINDINGS: PERSPECTIVES OF YOUNG WOMEN IN ADVANCED MANUFACTURING

2.1 Pathways into, and experiences of advanced manufacturing courses and careers

2.1.1 Exposure to the industry

As would be expected, there is no universal route for young women entering into engineering careers and the automotive component manufacturing industry. However, a number of young women respondents indicated that exposure to the idea of engineering at a crucial time in their lives was often an important factor in helping them to select this option. Whether this was a family or community member in the engineering or manufacturing fields, a television programme, or a high school incubator programme, exposure to the field that piqued their interest was an important part of many pathways into the engineering profession.

2.1.2 Paving the way

Many of the women spoke about the perception that engineering is a male dominated field and how their family and community were often initially sceptical of their career choice “because they didn’t believe it was a career for women.” Student 3.

They mentioned that their success with their studies or in their careers has helped shift the perceptions of their families and community members and has even paved the way for others to choose engineering careers.



I THINK THAT **SEEING ME PROGRESS** IN MY STUDIES AND WATCHING HOW I HAVE COMMITTED AND PUSHED MYSELF TO THE CORE HAS LED TO MY COMMUNITY BELIEVING THAT IT IS POSSIBLE TO SUCCEED IN THIS FIELD. I HAVE SHOWN THEM THAT IT CAN BE DONE. **STUDENT 2**



Respondents also indicated that they thought that having other female employees in technical roles made the career paths of those following in their footsteps easier, and some women hoped that by succeeding as a woman in the industry, it would be easier for women following after.



I HOPE THAT MY SMALL SUCCESS AS A **FEMALE ENGINEER** HAS MADE IT A LITTLE BIT EASIER FOR THE FEMALES THAT COME AFTER ME. **EMPLOYEE 2**



2.1.3 Changes in responsibility

Experiences of growing responsibilities and how that often required a change in mindset was another common topic raised by young women respondents when they described their pathways. Whether it was the jump between high school and tertiary education, or tertiary education and work, or from employee to manager or shareholder, or the shift to combining career and motherhood, the women spoke about having to change their attitudes and approaches to deal with changing levels of responsibility.

Moving from high school to tertiary education, many of the women explained their realisation that suddenly no one was there to check up on them and that it was up to them to study and work hard if they wanted to succeed.

Similarly, moving to management level in their careers was also a huge growth experience and required a change of mindset.





AS A **MANAGER**, SUDDENLY IT'S NOT ONLY ABOUT ENGINEERING AND SITTING IN FRONT OF YOUR COMPUTER DOING CALCULATIONS. IT'S ABOUT INTERACTING WITH PEOPLE, DEALING WITH CUSTOMERS, MAKING SURE THE WORKFORCE IS HAPPY, AND ADDRESSING CHALLENGES IN A CALM WAY. **EMPLOYEE 7**



These changes highlighted the extent to which preparing these young women for engineering requires a focus on both ensuring a solid technical foundation but also a focus on preparing the young women for what to expect in the workplace and how to navigate their changing roles.



AS A FEMALE, I WAS EXPECTING TO FACE CHALLENGES IN THIS INDUSTRY BUT THAT HASN'T BEEN MY EXPERIENCE. **EMPLOYEE 4**



I HAVEN'T EXPERIENCED **GENDER BIAS** IN THE WORKPLACE. **EMPLOYEE 5**

2.2 Perceptions of gender issues

2.2.1 Challenges and barriers

2.2.1.1 A male-dominated industry

It is interesting to note that many of the young women did not want to attribute the challenges that they had experienced to their gender. Some women also explicitly mentioned that although there is a stereotype about engineering and the automotive component manufacturing industry being male dominated, gender bias or discrimination had not been their experience.



I KNOW THERE IS A **STEREOTYPE** THAT ENGINEERING IS A MAN'S WORLD AND IS TOUGH FOR FEMALES. I CAN'T SPEAK FOR OTHER WOMEN, BUT I HAVE NEVER EXPERIENCED ANY FORM OF GENDER RELATED CHALLENGES IN MY CAREER. **EMPLOYEE 3**



However, what was evident from the stories that these women shared is that most of these women, strongly felt that they needed to prove themselves as women and most told a story of a challenge that they experienced as a result of their gender or minimally how they were aware of gender-related barriers and how these had impacted on the extent to which women select this career.

Many of the women spoke about the challenges of negative stereotypes they faced, often throughout their career journeys. From community and family perceptions that engineering is a career for men and that women should study nursing or teaching, ("they don't believe I will ever be able to get work as an engineer as they think it is just a man's job" Student 1) to comments during their studies about how their clothes or emotions prevented them from looking or acting like engineers.

Once they reached the workplace, many women found they were often the only woman in the team and had to deal with comments "along the lines of 'you are not supposed to be here.'" Employee 2. Several women mentioned how these negative stereotypes and comments discouraged them and made them question their choices to pursue a career in engineering and the automotive component manufacturing industry.





WHEN I STARTED OUT MY CAREER AS THE ONLY **FEMALE INTERN**, IT WAS OVERWHELMING, AND THERE WERE MOMENTS WHEN I WONDERED WHETHER I SHOULD CHANGE CAREERS. **EMPLOYEE 2**



These experiences have been reflected in other studies that found the “conservative nature of the current engineering sector in South Africa ... allows little room for diversity and innovation” and that the masculine culture of engineering can be a key reason for women leaving their jobs.

A lack of female role models in the industry and a lack of female mentors was also highlighted as a problem as when the women felt discouraged, there was often no one to turn to.

Inner resilience, together with drive and dedication helped all of the women through these low points, and we discuss this in more detail in section 2.3.1.

2.2.1.2 *Perceptions that women must prove themselves first*

Several of the women employees found that men are automatically given the benefit of the doubt when it comes to their skills and abilities, but as women, they needed to prove themselves first before they are respected or taken seriously.



THE MAIN WAY I COUNTERACT SOME OF THE NEGATIVE STEREOTYPES IS BY GETTING OUT THERE AND **PROVING THEM WRONG** BY ACTUALLY DOING IT. I ALSO MAKE SURE I HAVE A WATERTIGHT ARGUMENT AND CONFIDENCE IN MY FACTS WHENEVER I PRESENT! **EMPLOYEE 2**



Similarly, the women spoke about needing to work extra hard and push to do better because, as a woman, their data and calculations, career choices, and workplace decisions were often called into question. There was a sense that this was often taken as a challenge to prove the naysayers wrong by doing an excellent job.

These findings reflect an authority gap between men and women in which a woman, regardless of how highly she has achieved or how powerful or educated she is, will not be granted the same authority as a man of similar, or often lower, status.



PEOPLE AUTOMATICALLY GIVE MALE MANAGERS **RESPECT** AND ASSUME THEY KNOW WHAT THEY ARE DOING AND THAT BEING A LEADER IS BUILT IN BUT FOR A WOMAN, TO BE **RECOGNISED AND RESPECTED**, WE NEED TO FIRST PROVE OURSELVES. **EMPLOYEE 1**



I AM THE ONLY FEMALE IN MY TEAM HERE, SO I MAKE SURE I PUT IN THE **HARD WORK, LEARN FROM MY MISTAKES, AND DO BETTER** BECAUSE I DON'T WANT TO BE REGARDED AS NOT GOOD ENOUGH AND HAVING THIS BEING ATTRIBUTED TO ME BEING FEMALE. **EMPLOYEE 3**



2.2.1.3 Unequal responsibility for family care

Employees with children that we interviewed highlighted that managing their careers and families was a challenge although many expressed a strong sense of pride as to how they were achieving this balance.



BEING A **WIFE** AND A **MOTHER** AND HAVING A CAREER AT THE SAME TIME IS NOT WITHOUT ITS OWN CHALLENGES. **EMPLOYEE 6**



They also mentioned that they found that this was not a challenge for men with children which highlights issues related to an uneven distribution of care and childcare responsibilities.



MY HUSBAND CAN WAKE UP IN THE MORNING AND GO TO WORK, BUT I HAVE TO SEE TO THE KIDS, PREPARE THEIR LUNCH AND TAKE THEM TO CRÛCHE. IT'S LIKE A SECOND JOB. **EMPLOYEE 5**



That these challenges have been raised by the respondents is unsurprising given the worldwide impact that women's household and care responsibilities have on their work and careers. One would thus expect similar challenges to arise in the engineering profession and automotive component manufacturing sector.

2.3 Lessons: Advice from young women for young women

2.3.1 Internal success factors

Despite often growing up in rural areas – often far removed from industry – and most with financial difficulties, the women interviewed showed the importance of drive, dedication, passion and interest in furthering themselves professionally. Challenges and naysayers tend to motivate them to break the mould and prove that they can succeed.

A clear thread running through the stories was the importance of setting goals, focusing, and working extremely hard to achieve them. There were numerous accounts of how these women were motivated and driven to learn, grow, push themselves and put themselves out there in order to succeed.



I AM FROM A RURAL AREA AND SO I HAVE WORKED HARD TO ACHIEVE MY GOALS AND BETTER MY LIFE AND MY FAMILY'S LIFE. **EMPLOYEE 4**

IF YOU WANT TO GROW, YOU HAVE TO PUT YOURSELF OUT THERE EVEN IF IT'S SCARY. **EMPLOYEE 2**



This often involved making sacrifices, avoiding distractions, and ignoring disparaging comments from peers or peer pressure to put aside studies in the name of leisure, but the women thought sacrifices were a small price to pay if it helped them achieve their goals.



SACRIFICING FUN AND GOING OUT IS WORTH IT. I DON'T REGRET BE CALLED 'BORING' AND 'NO FUN' BECAUSE I CAN SEE WHAT I HAVE ACHIEVED." **EMPLOYEE 4**

I HAVE MADE UP MY MIND THAT THIS IS WHAT I WANT, AND I WILL FINISH REGARDLESS OF WHAT COMES MY WAY. **STUDENT 3**



A passion for the subject matter and field were also motivating factors for most of the women and they mentioned their excitement to come to work every day and how they felt that engineering had become part of who they were.



I REALLY **ENJOY** WHAT I AM DOING AND THAT HAS HELPED ME PERSEVERE AGAINST THE NAYSAYERS. **EMPLOYEE 2**





I BELIEVE ENGINEERING IS
IN ME. **STUDENT 3**



2.3.2 External influences of success

2.3.2.1 Company organised training and development programmes and support

Many of the women employees indicated that company organised training or development programmes helped them to grow both their technical and leadership skills, as well as their confidence.

Exposure to different departments and areas of the business was a feature of several of the programmes. Interestingly, many of these programmes were not programmes specifically geared for or designed for women employees, however the opportunity to participate was still highly valued.



THAT COURSE PLAYED A BIG ROLE IN MY CAREER BECAUSE I LEARNED SO MUCH ABOUT MYSELF AND **ACKNOWLEDGED MY EXISTING SKILLS. EMPLOYEE 5**



General company support was also seen as important by most women. This included support and encouragement during big changes such as starting out in the company, moves to management, and adjusting to balancing work and families.



HERE, WOMEN ARE GIVEN THE OPPORTUNITY TO WORK IN **MANAGERIAL POSITIONS** AND WE ARE TRUSTED WITH BIG PROJECTS. **EMPLOYEE 1**



RIGHT THROUGH MY CAREER, THE LEADERSHIP AT MY COMPANY HAVE ALSO BEEN VERY **SUPPORTIVE OF MY DEVELOPMENT. THEY HAVE GIVEN ME THE SPACE AND FREEDOM TO SUCCEED. EMPLOYEE 5**



2.3.2.2 Support networks: Mentors and family support

Several women mentioned the role of mentors. They either felt their journey would have been easier if they had more mentors or people to look up to, or that “phenomenal mentors though out my journey helped shape me into the leader I had always aspired to be.” Employee 2. Mentors in both tertiary education and the workplace were mentioned by several respondents.

Several of the women referenced lecturers or other staff at their tertiary institutions who went “the extra mile” to help. Employee 4 spoke about the personal assistant to the dean at the college who went above and beyond to support her in her studies and personal life: “She played a big role and if she was not in my life I would have dropped out.”

Supportive and encouraging lecturers who were “always willing to lend a helping hand” (Student 2) were also a common theme among the students.



WE GET A LOT OF SUPPORT FROM OUR LECTURERS; THEY **ENCOURAGE US** AND **ASSURE US** THAT WE HAVE CHOSEN THE RIGHT FIELD. **STUDENT 3**



Finding a mentor was also seen as crucial to staying the course once in the workplace for Employee 6 who indicated that if she “had not found the right support systems towards the end of that first year, [she] probably would have changed careers.”

Employee 6 also realised the possibilities for paying it forward as a young woman who has succeeded in the industry: “When I see the women in my team going through some of the things I went through, it’s much easier for me to help them through it [because I overcame it]. My main advice to women is always, identify a mentor.”

Student 3 also mentioned how another engineer from the neighbourhood became her inspiration and later her mentor. “My neighbour motivated me a lot. She used to say that engineering is infinite, and technology gets advanced daily, and everything is based on engineering.”

Values such as a strong work ethic and the importance of hard work and perseverance which were handed down from parents were also highlighted as key to the success of many women.

A few of the women were also the first in their families to embark on or complete tertiary education and they were supported by families who strongly believed in the transformative power of education.

This support together with families that battled the financial odds to ensure their daughters could access tertiary education and who believed in them, motivated them to keep going when facing challenges in their journeys.



I OWE MY PROGRESS IN LIFE TO MY PARENTS. THEY TAUGHT ME THAT **SUCCESS TAKES HARD WORK**, PERSEVERANCE AND DOING MY BEST. **EMPLOYEE 5**



MY **FAMILY** IS ALSO VERY SUPPORTIVE, THEY **MOTIVATE ME** TO KEEP STUDYING, TELLING ME THAT **EDUCATION IS THE KEY** TO MY FUTURE AND WILL HELP ME TO GO FAR IN LIFE. **STUDENT 2**





3. EMPLOYER-LED APPROACHES TO FURTHER GENDER EQUITY

3

EMPLOYER-LED APPROACHES TO FURTHER GENDER EQUITY

3.1 Initiatives that champion gender equity and increase the representation of and retention of young women

Cutting across the company interviews was the strong sense of commitment to transformation.

The extent to which these companies appear to be forerunners – and/or that change is rapidly being introduced is hinted at given the statement by the Engineering Council of South Africa (ECSA) which highlights that more needs to be done by the industry to ensure key partnerships are formed with relevant role players in order to contribute to gender equality in the sector.

An interesting feature of the interviews with companies was a reluctance to explicitly say that the company policy was to focus on women or that they had training and development programmes which specifically targeted women.

It could be speculated that, given that the vast majority of the workforce in the automotive component manufacturing industry are men, it is natural that companies would not want men to feel they are being left behind or are less important. Nevertheless, when getting into the detail, it was clear that a focus on women was important for many companies.

Some companies had programmes that specifically targeted the development of women and others ensured they had targets which ensured the inclusion of women in their general development programmes.

Company 1 is a key example of the former approach: “we pride ourselves in continuing to intentionally and deliberately recruit capable females, with a proven track record to ‘harness’ their talent, ensure their retention within the company, and support them to grow their potential and succeed in their careers.”



WE STRIVE TO CREATE A **CORPORATE CULTURE** THAT FOSTERS **NEW IDEAS, ATTRACTS AND RETAINS TALENT**, AND GIVES EMPLOYEES THE OPPORTUNITY TO REALISE THEIR FULL POTENTIAL. **COMPANY 3**

Examples of successful initiatives and programmes included:



Technical training: a focus on technical training for young women including targets for the number of women offered bursaries and participating in graduate programmes, learnerships, apprenticeships and management training programmes.



Soft skills training: soft skills training for women, interesting examples included:

- Assertiveness training for women to “ensure that our women feel empowered by training them in conflict management and assertiveness. We have found that assertiveness training helps make our women more effective in this environment. We aim to empower females to voice their opinions and understand that they are equally skilled, talented, and deserving to be in their positions.” Company 1.
- “Self-mastery training which includes self-management, coping strategies and how to balance work and personal life” Company 5.



Workplace exposure: programmes that expose women to different areas of the business in the hope that “this gives them the opportunity to see their strengths and talents and learn what they are good at.” Company 3.



Retention programmes: specific retention strategies which include offering “market-related salaries and benefits and that we provide continuous training opportunities as well as a clear career path. We also give our female employees challenging projects and ensure that they know that we appreciate and support them.” Company 5.

3.1.2 Mentoring and a company culture that supports women

Creating a culture that supports women to realise their full potential was also a key focus for most companies. It was indicated that one aspect of creating a culture that supports women was through formal staff policies such as:

- A code-of-conduct on gender discrimination and sexual harassment together with anonymous tip-off lines for gender related grievances. This was occasionally accompanied by staff-wide education on gender issues.
- The option to work flexible time was also introduced at some companies to ensure that people with young children did not struggle.
- Two companies ran surveys to get feedback on company culture and to better understand challenges that may be experienced by women in the workforce and indicated they put in place actions to address any concerns.

Mentoring was also seen by several companies as an important support mechanism to help women navigate the industry and thrive in engineering roles.

One employer stressed the value of a mentoring relationship that is “dynamic and comes naturally [and is] not overly structured or something we feel we are forced to do...We have a similar outlook, and we like to dream together on how to change things – and the world! – for the better.” Company 2.

3.1.3 Developing the next generation of engineers

Two companies mentioned that they support initiatives (either their own Corporate Social Investment (CSI) programmes or initiatives run by other organisations) that aim to attract young people into engineering.

Although the focus was not always on women only, the interesting aspect of these programmes was that they support participants over a longer term often from education into employment.

They started with piquing the interest of students during high school or even primary school, and included providing funding for tertiary education, career guidance

associated work experience, and even in-service training and permanent job placement.

One of the companies highlighted the impact of their CSI programme:



WE HAVE SEEN AND REAPED THE REWARDS OF THIS PROGRAMME AND SOME OF THE GIRLS FROM THE PROGRAMME ARE NOW WORKING AT [OUR COMPANY]. WE HAVE ALSO SEEN AN **ENORMOUS 43 PER CENT INCREASE** IN GIRLS AND BOYS WHO ARE TAKING UP MATHS AND SCIENCE IN GRADE 10-12 SINCE WE STARTED THE PROGRAMME WHICH IS FANTASTIC. **EMPLOYER 3**



3.2 Motivations for introduction of these initiatives

The motivation of companies for introducing these initiatives varied. Several highlighted the importance of diversity and a willingness to take accountability for shifting the perception that the industry is male-dominated by deliberately attracting women.



WE BELIEVE THAT THE **DIVERSITY** OF OUR WORKFORCE IS ABSOLUTELY KEY TO INNOVATION AND PERFORMANCE. WE KNOW THAT WOMEN ADD FLAVOUR AND COLOUR TO THE ORGANISATION, AND WE SEE THE DYNAMICS THROUGHOUT THE VALUE CHAIN. **COMPANY 3**



For others, the mandate had come from the Group level and for others a key focus was to ensure compliance with government legislation around employment equity.



WE NEED DIVERSITY IN THE COMPANY WHICH CREATES A **BALANCED** VIEW AND A RANGE OF **DIFFERENT STRENGTHS**. **COMPANY 5**





WE ARE AWARE THAT IN A MALE DOMINATED ENVIRONMENT LIKE ENGINEERING A LOT OF FEMALES START DOUBTING THEIR SKILLS AND ABILITIES. COMPANY 3



3.3 Use of merSETA funding to support gender equity

Several of the companies accessed funding from the Manufacturing Engineering and Related Services Sector Education and Training Authority (merSETA) for programmes such as apprenticeships, learnerships and internships.

Some companies specifically targeted a certain percentage of women for these programmes, but most indicated that both genders benefited from the funding.

All the companies that accessed SETA funding said that they had no difficulties accessing the funding and found the teams at the SETA supportive and available for any questions or queries.

The High Gear programme was also highlighted by some companies who indicated they participated in the programme “with the specific aim of recruiting more young women in the production and manufacturing sector.” Company 7.

3.4 Lessons: Advice from employers to employers

3.4.1 Industry perceptions of women and their representation

The most common challenge mentioned by companies was around how women are perceived by the industry and the concern that this can hold women back.



I GET THE **IMPRESSION** THAT SOME MEN BELIEVE WOMEN ARE BETTER SUITED TO SUPPORTING ROLES. I HAVE MY SUSPICIONS THAT IN SOME CASES, THIS HAS RESULTED IN WOMEN BELIEVING THAT TO BE TRUE.

COMPANY 2



Companies acknowledged that the industry is male-dominated, and there is a view that some people continue to believe that men are more suited to certain roles, especially in leadership. There was a concern that this had a knock-on effect and resulted in women doubting their own abilities in the workplace.

Although many companies felt that their initiatives had resulted in increases in women in engineering and management and leadership roles, companies acknowledged that there was still more work to be done. The area requiring the most attention was the senior leadership level. One company explained that part of the problem is retaining women at this level “as there are so few female engineers in the industry, there is high competition between organisations.” Company 5.

3.4.2 Recommendations from employers for enhancing women’s representation and career growth in the sector

Companies had a range of ideas and recommendations for enhancing women’s representation and career growth in the sector. The most interesting ideas included the following:

- **Exposure:** Pique the interest of young women and girls by exposing them to engineering from school level. This could include anything from career expos to immersive work-experiences to give women an opportunity to see if they would be interested in a career in engineering. Some companies were working to create this exposure through their CSI programmes or through involvement in initiatives run by other organisations.
- **Long term representation and retention strategies, and targets for women:** “People need to recognise that the industry will be stronger if more women are involved” (Company 2) and thus companies need to develop strategies with targets to increase the representation of women. “Companies need to actively focus on creating a skills pipeline of talented women. We can’t keep saying ‘we can’t find them.’” Company 5.
- **Relevant and interesting curriculum:** Industry, government and educational institutions need to work together to ensure the curriculum is relevant for the workplace and interesting and exciting for students. “Ensuring the maths and science curriculum at schools is exciting is key, and science labs are often an important component.” Company 3.



4. LEARNINGS & RECOMMENDATIONS

4.1 Key learnings

While many strides have been made, and aspects of the industry are getting easier for many women, the automotive component manufacturing industry and the engineering profession are still male-dominated, and women experience challenges with negative stereotypes and gender bias. As is the case in many industries, the challenges for women who are also mothers are compounded by navigating their many roles and responsibilities between their career and personal lives.

The complexities associated with grappling with many of these gender-related issues are also acknowledged, some of which are evident in the hesitancy of many of the young women and company representatives to speak explicitly about gender.

Some of the women plainly said that their gender had not held them back or disadvantaged them, even though they generally had examples of when this had been the case. Similarly, company representatives were quick to stress that they did not have programmes specifically targeted at the development of young women, but when probed, it was usually clear that gender equity was on the agenda and various supporting initiatives were detailed. Another concern that could be raised is that for many of the company representatives and young women, it was not always clear why it is desirable to increase the representation of young women in the industry.



Below is a summary of the lessons emerging in the above report. These lessons underpin the recommendations in the final section.

Lessons for young women:**1. Pathways into engineering careers:**

- **Early exposure:** exposure to engineering that piqued their interest was an important part of many pathways into the profession.
- **Successful role models:** Successful women engineers pave the way for other women and community members to follow in their footsteps.
- **Personal success:** Success with their studies or in their careers has helped shift family and community perceptions that engineering is a man's job.

2. Challenges and barriers:

- **Male dominance:** engineering and the automotive component manufacturing industry are still predominantly male-dominated, and women face challenges on several fronts, from negative stereotypes and gender bias, to battling family and community perceptions that engineering is a man's job and not a proper career for women.
- **Workplace inequality:** Men are automatically given the benefit of the doubt when it comes to their skills and abilities, but women need to prove themselves first before they are respected or taken seriously.
- **Work/life balance:** of the employees with children, managing their careers and families was highlighted as a challenge.



WOMEN PLAINLY SAID THAT **GENDER HAD NOT HELD THEM BACK** OR DISADVANTAGED THEM, EVEN THOUGH THEY GENERALLY HAD EXAMPLES OF WHEN THIS HAD BEEN THE CASE



3. What helps women succeed in their careers:

- **Internal factors:** internal motivators such as drive and determination and a passion and interest for the industry have been key to the success of the young women interviewed. Despite what is often a challenging (and occasionally hostile environment), women who succeed in this industry do so through sheer willpower, determination and drive.
- **External factors:** external factors that contributed to the success of many of the women, included:
 - **Training and development:** The opportunity to participate in company organised training and development together with the appropriate levels of support from the company management and leaders.
 - **Supportive families:** supportive families that battled the financial odds to ensure their daughters could access tertiary education and who believed in them motivated them to keep going when facing challenges in their journeys were also key.
 - **Identifying mentors:** mentors were seen as important to guide, coach and support women in their studies and careers.

Lessons for companies in the industry:

1. Initiatives that champion gender equity in the company and increasing the representation of and retaining young women in engineering or production roles:

- Inclusion and representation targets: some companies had programmes that specifically targeted the development of women and others ensured they had targets which safeguard the inclusion of women in their company programmes.
- An enabling culture: creating a culture that supports women to realise their full potential was also a key focus for most companies. Examples of initiatives to create this culture included:
 - Code-of-conducts on gender discrimination and sexual harassment
 - Anonymous tip-off lines for gender related grievances

- Staff-wide education on gender issues
- Flexitime work arrangements
- Surveys to assess challenges experienced by women
- Mentoring and support: mentoring was also seen by several companies as an important support mechanism to help women navigate the industry and thrive in engineering roles.

2. Motivations for implementing gender equity

- initiatives included a belief in the importance of diversity and a willingness to take accountability for shifting the perception that the industry is male-dominated by deliberately attracting women. For others, the mandate had come from the Group level, and for others a key focus was to ensure compliance with government legislation around employment equity.

3. Common challenges identified by companies:

- Companies acknowledged that the automotive component manufacturing industry is male-dominated resulting in some people believing men are more suited to certain roles, especially in leadership. There was a concern that this had a knock-on effect resulting in women doubting their own abilities in the workplace.
- There is still unequal representation of women in senior leadership.



4.2 Recommendations

To help move the automotive component manufacturing industry forward towards increasing the representation of women in engineering and advanced manufacturing roles, we propose the following recommendations.

These recommendations are based on findings from the automotive component manufacturing industry, but aspects may be applicable to the broader engineering profession:

1. The possibilities, value, and benefits of women in the industry need to be made explicit

High Gear and its partners need to raise awareness about the value of women in engineering and the automotive component manufacturing industry and companies should be educated on the benefits of a diverse and inclusive workforce.

It is also important to challenge some of the gender essentialism present in the language of certain companies, where women are automatically not seen to have enough physical strength for the job. In the rare circumstances where physical strength requirements prevent women performing certain tasks, it is vital to ensure that this view does not preclude women from engineering roles in general. Our interviewees gave numerous examples of the dynamic nature of their roles as engineers where much of the work involved computers, design, measuring, planning and strategy.

Ensuring that companies are aware of the possibilities, value, and benefits of women in the industry should help ensure that company initiatives move away from simply complying with the gender equity legislation and towards the development of holistic solutions that attract and retain women in the industry.

2. Set targets for women for training and development programmes

Although our wish is for the possibilities, benefits, and value of women in the industry to be explicit and understood throughout the industry, the fact that compliance with legislation is mentioned as a motivator for many companies, demonstrates that it can still be a useful tool for increasing the number of women in the industry. Most of the women employees we interviewed indicated that they benefited from company training and development programmes even if those programmes were not specifically designed for or exclusive to women.

The key issue is to ensure women are given the opportunity to participate in these development and training programmes. Companies could thus look at setting targets for the percentage of women supported through their various initiatives, whether bursaries, incubator programmes, internships, apprenticeships, or leadership and management training.

3. Ensure programmes support women at every stage of their career journeys

A key feature of many of the stories from young women is the importance of support at each stage of their career journey. This starts from ensuring that young women at school are exposed to engineering as potential career path where women can succeed, through to financial support to study at tertiary education and opportunities for in-service training, learnerships, internships and apprenticeships.

It is crucial that support does not stop once women reach the workplace. Important aspects include a company culture conducive to thriving women, opportunities for women to progress their careers through training and development initiatives and ensuring that women feel that their voices are heard, and their careers are guided and supported. Although individual companies cannot necessarily be expected to take on the role of developing these comprehensive programmes that support women throughout their entire career journeys, there are certain interventions they can pursue. These are detailed in the following section.

4. Recognise and acknowledge industry mentors and encourage managers to be teachers and enablers

A key theme in the research has been ensuring that initiatives to get young women into the industry do not stop once women reach the workplace. Support for women needs to continue to help them navigate the often male-dominated environment and guide them through key personal and career milestones. A company culture that is conducive to women thriving is one aspect of this support, however, it can take time to achieve. Having one person, such as a mentor to turn to, discuss challenges with, and to have as a coach and guide has been a key part of many women's journeys.

This is also the case during tertiary education, where women noted that lecturers or support staff often play the role of mentor, supporting them through challenges and encouraging them to stay the course.

It is also clear that the mentee-mentor relationship can be mutually beneficial and works best when it is dynamic rather than overly formal and structured. We would recommend raising awareness of the benefits of mentoring for young women, along with more informal approaches that tertiary education lecturers and staff, as well as company management and leadership can take to enable and teach young women to thrive in the industry. Methods to incentivise lecturers, managers, and leaders to take up the role of mentor could include encouraging mentorship and formal recognition and acknowledgement of outstanding mentors in the industry.

Create shared value through corporate social investment strategies

To attract new talent into the industry, companies should consider aligning their corporate social investment strategies with their talent pipeline needs. They would then be able to support or develop programmes that target the development of high school and tertiary education-level women (and men) who have the potential to work in the industry. Programmes that support people throughout their career journeys, from exposure to the field in high school, to funding their studies and supporting their entry into the workplace are showing signs of positive impact.

Family friendly policies

Employers could consider instituting family friendly policies to support their employees with family care responsibilities. Examples of the types of policies to consider include:



Parental leave: To support women and men in the business to integrate their work and personal life, companies could consider designing a progressive approach to parental leave where both men and women are given paid maternity and paternity leave above the norms of the country. Programmes to help facilitate the return to work and promote the retention of talent and career progression could also be considered.



Opportunities for flexible work arrangements which include working flexitime or working from flexible locations, where possible.



Flexible roles such as job-sharing opportunities and adjusting the type of work for pregnant women and when they return to work after maternity leave.



Breastfeeding rooms.



Safe transport to and from work for employees.



Employer-supported **childcare**.





5. ANNEXURES



5 ANNEXURES

5.1 High Gear Gender Equity Research Interview Guides

Guides for Interviews with Young Women

Objective 1: Document young women’s individual pathways into advanced manufacturing production careers, the barriers and opportunities that they encountered, and their recommendations for advancing similar young women’s representation and career growth in the sector.

IYF is exploring key Gender Equality and Social Inclusion (GESI) issues, with the specific aim of understanding these issues from the perspective of young women studying towards engineering qualifications as well as young women who are employed in engineering occupations.

We are using an adapted form of Most Significant Change (MSC) in this research, to allow the young women participants to tell us their ‘stories of change’.









We will ask participants to tell us about the change that they believe has been the most important in their studying and/or work journey this far – that is, what the most significant change has been and what they think has contributed to these changes. We have identified the following likely domains of change (or where the change is likely to be) to provide a guide for the interviews and the case studies. However, respondents may suggest a change in a different domain, and that is fine too! We are open to unintended outcomes.

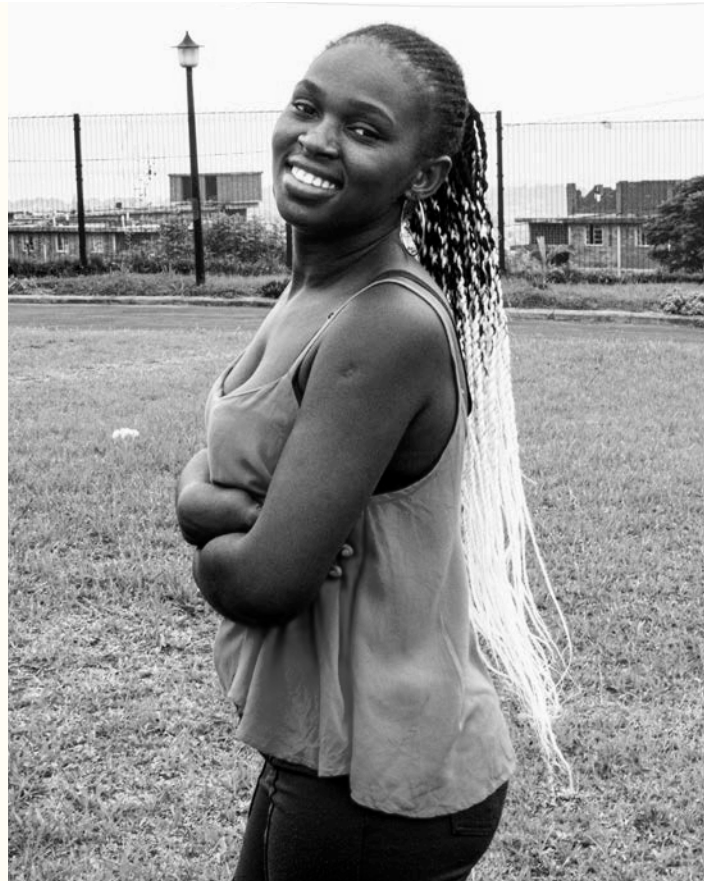
Domain of change – what has changed for:	Issues to explore in this domain
Individuals	Changes in individual women’s capacity to fulfil technical professional roles; changes in the quality of their personal and professional lives (how they do things/what they do)
Organisations (companies)	Changes in organizational/company culture, policies and practices which has made it/ will make it easier for women to access and thrive in professional positions.
Communities	Changing perceptions of women in the community (and in which spaces – religious, political, family, social etc.)

The interviews will be written up as ten individual case studies and then an overarching analysis (which will also include findings from interviews done with companies around similar issues) Singizi Consulting has been appointed to undertake this research, conducting the interviews and doing the write up, while BrandCode has been appointed to support the branding and publication of the participants’ stories through social media platforms.

INTERVIEWING YOUNG WOMEN COLLEGE STUDENTS

Information about the respondent:

	Name:
	Age:
	Race:
	Location:
	Name of current qualification and level enrolled:
	Name of college and campus
	What were you doing before you enrolled for the qualification?
	Do you have any other qualification(s)?



1. Can you please briefly describe your journey to this point in your studies? How did you get to where you are today?

Let the respondent talk but if they get stuck you could use the questions/factors below to probe whether they influenced where the respondent is

- Family background (did your family background shape the choices that you made and if so - in which ways)
- Schooling (subjects offered, specific teachers, a seminal 'event')
- Role models (other qualified women in the sector)

2. Can you tell us what has been the most significant personal change that you have experienced since you started your studies? And what do you think has contributed to (or led to) that personal change?

Here we are looking for changes in their personal circumstances – how they feel about themselves, about where they are and what they are doing. Again, if they get stuck some of the areas that you can probe include:

- How confident they are feeling? Have they made the right choices?

- Are their areas that they want to strengthen (get better at)?
- What motivates them? Gets them excited?
- Have they changed how they view themselves?
- Anything specifically about how they are experiencing their studies as a young woman?

3. Now can we talk about what you think has been the most significant change in relation to how you see the field of engineering, since you started your studies? And what do you think has contributed to (or led to) that change?

Here we are looking for changes in terms of how they see engineering as an academic discipline and as a career option. Probes could include:

- What was your perception of engineering before you joined the field, specifically as a career opportunity for young women? How have these perceptions changed? And what has led to this change in perceptions?
- What have been the key highlights (achievements) in your studies? What enabled this achievement? Do you think that have achieved these because of/in spite of being a young woman? (i.e. has being a young woman helped or hindered your achievements?)

- What were some of the challenges that you/ other women encounter when studying towards engineering qualifications in the TVET colleges?
- Since you started your studies, have you noticed any change in the College in terms of making it easier for young women to succeed in their engineering studies? What are these changes?
- Do you think you are getting enough support in your studies, if so from who and what kind of support? What kind of support do you need and from who? Is any of this support specific to being a young woman? How do you engage with/relate to/ experience male students with whom you study? How do you think that they view women in the engineering field? Why do you say this?
- Do you think enrolling/completing an engineering qualification will/has advantaged you in accessing employment, further training, etc? Please explain? And do you think you will face any specific challenges when you qualify?
- What are your recommendations for increasing/ attracting young women to enrol in engineering studies?

4. Let's go on to talk about what you think has been the most significant change in how others in your family or community perceive you? And again, what do you think has led to those changes?

This is about how others see them and if this has changed since they started their studies. Probes include:

- What perceptions have you observed from those around you (family/friends/community) regarding your chosen field of study – a young woman studying engineering? And have these perceptions changed over time? What do you think contributed to these changes in their perceptions?
- What changes have you observed in society's views on the ability of women to fulfil technical professional/engineering roles? What do you think contributed to these changes in their perceptions?

5. Overall, what do you think has been the single biggest change that you have experienced since you started your engineering studies?

This could be one of the changes you have already described, in which case can you tell us why you think it has been SO significant, or it may be something else that you haven't mentioned yet. If it's something else, can you tell us what that change is and why you think it is so important. Also, a bit about what you think led to that change, if you can.



INTERVIEWING YOUNG WOMEN EMPLOYEES

Information about the respondent:

	Name:
	Age:
	Race:
	Location:
	Highest Qualification obtained, and date:
	Institution:
	Currently studying (qualification & institution)
	Name of employer:
	Job title/occupation:
	Number of years in the organisation
	Previous employment history



1. Can you please briefly describe your journey to this point in your career? How did you get to where you are today?

Let the respondent talk but if they get stuck you could use the questions/factors below to probe whether they influenced where the respondent is

- Family background (did your family background shape the choices that you made and if so - in which ways)
- Schooling and tertiary education (subjects offered, specific teachers, a seminal 'event')
- Role models (other qualified women in the sector)

2. Can you tell us what has been the most significant personal change that you have experienced since you started your career (generally OR at this company)? And what do you think has contributed to (or led to) that personal change?

Here we are looking for changes in their personal circumstances – how they feel about themselves, about

where they are and what they are doing. Again, if they get stuck some of the areas that you can probe include:

- How confident they are feeling? Have they made the right choices?
- Are their areas that they want to strengthen (get better at)?
- What motivates them? Gets them excited?
- Have they changed how they view themselves?
- Play any leadership role?
- Anything specifically about how they are experiencing their engineering/technical professional career as a young woman?

3. Now can we talk about what you think has been the most significant change in relation to your career, and to your perception of engineering as a profession? And what do you think has contributed to (or led to) that change?

This is about changes in relation to their own understanding of their careers – what they thought it would be like vs what it is. What has changed for them here?



- What have been the key highlights (achievements) in your career? What enabled these achievements? Do you think that have achieved these because of/in spite of being a young woman? (i.e. has being a young woman helped or hindered your achievements?)
- What are some of the key challenges that you/ other women encounter as an engineer/ technical professional?
- Since you started working here, have you noticed any change in the company in terms of making it easier for young women to succeed in their careers? What are these changes? If they have worked elsewhere, can they compare – what is better/different?
- What would make it easier for you to thrive as an engineering professional in this company? What would you want more of/less of?
- And do you think you are getting enough support in advancing your career? If so from who and what kind of support? What kind of support do you need and from who?
- Specifically what role is industry playing in supporting women work seekers access employment in their field? What do you think is the role of companies should be in terms of ensuring that the industry attracts and retains more female engineers? And what has been your experienced in this regard?
- What are your recommendations for increasing the participation of young women in engineering professions?

- What was your perception of engineering before you joined the field, specifically as a career option for young women? How have these perceptions changed? And what has led to this change in perceptions?
- Do you think completing an engineering qualification advantaged you in accessing employment, further training, opportunities to develop etc.? Please explain? And specifically, if you think you were advantaged (or disadvantaged) as a woman with an engineering qualification?

4. Let's go on to talk about what you think has been the most significant change in how others in your family, or community perceive you? And again, what do you think has led to those changes?

This is about how others see them and if this has changed since they started their careers. Probes include:

- What perceptions have you observed from those around you (family/friends/community) regarding your chosen career – a young woman engineer? Have these perceptions changed over time and what do you think contributed to these changes in their perceptions?
- What changes have you observed in society's views on the ability of women to fulfil advanced manufacturing production careers?

5. Overall, what do you think has been the single biggest change that you have experienced since you started your engineering studies? This could be one of the changes you have already described, in which case can you tell us why you think it has been SO significant, or it may be something else that you haven't mentioned yet. If it's something else, can you tell us what that change is and why you think it is so important. Also, a bit about what you think led to that change, if you can.

Guides for Interviews with Employers

Objective 2: Document impactful employer-led approaches to furthering gender equity through initiatives and innovations within their respective skills and training departments, especially those initiatives co-funded with Sector Education Training Authority (SETA) grants.









IYF is exploring key Gender Equality and Social Inclusion (GESI) issues within the overall High Gear initiative, with the specific aim of understanding these issues from the perspectives of both young women and of employers.

The employer stories will be shared through six learning briefs that will highlight the stories of manufacturing employers that are actively working toward gender equality in the workplace.

These will complement the ten stories from young women which also forms part of this research. In addition, an overarching piece will be written to highlight learnings across the interviews.

Singizi Consulting has been appointed to undertake this research, while BrandCode has been appointed to support the branding and publication of the participants' stories through social media platforms.

Factual information:

	Name of Company:
	Name of Respondent:
	Position in Company:
	Location:
	Sector:
	Company size:
	Number of female employees
	Number of Male employees



1. Can you provide a brief outline of initiatives that champion gender equity within your company? Can you describe these, tell us how and why they have been introduced?

Probe:

- Prioritizing gender diversity
- Recruiting and hiring for gender diversity
- Equitable salaries
- Promoting gender diversity in leadership
- Training on diversity/unconscious bias
- To what extent do you think your company delivers expanded and more gender-inclusive workplace training opportunities for female TVET students/ graduates/ employees?

2. What motivated you to embark on these initiatives? What changes did you anticipate? Did these changes occur? What contributed to these changes? E.g., external policies/internal pressures/cultural shifts

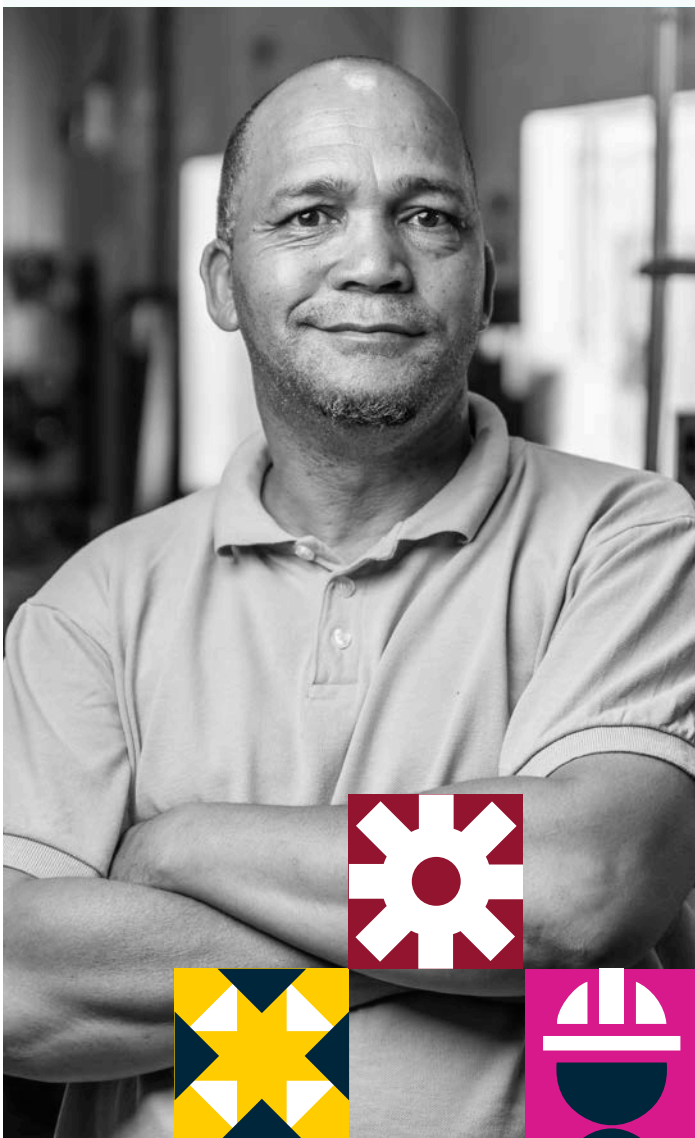
3. What have been the key highlights (achievements) in implementing these programmes?

4. Are there any initiatives that aim to increase representation of young women in engineering or production roles?

5. **As an organisation what specific challenges did you anticipate when you were planning these initiatives? And what specific challenges did you encounter when you implemented these initiatives?**
6. **Have you found that female employees remain in the engineering professions? Which positions do they mostly fulfil? What encourages female employees show remain in these positions?**
7. **As an organisation have you been able to access any external funding to advance inclusive workplace practices and policies for initiatives directed at increasing the participation of young women in the engineering sector? Where did you get the funding from? Can you talk a bit about the process, how easy/ difficult it was? Would you do it again or encourage others to? Why or why not?**



8. **What are your recommendations for programmes that aim at advancing young women's representation and career growth in the sector?**
9. **Finally, which stakeholders are important in ensuring that the industry attracts and retains female engineers? What is the role of companies in ensuring that the industry attracts and retains female engineers?**



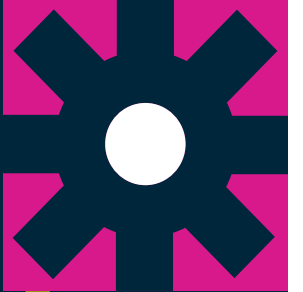


**MAHLE BEHR
SOUTH AFRICA**

**JOHN
MOFFAT
PROLOCK**



**VOLKSWAGEN
SOUTH AFRICA**



**HESTO
HARNESSES**



**HANSENS
ENGINEERING**

**SMITHS
MANUFACTURING**



**ELANGENI
TVET
COLLEGE**



LUMOTECH



THANK YOU

TO ALL OUR RESEARCH RESPONDENTS FOR
MAKING THE TIME TO PARTICIPATE IN THE HIGH
GEAR GESI RESEARCH 2022



For more information about High Gear, please visit the project website,



highgear.naacam.org.za

Funding Partners



Implementing Partner



National Partner

