



1. The Problem

In South Africa's automotive sector, the general level of competitiveness lags behind international firms. Tier 2/SME firms face particularly large gaps in terms of capacities, and their exposure to world class manufacturing principles has been low.

At the same time, Original Equipment Manufacturers (OEM) and 1st Tier automotive component manufacturers both locally and internationally are demanding increasingly higher standards relating to quality, cost, delivery and, to a certain extent, engineering expertise. They are generally dissatisfied with the competitiveness of their sub-suppliers.

The strong competitive pressures and thin margins in the sector also mean that a drive for cost savings down the supply chain are linked with lower standards of working conditions, particularly in lower tier firms.

In most cases, tier 2 firms are excluded from direct initiatives launched by most OEMs and therefore do not benefit from international expertise, such as international joint ventures and multinational participation in competitiveness improvement programs and are required to address these challenges on their own.

2. What type of intervention are we talking about?

The Automotive Industry Development Centre (AIDC), an implementation agency that is part of the provincial department of economic development, developed a manufacturing competitiveness programme in 2002 in partnership with CII (Confederation of Indian Industries) and UNIDO (United Nations Industrial Development Organisation) named 'Tirisano', for South African automotive suppliers.

The focus of the programme was to improve supplier competitiveness through the implementation of lean manufacturing tools targeting safety, quality, cost, delivery, energy efficiency and morale whilst simultaneously transferring the Continuous Improvement skills and tools to the clients' selected teams. Due to the nature of the Programme, process/competitiveness improvement can be associated with benefits like reduced overtime, increased productivity, reduced energy consumption, and improved utilities management.

The selection of SMEs for the pilot program was based on the following characteristics:

- Automotive component suppliers based in the target area
- Ranging from 27 to 126 employees in size
- Companies with a need to improve Quality, Cost and Delivery performance
- 1 Black Economic Empowerment company
- 1 Previously Disadvantaged Individual company

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The five companies targeted in the pilot program represented 371 employees, of which 248 have undergone training through the pilot program.

The program involved different forms of support at the firm level. First, the engineer or 'industry advisor' assigned to firm undertakes management orientation and awareness-raising initiatives at the enterprise level. The industry advisor then carries out a diagnostic assessment to point to potential areas of intervention to improve the firm operations. Interventions are discussed and agreed with the company management, and the advisor trains and collaborates with assigned company representatives to implement the interventions over a period of 6 months (in later program phases revised to a 12 month period).

The program also created platforms for information-sharing on continuous improvement among companies in the cluster. Monthly review meetings were held, at which the companies gave feedback on their monthly activities and evaluated progress on the program, set new targets and offered advice and solutions to the company hosting the meeting.

The results achieved could be categorized in two levels: skill transfer of world-class manufacturing tools and techniques to the entire company by the AIDC engineers and measurable improvements to the bottom line of the company's performance.

Overall benefits to companies included the following:

- ✓ Improved communication at shopfloor and management level
- ✓ Improved relationships between management and employees
- ✓ New systems) senior management walkabouts / awareness
- ✓ Cultural changes
- ✓ Awareness training
- ✓ Involvement from staff
- ✓ General buy-in for change
- ✓ Implementation of a sustainable and continuous improvement program
- ✓ Adherence to training requirements and quality management system
- ✓ Improved understanding of the needs of the customer
- ✓ Improved efficiencies and reduced costs

The combined results reported for the five companies that participated in the pilot program included:

- 843 Red tags found in the 5S activities of which 773 have been eliminated (Red tags identify safety and quality problems, maintenance and housekeeping issues)
- 751 Wastes identified of which 563 were eliminated (Wastes include overproduction, inventory, transportation, idle time, operator motion, bad quality).

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Specific company results - highlights

Company 1 : 75% time reduction in bottleneck operation changeovers

Company 2: 60% improvement in output on one production line

Company 3: 35% reduction in finished goods stock holding

Company 4: 67% improvement in overall people productivity

Company5: 50% improvement in production output

3. Implementation strategy

The Tirisano pilot program was delivered through a partnership of UNIDO, AIDC with resources from the Department of Trade and Industry and other funders. The pilot program involved Ford Motor, and in particular it requested its contribution in terms of conference facilities, program validation and feedback to ensure consistency with required specifications, and selection of enterprises.

After the pilot, in 2009, DTI approved a 3 year contract project managed through UNIDO whereby the AIDC was contracted to implement an Automotive Component Supplier Development Programme (ACSDP) providing services to 65 national automotive companies (Tier 1 and 2) within South Africa over a three year period. Participation and involvement from Ford Nissan, GMSA, DaimlerChrysler and VWSA has been leveraged with clusters involving their supply chain.

While the final beneficiaries of the program are automotive component suppliers, the project also aimed at benefitting the AIDC, to further increase its capacity to provide services on a commercially sustainable basis, and the DTI, which would improve its capacity to monitor and assess this and other similar programmes.

The Tirisano and ACSDP were subsidized by the DTI, but participating companies paid a fee that covered around 26% of the costs (R7500 per month over 13 months, amounting to approximately a total of USD 7500). In later phases efforts were made to increase the cost recovery rate, by increasing company fees. In the second phase of the program, companies paid between 26% and 55% of the costs of the services they received.

4. Success factors and lessons learnt

A review of the experience pointed to several aspects that were identified as important to the success and sustainability of the program, from a technical, institutional and financial perspective.

Technical aspects

- Duration of the cycle of services: the duration was increased from a six to a twelve month cycle assistance program to increase the impact and sustainability of the training

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- Certain topics and areas of training and support have been added to increase the scope and impact of the program (cleaner production and supervisory training) and others have been identified as supplementary areas of support
- Roll-out of training and assistance in training in indigenous languages was adopted

Institutional and financial aspects

- It was recognized that continuing and strengthening the involvement of OEM and industry lead firms was important to support the relevance of the program and buy-in from suppliers
- It was recognized that the individual abilities of the experts were a very significant factor in determining the quality and impact of the services. Diagnostic tools were introduced to support the experts in their assistance to companies and have a more standardized basis for guiding their support.
- The importance of coordination among different programs in the automotive industry was highlighted and the value of establishing and maintaining linkages with business associations was recognized as something to be further leveraged
- Efforts were made to increase the financial sustainability of the program by raising the fees for companies. However it was also recognized that companies with the weakest capacity, which needed most the assistance, also had the lowest ability to pay. A flexible approach to fees was adopted to respond to such reality.