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*As outlined in the previous newsletter, the South African automotive component industry has been making progress in recent years. However, there are notable challenges which remain for the automotive industry, both local as well as global, especially in relation to costs. The key issue is whether the local industry is improving fast enough to meet these ever increasing demands.*

*This newsletter will outline the possible competitiveness profile of the local industry in 2010. This will be undertaken by examining a range of cost related indicators and reviewing what the situation may be in 2010.*

*The purpose of this newsletter is therefore to provide industry with a glimpse into the future. This should outline to managers where they should be heading and subsequently challenge firms to continuously review their operational practices in line with ultimately achieving World Class Manufacturing levels.*

*“News from the regions” briefly outlines the SAABC’s progress in March and April and the programme’s focus during the months of May and June. Importantly, the newsletter contains an outline of the **SAABC WCM Best Practice workshop programme** for 2008, which all firms are encouraged to attend.*

*If there are any comments regarding any of the items noted in the newsletter, please email the SAABC Project Co-ordinator, Cleopatra Ndlovu, on [saabc@bmanalysts.com](mailto:saabc@bmanalysts.com).*

*Focus article...*

## Objective 2010 – Analysing Future Competiveness Performance

By Sean Ellis

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### Introduction

The last two newsletters of 2007 attempted to quantify the cost challenge that the local automotive component industry is experiencing. This was done by examining several operational indicators and was undertaken both at an aggregated South African firm-level as well as by industry sub-sector. The newsletters noted that while several definite challenges exist, the data suggested that real opportunities to eliminate waste and thus reduce costs do exist.

The first newsletter of 2008 further built on the cost challenge discussion undertaken at the end of 2007 by outlining the operational competitiveness progress that the industry has made since its inception. It found that while there had been movement forward, especially in relation to downstream or customer performance levels, internal competitiveness progress as well as performance in other key areas such as finished goods had been less impressive. An analysis of these findings suggests that customer satisfaction levels are being achieved at a cost, and not cost effectively which has to be the objective at all firms.

The focus article of this newsletter will, as its starting point, assume that cost pressures evident in the automotive industry will continue to intensify going forward. Based on this assumption, it can be safely argued that the local auto component industry needs to continuously find opportunities to further reduce costs, while at the same time

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ensuring that customer demands and requirements are not undermined as a result of this. In this regard, industry analysts argue that firms still need to find effective ways to reduce costs by as much as 20% by 2010 if they are to survive. In addition, this is vital if the local auto industry is to prosper and ultimately grow going forward.

Therefore, this focus article will briefly consider where the industry may find itself in 2010. While there are numerous indicators that can be utilised, only those involved in the cost calculation will be considered here. These include:

- Finished goods inventory holding
- Work-in-progress inventory holding
- Raw material inventory holding
- Customer return rates
- Internal scrap rates
- Downtime due to machine changeovers
- Downtime due to machine breakdowns
- Downtime due to tooling breakdowns
- Downtime due to internal material unavailability
- Absenteeism rate

The intention of the article is thus to challenge firms to continuously consider opportunities to eliminate waste, reduce costs and thus maximise value within operations.

### **Recap of historical performance**

An analysis of the operational competitiveness indicators mentioned above reveals that performance has improved in all areas for the 2004-07 period, with the single exception of internal scrap rates. This is outlined in Table 1.

As is also apparent, progress has also been substantial for certain indicators, namely customer return rates (+65.8%) and production downtime due to internal material unavailability (+50.8%). Thus, based purely on these operational indicators, the overall average change for the period analysed is 23.7%. However, as is evident from the table, it is clear that the level of change for all the indicators is variable. Also, despite the overall 2004-07 improvement, the data suggests that the rate of progress slowed down notably in 2007.

Table 1: SAABC operational performance

|   | 2004  | 04-05%        | 2005 | 05-06%        | 2006 | 06-07%       | 2007 | 04-07%        |
|---|-------|---------------|------|---------------|------|--------------|------|---------------|
| Finished goods inventory (Days)           | 9.9   | -2.8%         | 10.1 | +7.3%         | 9.4  | -2.2%        | 9.6  | +2.6%         |
| Work-in-progress inventory (Days)         | 7.3   | +12.5%        | 6.4  | +3.8%         | 6.1  | +6.8%        | 5.7  | +21.5%        |
| Raw material inventory (Days)             | 21.3  | +8.0%         | 19.6 | +0.7%         | 19.5 | +0.2%        | 19.4 | +8.8%         |
| Customer return rate (PPM)                | 1,170 | +39.8%        | 704  | +5.0%         | 670  | +40.2%       | 400  | +65.8%        |
| Internal scrap rate (PPM)                 | 3.5   | -0.2%         | 3.5  | +14.9%        | 3.0  | -19.6%       | 3.6  | -2.0%         |
| Time lost to machine changeovers (%)      | 8.9   | +13.7%        | 7.7  | +6.9%         | 7.2  | +0.6%        | 7.1  | +20.2%        |
| Time lost to machine breakdowns (%)       | 5.9   | +4.5%         | 5.6  | +12.1%        | 4.9  | +4.8%        | 4.7  | +20.1%        |
| Time lost to tooling breakdowns (%)       | 3.8   | +9.5%         | 3.5  | +9.7%         | 3.1  | +10.1%       | 2.8  | +26.5%        |
| Time lost to int. mat. unavailability (%) | 3.6   | +19.2%        | 2.9  | +35.4%        | 1.9  | +5.6%        | 1.8  | +50.8%        |
| Absenteeism rate (%)                      | 4.4   | +9.5%         | 4.0  | +12.7%        | 3.5  | +1.7%        | 3.4  | +22.4%        |
| Average change                            |       | <b>+11.4%</b> |      | <b>+10.8%</b> |      | <b>+4.8%</b> |      | <b>+23.7%</b> |

As outlined in Table 2, which highlights the direct/unnecessary costs associated with the indicators being considered, a similar picture emerges as with the operational competitiveness performance analysis.

Table 2: SAABC costs performance

|   | 2004         | 04-05%        | 2005         | 05-06%        | 2006         | 06-07%       | 2007         | 04-07%        |
|---|--------------|---------------|--------------|---------------|--------------|--------------|--------------|---------------|
| Finished goods inventory                      | 1.0%         | -0.8%         | 1.1%         | +6.5%         | 1.0%         | -1.7%        | 1.0%         | +4.3%         |
| Work-in-progress inventory                    | 0.8%         | +14.2%        | 0.7%         | +3.0%         | 0.6%         | +7.3%        | 0.6%         | +22.9%        |
| Raw material inventory                        | 2.3%         | +9.9%         | 2.0%         | -0.2%         | 2.0%         | +0.7%        | 2.0%         | +10.3%        |
| Customer return rate                          | 0.1%         | +39.8%        | 0.1%         | +5.0%         | 0.1%         | +40.2%       | 0.04%        | +65.8%        |
| Internal scrap rate                           | 2.0%         | +0.4%         | 2.0%         | +15.4%        | 1.7%         | -23.4%       | 2.1%         | -3.9%         |
| Time lost to machine changeovers              | 8.9%         | +13.7%        | 7.7%         | +6.9%         | 7.2%         | +0.6%        | 7.1%         | +20.2%        |
| Time lost to machine breakdowns               | 5.9%         | +4.5%         | 5.6%         | +12.1%        | 4.9%         | +4.8%        | 4.7%         | +20.1%        |
| Time lost to tooling breakdowns               | 3.8%         | +9.5%         | 3.5%         | +9.7%         | 3.1%         | +10.1%       | 2.8%         | +26.5%        |
| Time lost to internal material unavailability | 3.6%         | +19.2%        | 2.9%         | +35.4%        | 1.9%         | +5.6%        | 1.8%         | +50.8%        |
| Absenteeism rate                              | 0.5%         | +10.0%        | 0.4%         | +8.6%         | 0.4%         | -3.3%        | 0.4%         | +15.0%        |
| Average change*                               |              | <b>+10.3%</b> |              | <b>+11.6%</b> |              | <b>+1.6%</b> |              | <b>+22.0%</b> |
| Total costs                                   | <b>28.9%</b> |               | <b>25.9%</b> |               | <b>22.9%</b> |              | <b>22.5%</b> |               |

\* Based on total cost calculation figures

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The major cost findings therefore include:

- Costs have improved for all the measures, except internal scrap rate.
- The biggest positive change is evident for customer return rate and production time lost due to internal material unavailability.
- While overall costs have been reduced by 22.0%, the level of progress does vary notably.
- After reporting an overall improvement of around 10-12% in 2005 and 2006 in terms of cost reduction, very little change occurred in 2007

Thus, the competitiveness performance measures as well as the cost analysis reveals that while the local auto component industry is moving forward and costs are being reduced, performance is highly variable and the level of progress slowed down significantly in 2007. These are areas of concern.

The next part of the newsletter will subsequently look at performance going forward by considering where the industry may find itself in 2010.

### Looking forward to 2010

When discussing future performance, various external factors need to be considered. Amongst others, these include:

- Ever changing customer demands
- Global developments – growth in the East as well as the performance of individual OEMs
- Local automotive policy framework post-MIDP
- Import and export propensity

While all important, this analysis will simply consider and discuss future performance in relation to two scenarios.

The first scenario will consider that cost performance across all areas improves by the target of 20% from 2007 to 2010. The second scenario is based on the assumption that the performance for each indicator for the period under analysis will improve at the same rate apparent for the 2004-07 period. The two situations are outlined below in Table 3 and Table 4 respectively.

Based on these two situations, we can estimate what the performance levels for the industry in 2010, with this to be followed by a discussion of whether the scenarios are realistic and therefore achievable.

As outlined in Table 3, if the local component industry is able to reduce its costs by 20% for each of the indicators analysed, total costs incurred due to these measures will be reduced from 22.5% of turnover in 2007 to 18.0% by 2010.

Table 3: Scenario One –Performance improves by 20% for all indicators for 2007-10 period

|   | 2007        |              | Projected 2007-10<br>% Change | 2010        |              |
|---|-------------|--------------|-------------------------------|-------------|--------------|
|   | Performance | Costs        |                               | Performance | Costs        |
| Finished goods inventory                      | 9.6 days    | 1.0%         | +20.0%                        | 7.7 days    | 0.8%         |
| Work-in-progress inventory                    | 5.8 days    | 0.6%         | +20.0%                        | 4.6 days    | 0.5%         |
| Raw material inventory                        | 19.4 days   | 2.0%         | +20.0%                        | 15.5 days   | 1.6%         |
| Customer return rate                          | 400ppm      | 0.04%        | +20.0%                        | 320ppm      | 0.03%        |
| Internal scrap rate                           | 3.6%        | 2.1%         | +20.0%                        | 2.9%        | 1.7%         |
| Time lost to machine changeovers              | 7.1%        | 7.1%         | +20.0%                        | 5.7%        | 5.7%         |
| Time lost to machine breakdowns               | 4.7%        | 4.7%         | +20.0%                        | 3.8%        | 3.8%         |
| Time lost to tooling breakdowns               | 2.8%        | 2.8%         | +20.0%                        | 2.3%        | 2.3%         |
| Time lost to internal material unavailability | 1.8%        | 1.8%         | +20.0%                        | 1.4%        | 1.4%         |
| Absenteeism rate                              | 3.4%        | 0.4%         | +20.0%                        | 2.7%        | 0.3%         |
| <b>Total costs</b>                            |             | <b>22.5%</b> |                               |             | <b>18.0%</b> |

Table 4: Scenario Two –Performance for each indicator improves at same rate for 2007-10 as for 2004-07 period

|   | 2007        |              | Projected 2007-10<br>% Change | 2010        |              |
|---|-------------|--------------|-------------------------------|-------------|--------------|
|   | Performance | Costs        |                               | Performance | Costs        |
| Finished goods inventory                      | 9.6 days    | 1.0%         | +4.3%                         | 9.4 days    | 1.0%         |
| Work-in-progress inventory                    | 5.8 days    | 0.6%         | +22.9%                        | 4.5 days    | 0.5%         |
| Raw material inventory                        | 19.4 days   | 2.0%         | +10.3%                        | 17.7 days   | 1.8%         |
| Customer return rate                          | 400ppm      | 0.04%        | +65.8%                        | 137ppm      | 0.01%        |
| Internal scrap rate                           | 3.6%        | 2.1%         | -3.9%                         | 3.7%        | 2.2%         |
| Time lost to machine changeovers              | 7.1%        | 7.1%         | +20.2%                        | 5.7%        | 5.7%         |
| Time lost to machine breakdowns               | 4.7%        | 4.7%         | +20.1%                        | 3.8%        | 3.8%         |
| Time lost to tooling breakdowns               | 2.8%        | 2.8%         | +26.5%                        | 2.1%        | 2.1%         |
| Time lost to internal material unavailability | 1.8%        | 1.8%         | +50.8%                        | 0.9%        | 0.9%         |
| Absenteeism rate                              | 3.4%        | 0.4%         | +15.0%                        | 2.6%        | 0.3%         |
| <b>Total costs</b>                            |             | <b>22.5%</b> |                               |             | <b>18.1%</b> |

Interestingly, if one examines Scenario Two, as outlined in Table 4, where each indicator is considered to improve at the same rate for the 2007-10 period as was the case for the 2004-07 timeframe, costs improve by 19.6% to 18.1% of turnover. It is thus

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clear that the previous rate of progress noted for 2004-07 fails, albeit marginally, to bring the industry to the desired target of 20%.

## Summary

As briefly outlined, if the local auto component industry improves at the same rate over the next few years (i.e. for the 2007-10 timeframe) as was apparent in the past (i.e. for the 2004-07 period), the 20% cost reduction target will be missed, although just marginally. While this may not be viewed as a major concern, it is worth remembering, as already mentioned, that progress improvements have not been consistent, either (a) across the various indicators reviewed or (b) over the time period considered.

- (a) In terms the indicators analysed, progress has been very impressive for several measures (i.e. customer return rates and production time lost due to internal material unavailability), and far more subdued in other areas (i.e. for finished goods, raw materials and internal scrap rate).
- (b) Also, while there are a few exceptions, the year-on-year improvement trend has 'slowed down' notably

## Conclusion

Therefore, considering the previous analysis, it can be argued that achieving the 20% cost reduction objective is very unlikely if industry continues to operate as it has in the past.

Thus, whether one terms it waste elimination, cost reduction or value maximisation, it is clear that the local auto component industry needs to improve far more if it is to stand a chance of surviving. In this regard, **business unusual** is clearly required. Firms need to continuously challenge the paradigm that exists and embrace superior manufacturing practices and philosophies. This needs to involve the holistic adoption of lean manufacturing and the associated elements of JIT, TQM and CI. This remains a definite prerequisite for all firms involved in the South African automotive component industry.

## News from the regions...

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By Sean Ellis, Chief Facilitator: SAABC

### The Past

- During the months of March and April, five **process benchmarks** were undertaken for SAABC member firms, with several **benchmark reports** also finalised. Members that received their reports include Smiths Plastics and Smiths Manufacturing in KwaZulu-Natal as well as the three OEM members – General Motors, Toyota and Mercedes-Benz.
- Four benchmark **presentations/feedback sessions** were also undertaken for Feltex Automotive Trim in KwaZulu Natal, Dana Spicer Axle and General Motors in Port Elizabeth, as well as for ZF Lemforder in the Gauteng.

- In addition to the firm-level activities, a **World Class Manufacturing Just-in-Time** workshop was held at Feltex Automotive Trim for the KZN Chapter. Positive feedback was obtained from all those that attended with a special thank you extended to the management of Feltex for all their assistance.
- Three of the scheduled five SAABC Chapter breakfast workshops also took place in the Gauteng (3<sup>rd</sup> April), Port Elizabeth (4<sup>th</sup> April) and in KwaZulu-Natal (10<sup>th</sup> April), with the last two to be held in the Western Cape (8<sup>th</sup> May) and East London (13<sup>th</sup> May).

### The Present & the Future:

- The focus over the next few months will be on undertaking and completing SAABC activities, both at a firm-specific as well as cluster level.
- In terms of the SAABC WCM best practice programme, all member firms are encouraged to attend the sessions, both in the respective regions as well as in the other regions where possible. The full programme is outlined below:

| SAABC WCM Best Practice Workshop Programme - 2008 |  |   |  |
|---|--|---|--|
| Chapter   | JIT  | TQM   | CI   |
| <b>KwaZulu-Natal</b>                              | Feltex Automotive Trim<br>(22 <sup>nd</sup> April) | Pi Shurlok<br>(16 <sup>th</sup> July)             | Ramsay Engineering<br>(17 <sup>th</sup> September)                   |
| <b>Port Elizabeth</b>                             | Faurecia Interior<br>(17 <sup>th</sup> June)       | Bel-Essex Engineering<br>(8 <sup>th</sup> July)   | Dorbyl Auto System<br>(13 <sup>th</sup> – 17 <sup>th</sup> October)* |
| <b>Gauteng</b>                                    | Inergy Automotive<br>(6 <sup>th</sup> May 2008)    | ZF Lemforder<br>(21 <sup>st</sup> May)            | Shatter. GaRankuwa<br>(4 <sup>th</sup> September)                    |
| <b>East London</b>                                | Faurecia Interior<br>(12 <sup>th</sup> May)        | TBA   | Mercedes-Benz SA<br>(22 <sup>nd</sup> – 26 <sup>th</sup> September)* |
| <b>Western Cape</b>                               | EMCON Technologies<br>(26 <sup>th</sup> February)  | Senior Automotive<br>(30 <sup>th</sup> July 2008) | TBA  |

\* Final date to be confirmed

- Lastly, the SAABC has gained six new members in recent months. Two firms – Automould and Dunlop Automotive Products – as well as Trade and Investment KZN, joined the KZN Chapter, with Inergy Automotive, Hall Longmore and NAMPAK Wiegand Glass all joining the Gauteng Chapter
- For more information on any of the SAABC activities outlined in “**News from the regions...**”, please contact the Project Co-ordinator, Cleopatra Ndlovu, telephonically (031 765 3870) or via email ([saabc@bmanalysts.com](mailto:saabc@bmanalysts.com)).