

High Gear

REPORT 2021 Q3

H I G H
G E A R

**The importance
of a consolidated
skills approach
in driving the
South African
automotive
component
sector**

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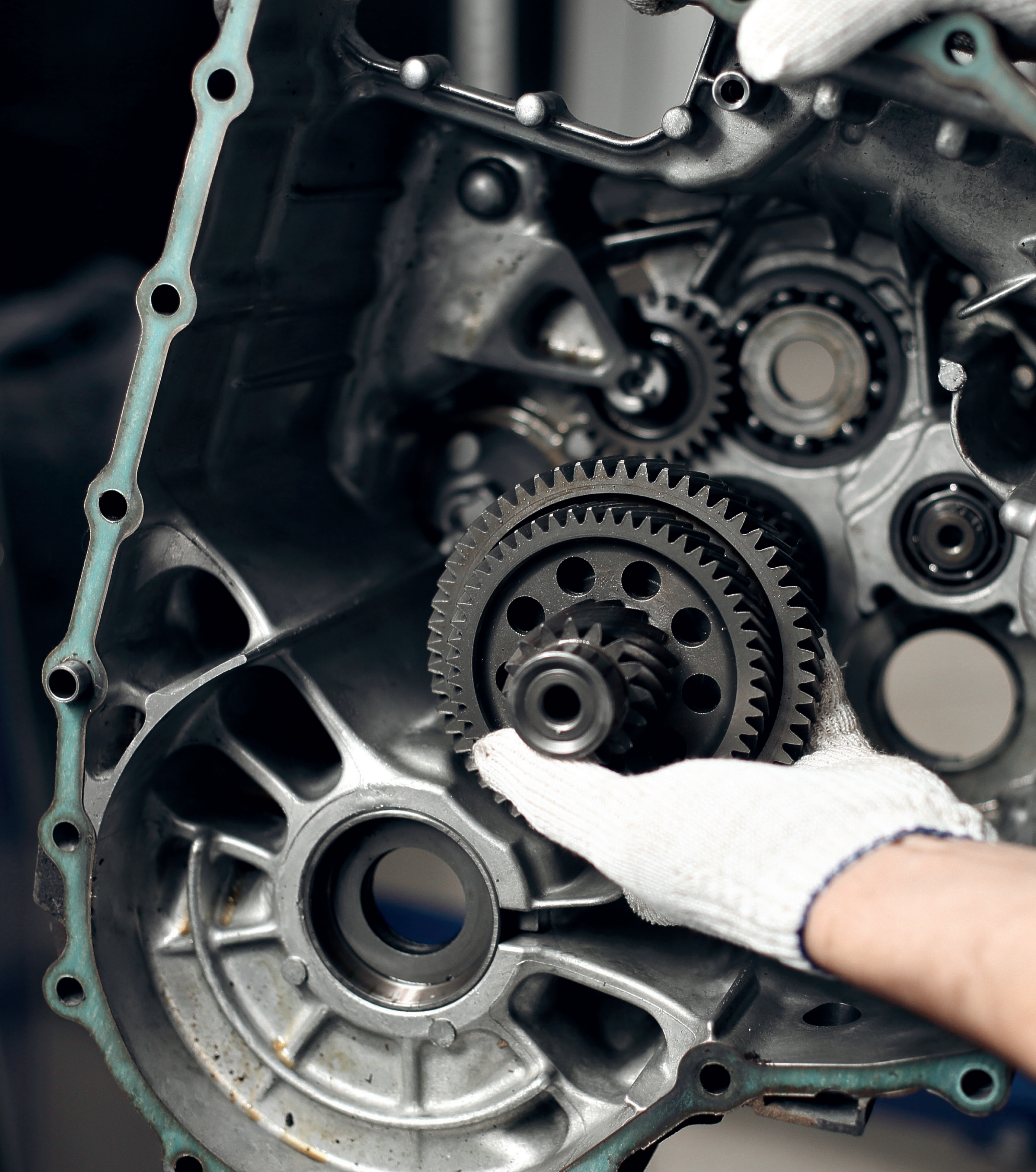


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About High Gear

NAACAM and the Department of Higher Education and Training (DHET) are the lead national partners of High Gear, an exciting initiative managed by IYF that is advancing South Africa's public 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.

To learn more, visit the [High Gear website](#)

The UK Government's Skills for Prosperity Programme is funding High Gear implementation in KwaZulu-Natal Province, and the United States Agency for International Development (USAID) and the Michael & Susan Dell Foundation are funding project implementation in Eastern Cape Province. All three funding partners are supporting High Gear's national stakeholder engagement and learning efforts.

A close-up photograph of a mechanic wearing a black cap and safety glasses, focused on working on the engine of a vehicle. The engine components are visible, including hoses, wires, and a red battery. The background is slightly blurred, showing a workshop environment.

Background

Policy landscape

Over the past decade, South Africa has experienced minimal economic growth. The stagnation of the economy has placed strain on the country's ability to tackle historical structural inequalities, unemployment, and poverty

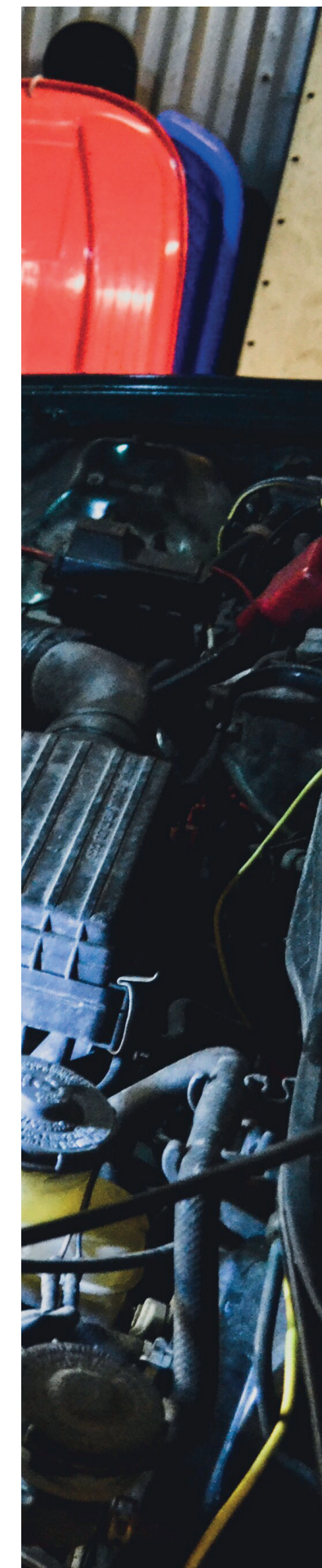
Prior to the onset of the COVID-19 pandemic, the South African economy had already experienced two consecutive recessionary quarters - as a result, the COVID-19 pandemic further worsened the existing poor economic climate. Given the extent of the devastation, the economic response required should match or even surpass the scale of the disruption caused (The Presidency, 2020). To this end, The Presidency recently launched South African Economic Reconstruction and Recovery Plan (ERRP) which aims to stimulate equitable and inclusive growth.

The ERRP positions employment-oriented strategic localisation, re-industrialisation, and export promotion at the centre of economic recovery within South Africa; with priority being placed on key value chains, including the automotive sector. A key focus area of the ERRP is skills development for youth to combat the current 74% youth unemployment rate and support the uptake of the new jobs aimed to be created through the ERRP (The Presidency, 2020). The main focus of the Presidential Youth Employment Intervention (PYEI) is to expedite

a young persons' journey from 'learning to earning'.

Along with the objectives of the ERRP, the South African Automotive Masterplan 2035 (SAAM35) sets out clear targets to further develop the automotive industry through local market optimisation, greater localisation, improved transformation, and development of critical future technologies and skills, amongst other focus areas. Whilst the development of critical skills is a focus area in and of itself, it too, is a fundamental enabler of transformation, the embedding of new technologies, and the localisation of components and raw materials.

In the main, the importance of developing technical and 'soft' skills, cannot be overstated within the automotive component industry. It is widely recognised that a strong pipeline of skilled individuals is a cornerstone for the sustainability and growth of the manufacturing industry (Albaladejo & Weiss, 2017).



Case study:

Development of Turkey's highly skilled labour market

In 2018, the Automotive Supply Chain Competitiveness Initiative¹ (ASCCI) conducted a study tour to Turkey to understand the activities carried out within the country that drove the significant development of its automotive industry over the last twenty years. Turkey serves as a good reference point for the development of South Africa's automotive industry for the following reasons:

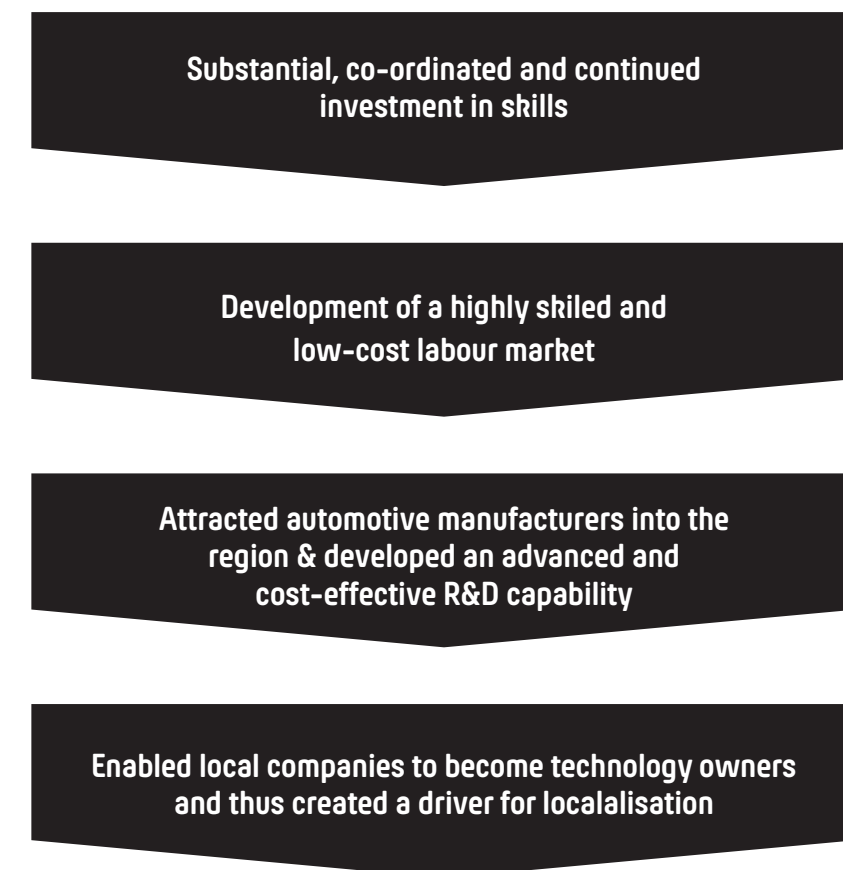
1. Much like South Africa, Turkey is a developing country that relied heavily on a targeted industrial policy and related incentives for the establishment of the automotive industry.
2. Turkey's automotive industry is dominated by the major world automakers in final assembly and international top tier 1 suppliers of part and components, along with a large number of small local tier-2 and tier-3 companies (Hamid & Sow, 2020).
3. Turkey has successfully developed its automotive industry from 468 000 units in 2000 to 1 750 000 units in 2017.
4. The country is actively participating in the major value chains (VC) segments of the automotive industry, namely in final assembly, parts and components, and subassembly and is deeply integrated into global value chains (GVC).

The expansion of the Turkish automotive industry was achieved through expending significant effort on expanding its export market, deepening value addition, and developing a strong R&D capability (B&M Analysts, 2018). In doing so, the country has become significantly less reliant on policy and subsidies and is a global player in the industry in its own right. The success Turkey has experienced, through prioritisation of the export market and deepening of value addition, makes it an important reference point for the development of the South African automotive industry which is aiming to produce 1.2 million vehicles by 2035.

¹ **ASCCI is a national non-profit initiative jointly established by government, industry and labour, to facilitate, coordinate and oversee supplier competitiveness improvement initiatives in the South African automotive industry and to set the strategic direction for specific practically oriented competitiveness improvement projects.**

The ASCCI study tour in Turkey looked at both the market-seeking and asset-seeking opportunities which are driving investment into the region. One of the key findings of the tour was the positive impact of Turkey's investment in skills as highlighted in Figure 1 below.

Figure 1: Impact of Turkey's investment into skills development



The above figure highlights that through substantial well-placed investment into skills development, Turkey was able to develop a highly skilled, low-cost labour market which supported the growth of the industry through attracting investment, developing cost-effective R&D capabilities and ultimately, driving localisation (B&M Analysts, 2018). These findings highlight the importance of a well-coordinated plan to develop a skilled labour market from which the automotive industry can be sustained.



The South African automotive skills development landscape

When looking at the South African automotive components manufacturing industry, the skills development landscape has traditionally been ad hoc, with limited co-ordination between key stakeholders to support a highly skilled and industry-aligned labour market. While this is not ring-fenced to this sector, it has a significant impact on the skills pipeline for the sector. In 2013, the Department of Higher Education developed the White Paper for Post-School Education which focuses its attention on the vision DHET have for the system and the principles governing that vision, as well as the policies which will be developed and implemented over the coming years. It represents government's thinking in the area of higher education and training and is in line with the

country's key national policy documents including the National Development Plan 2030, the New Growth Path, the Industrial Policy Action Plan and the draft Human Resource Development Strategy for South Africa. Chapter 8 of the White Paper for Post-School Education particularly focused on creating the link between education and the workplace and identifying all stakeholders central to this successful achievement of a more dual vocational model which ensured that by the time a learner exited the post-school system, they had gained the necessary experience to make them employable.

The sectors' general response to the unavailability of critical skills exiting the post-school system has been to establish

internal academies to ensure that the right skills exist at the right occupational level. In terms of access to funding for the implementation of said training, critically, whilst publicly available skills programmes and funding do exist, they tend to operate in silos with seemingly minimal uptake from the industry. The High Gear initiative undertook to research the reasons for the low uptake of the merSETA discretionary grants. This research revealed that just 10% of automotive component manufacturers applied for a discretionary grant in the previous period (High Gear, 2021). This is often a function of companies being unaware of the different types of funding available from the SETA, a lack of understanding the applicability, or not having the capacity to process applications.

Recognising this disjuncture within the skills space, the National Association of Automotive Component and Allied Manufacturers (NAACAM) over the past two years has taken a leading role in both co-ordinating and driving the skills interventions within the automotive components manufacturing sector. This directly led to the establishment of an automotive component-specific chamber at the MerSETA, and

the launch of NAACAM's flagship skills programme, High Gear with its project partners.

High Gear is a skills development initiative managed by IYF, with NAACAM and the Department of Higher Education and Training (DHET) as lead national partners. The involvement of all three stakeholders ensures significant reach for the project imperatives. The initiative is supported by three global donors who have a passion for skills development. These donors are the UK Government's Skills for Prosperity Programme, the United States Agency for International Development (USAID), and the Michael and Susan Dell Foundation.

The key objectives of High Gear include:

- Establishment of demand-driven TVET curricula to support the automotive component sub-sector;
- Establishment a strong and sustainable partnership between industry and TVET colleges to ensure greater alignment going forward.

By promoting this alignment and co-operation, it is anticipated that positive outcomes for

both youth and employers will be realised. This need for greater coordination is clearly illustrated when looking at the artisan profession: whilst artisan occupations are frequently cited as hard-to-fill vacancies, (where a hard-to-fill vacancy is a vacancy that takes longer than six months to fill), at the same time, there are numerous unemployed artisans in the labour market; suggesting that there is a gap between what component suppliers require and the current skills and experience of unemployed artisans.

With High Gear's objectives in mind, the programme must offer a comprehensive set of solutions to skills development in the industry. It is critical that data on the most pertinent skills and occupation gaps must be validated to ensure interventions are well-placed. In undertaking this validation exercise, High Gear ran two focus groups with NAACAM member companies, comprising of CEOs and HR Managers respectively. The focus groups were asked to validate the results of previous High Gear Quarterly Skills Surveys, as well as the merSETA Sector Skills Plan for 2021/2022.

This thought paper presents the outcomes of these focus groups.



Outcomes



South Africa is in a unique position given the country's high Gini Coefficient. The country has a large cohort of low-occupation level employees that are remunerated in line with lower-cost countries, whereas top-level management positions are typically remunerated at higher level, in line with developed-economy rates of pay. As a result, there is pressure to limit top-level occupations to fit the low-cost country model. Change drivers in the market are, however, placing pressure on this dynamic. HR professionals reported that the cash 'crunch' brought on by COVID-19, its related reduction in production volume, and other supply chain disruptors have resulted in companies consolidating positions within their organisations, thus demanding a more highly skilled and multi-disciplinary workforce. Globally, the increased adoption of Industry 4.0 technologies is similarly forcing employees to

offer a more advanced and wider skills range (European Training Foundation (ETF), 2021).

1. Impact of Industry 4.0

Whilst the above pressures seemingly lead towards the existing narrative suggesting Industry 4.0 could result in significant retrenchment of entry-level workers as advanced technologies replace some tasks; evidence from workplace adoption of Industry 4.0 technologies suggests otherwise.

Few occupations are expected to become redundant:

Whilst new technologies are impacting all occupational levels and are certainly changing the skills requirements of the workforce, few occupations are expected to become entirely redundant while other occupations will remain but see a shift in the knowledge, competencies and skills required (ETF, 2021).



Outcomes

Opportunity for upskilling:

ASCCI's World Class Manufacturing (WCM) 4.0 Programme supports the adoption of these advanced technologies within automotive companies to enhance productivity and efficiencies. Evidence from the WCM programme has found that automation is creating an opportunity for the upskilling of lower-level employees to learn to work with new technologies, rather than against them.

Cost-savings:

Through the adoption of Industry 4.0 technologies, companies can derive greater cost-savings and productivity which supports the growth of the business and subsequent opportunity to create more jobs.

It is important to note that while Industry 4.0 is largely concerned with automation and AI, for some organisations; Industry 4.0 could be limited to the adaption and

streamlining of processes and standard operating procedures.

From NAACAM's experience in implementing supplier upgrading interventions, it is critical that shopfloor staff are included in process optimisation and change management, as these are the individuals which need to leverage the gains from the technology on a day-to-day basis. This is evidenced through an ASCCI WCM project undertaken at a locally-owned company. Through the implementation of smart systems for visual controls and Visual Project Management, and the training of shopfloor staff to utilise these systems, productivity increased from 83% to 101%.

These findings are further validated by both the High Gear focus groups and research done in Turkey to understand the future of skills within the Turkish auto-motive sector (ETF, 2021).

2. Rising importance of 'soft' skills

The merSETA Sector Skills Plan 2021/2022 identifies new technologies, processes, and products as key areas impacting skills gaps across the sector. This phenomenon is found globally, including in other BRICS countries such as China, India, and Brazil and comparable automotive manufacturing destinations like Turkey [(Albaladejo & Weiss, 2017) & (ETF, 2020)]. The reality, however, is the fast pace at which technological change is occurring will frequently result in skills gaps (Albaladejo & Weiss, 2017). This is further compounded by companies' ability to quickly pivot their operations and skills development processes to support the required change. What, therefore, becomes critical in addressing these gaps is a workforce that is agile, strong in problem-solving, critical and methodical thinking and other 'soft' skills, and has a willingness to learn on the job (Albaladejo

& Weiss, 2017). Employers in the focus groups stressed that these listed skills and mindsets are frequently lacking across all occupational levels, and this inhibits a company's ability to respond quickly to change in the operational environment.

3. Improvement of fundamental technical skills

Along with the rising importance of soft skills, sound technical skills remain a requirement for new entrants into the industry as indicated by respondents to the first quarterly High Gear survey. The focus groups, however, indicated that they encountered difficulties in identifying prospective employees with the necessary basic technical skills, as well as more advanced technical skills. This is evidenced by the recruitment process for apprenticeships. An employer in a focus group indicated that all

applicants, who require only a matric qualification, are asked to write a numeracy and literacy test as part of the application process. The company reported that only around 20 percent of applicants are successful in this test and expressed their concern that this points to the poor level of basic skills across the education and training spectrum.

Outcomes



Learnings from best Practice

There is merit in assessing global best practices and their suitability to support South Africa's development of the labour market given the importance of a robust skills base and the current shortcomings within South Africa in this regard.

1. Strong primary and secondary education

Strong primary and secondary education are vital not just for the automotive industry, but the country at large. The focus needs to be placed on basic literacy and numeracy skills that currently create a bottleneck to further learning in tertiary institutions and the workplace (Albaladejo & Weiss, 2017).

2. Sound career guidance and improved reputation for technical qualifications

Good career guidance and improved reputation for technical qualifications that incorporate practical workplace learning are also important (Albaladejo & Weiss, 2017). The German vocational training programme provides a good example of this:

1. Students are advised from a young age on what level and type of educational attainment would best suit them (Parilla et al, 2015).
2. Additionally, the dual vocational system in Germany, of which 45 percent of students undertake following secondary school, allows students to obtain field-specific workplace skills through spending three to four days per week training at a firm through an apprenticeship, and the additional one or two days is spent at a vocational school gaining theoretical training (Parilla et al, 2015).

This equips the students with both the technical skills required by industry, but also the 'soft' skills that one acquires through operating within a workplace and as part of a team and thus improves the work readiness of graduates and ultimately the reputation of the training.

3. Strong linkages between the private sector, tertiary institutions, and government

Linkages between the private sector, tertiary institutions, and government are critical and have been central to the development of Turkey and Germany's skills base [(Albaladejo & Weiss, 2017) & (B&M Analysts, 2018)].

- Turkey: Central to Turkey's development of an advanced skills base is the strong linkage between industry and academia (B&M Analysts, 2018). Automotive suppliers, through their industry association, seek to influence curricula, both at a TVET and university level (B&M Analysts, 2018). This collaboration between industry and academia ensures

that academia has an up-to-date understanding of skills needs in the industry.

- Germany: This close working relationship is similarly seen in Germany, where there are numerous supporting chambers that link government, labour, private sector, and academia to ensure alignment in policy and curricula and garner substantial industry support for apprenticeship programmes (Parilla et al, 2015).

Additionally, it must be recognised that the automotive industry moves at a rapid pace, and component manufacturers are not merely looking a year into the future when planning to support future model cycles, they are typically considering a planning horizon of five to ten years. This means that considerations must include critical skills related to future vehicle models and projects. The implications of this are twofold:

1. The CEO focus group highlighted that whilst there is purpose for reactive interventions to tackle immediate skills shortages, skills programmes must implement these interventions swiftly. Too much time spent planning runs the risk of the intervention becoming redundant as the industry has already moved on.

2. Programmes cannot lose sight of the future needs of industry. As companies themselves are planning well into the future, they are best placed to know the future needs of their companies. It is therefore crucial that companies form a central part of the forecasting and planning for future skills needs (Albaladejo & Weiss, 2017). This is particularly true for original equipment manufacturers (OEMs) and Tiers 1s who are both best-placed to inform the tertiary institutions, as well as the greater supply chain in terms of changing production and material requirements that will necessarily inform future skills needs.

4. Training of transferable versus company-specific skills

A certain degree of the skills required in the industry are company-specific. These particular skills are usually best delivered by component suppliers through on-the-job training and apprenticeships (Albaladejo & Weiss, 2017). This has been noted across the NAACAM membership, with many companies investing significantly in the training of staff for their company-specific manufacturing environments. These efforts are, however, rendered fruitless if the new entrants which are being

trained do not possess an inherent level of base technical skills which are generally required across the sector. Many component suppliers have been vocal in the view that TVET colleges have not been delivering on an adequately skilled pipeline and need to be doing more to nurture basic technical and 'soft' skills in their student cohorts. This results in companies' reskilling or further skilling new entrants to the sector.

This additional time expended in training new entrants comes at a significant cost, especially for domestic manufacturing firms, as they often do not have the resources or expertise to deliver this training in-house. It is thus critical that students are highly trained in transferable skills to ensure in-company training is limited to only company-specific (Albaladejo & Weiss, 2017). Furthermore, to support companies in their training interventions, financial support must be leveraged by companies (Albaladejo & Weiss, 2017). Whilst the merSETA offers discretionary grants that provide significant support for these types of activities, there is seemingly low uptake of this funding.

What does this mean for High Gear and training of automotive skills in South Africa at large?

High Gear strives to provide a holistic intervention for skills development specific to the automotive component industry. In doing so, the programme is not only upgrading curricula but offers numerous interventions to support the growth of the skills base.



1. Lecturer development:

Along with enhancing curricula, High Gear is expending significant time empowering lecturers to teach this upgraded content. This includes lecturer workshops and the development of 'toolkits' equipped with various apparatus and tools to support greater practical teaching within the classroom.

2. Facilitation of work-integrated learning (WIL) for both lecturers and students:

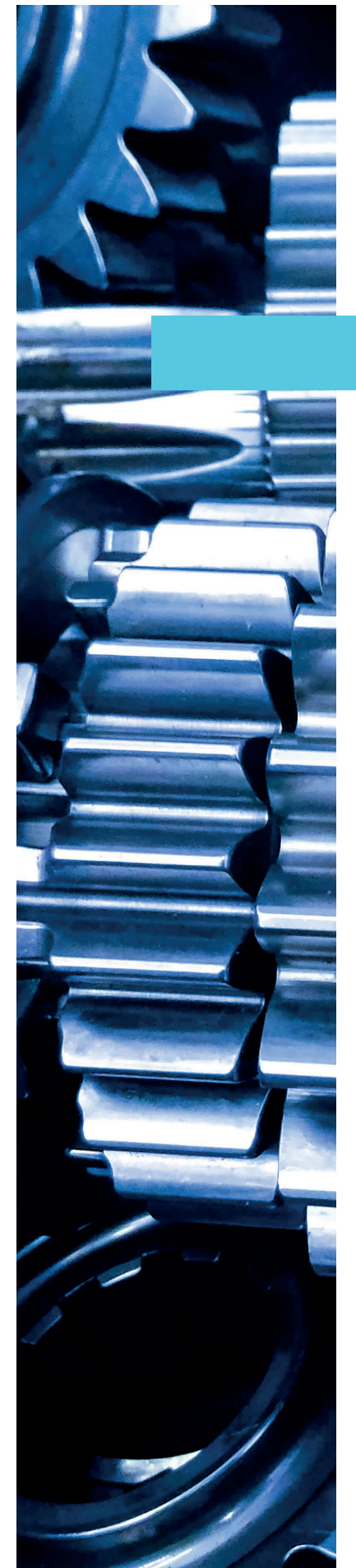
Whilst all curricula enhancements have been done with significant consultation from the private sector, WIL gives students and lecturers the opportunity to gain practical exposure to the operational environment and in doing so, develop critical technical and soft skills. For WIL to be a success, it requires buy-in and support from the private sector. Justifying why Siemens in Germany invests significantly in their apprenticeship programme, a Siemens Executive explained that having a well-skilled and flexible labour market is necessary for economic competitiveness, the sustainability of the industrial base, and ultimately the company's profitability (Parilla et al, 2015). This understanding and attitude towards skills development needs to be understood and adopted in South Africa, not only for the success of High Gear as an intervention but more importantly, for the success and sustainability of the South African automotive sector.

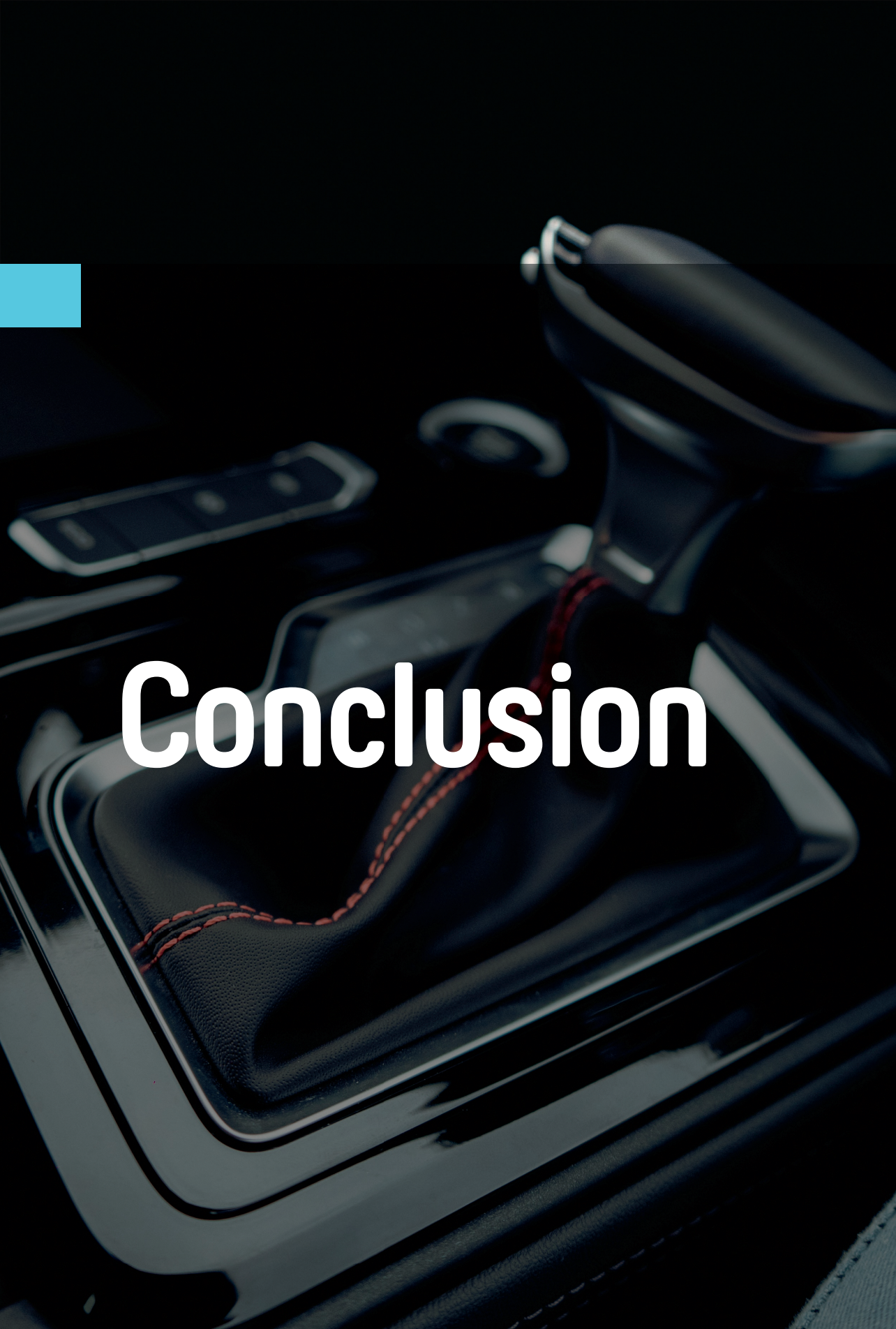
3. Career guidance:

High Gear will be launching a digital career experience platform in the first quarter of 2022. This platform will highlight key professions within the sector and offer career pathway mapping and information on the skills requirements to serve in these roles. There will also be educational games and other tools on the platform to support the further training of youth.

4. SETA Grant Advisory Service:

Recognising the seemingly poor uptake of merSETA discretionary grants, High Gear has published a SETA Best Practice Guide to provide companies with information on what funding is available and how to go about applying for it. Additionally, a service is being trialled in the KZN region to support automotive component manufacturing companies with compiling their application.





Conclusion



Critical to the achievement of SAAM35's growth targets is a skilled labour market that supports the expansion of the industry. Historically, skills development in the local industry has been ad hoc and the focus groups confirmed that consequentially, skills and occupation gaps persist. Furthermore, the focus groups highlighted that contrary to some concerns, Industry 4.0 offers substantial opportunities for upskilling and job creation. To support the industry and opportunities arising from Industry 4.0, focus group participants noted the increased importance of developing 'soft' skills to adapt to a rapidly changing environment and high-quality training of fundamental technical skills.

To address these trends, learnings from global best practice provides a clear motivation for well-considered investment into skills development underpinned by strong coordination between key stakeholders to ensure the relevance of interventions. This investment is critical for the development of a highly-skilled labour market that not only accommodates the skills needs of the local industry but also attracts more

manufacturers into the region and ultimately unlocks localisation opportunities. The focus groups noted that interventions should primarily focus on transferable skills and comprehensive career guidance is needed to guide students on the opportunities within the industry and the requisite qualification and skills requirements.

Taking direction from the above findings, High Gear has adopted numerous activities that provide the automotive component manufacturing industry with a comprehensive and consolidated skills initiative. Notably, High Gear aims to derive positive outcomes for all stakeholders, therefore the initiatives implemented do not solely focus on the skills development of students through curricula enhancement; WIL; and career guidance, but also the empowerment of lecturers via workshops; provision of 'toolkits'; and WIL, and support for employers through the SETA Grant Advisory service

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About NAACAM - NAACAM is recognised as the voice of the South African automotive component industry both domestically and internationally. As a member-driven organisation, NAACAM is at the forefront of industry leadership, representation and stakeholder engagement for automotive component manufacturers. NAACAM devotes many resources towards positively impacting the localisation, transformation and supplier development environment in South Africa.

To find out more, visit the [NAACAM website](#)

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