Logistics Association of Australia Ltd

DELAWARE VALLEY INDUSTRIAL RESOURCE CENTER

In the following report, 1993 International Study Award winner Terry Brookshaw reviews the activities of Delaware Valley Industrial Resource Center.

Small and medium sized businesses, considered to be the backbone of the USA and Australian economies, struggle to compete without the comparable financial and human resources that large companies have.

In today's global marketplace, the issues that larger companies face, are the same for smaller companies. The pressure continues to increase on small companies to develop and implement quality systems, so they can achieve sustainable competitive advantage in their target markets.

The Delaware Valley Industrial Resource Center (DVIRC), based in Philadelphia, Pennsylvania, was established to address the need by local small business in the Delaware Valley, for financial and human resources to achieve global competitiveness.

Support provided by the resource center to local companies helps them implement a quality culture and continuous improvement.

The resource center, established in 1988 and funded mainly by the Pennsylvania Government, is one of eight Pennsylvanian industrial resource centers in the region. It is part of an economic development program, not a job creation program.

The businesses they seek to assist have less than 500 employees. Each resource center sets up its own structure. The Industrial Resource Centers (IRC) operate in five counties: Bucks, Chester, Delaware, Montgomery and Philadelphia, assisting 5000 manufacturers out of 18,000 companies in the region.

The IRCs are basically change agents who work with companies like Scott Paper, DuPont, Ford Electronics to train and provide technical support to their small suppliers in the region.

Manufacturers in the region are struggling to upgrade quality programs where they exist and implement one where they do not.

They are under pressure as a supplier to meet their customers' demands.

These include Quality Assurance (QA), Just in Time (JIT), and Continuous Improvement (CIP), towards lower overall cost. The pressure to initiate change and force quality manufacturing down to the grass roots has created a vital need for assistance to the smaller company.

The DVIRC quality program was developed in response to the needs of small and medium sized manufacturing companies for an affordable and flexible quality implementation program. The DVIRC program is designed to allow customisation while maintaining some crucial core components.
The 3 basic components of the model (*Partnerships for Quality,* Anthony Girifalco DVIRC Feb 1992) are:

1. The formation of partnerships that respond to market demands.
2. A pre-assessment and evaluation system to continuously improve the type and quality of total quality services delivered.
3. A global perspective that views total quality as a vital component of world class manufacturing.

The model is straightforward and easily duplicated. A DVIRC project team will go to a company at the request or invitation from the CEO who may have filled in a reply card. The project team will tour a company and make suggestions to the CEO. The assistance could be as basic as managing and supporting a competitive bid process for the company, or it could be a loan situation to assist the company to implement a capital improvement, (see figure 1).

Figure 1. Company Investigation Report

Company Name:	Ash Plastics	CV	
Address:	9750 Ashton Road	1993-94	
City, Street, Zone:	PA 19114	Engagement	94007
Contact:	Kimberley Robinson	Employees	60
Phone:	215-969-0800	Sales Last Yr:	$10 mill
County:	Philadelphia	SIC:	3089
Company Cash:	$34000.00	Equipment:	$0
IRC Match:	$0	Plant:	$0
Types:	N/A	Workforce:	$0
Other Match:	$0	Proj. Investment:	$0
Provider Cost:	$34000	IRC Staff Costs:	$500
IRC Fee:	$0	Total Proj. Value	$84500
Proj. In-Kind:	$50000	Value Added:	$0
Proj. Cost:	$84500	Start:	15/7/93
Assist:	QM	Complete:	31/7/94
Serivve:	E		
Provider:	Robert Reid Assoc.		

The loans are low interest loans for qualified productivity improvement projects. The funding could extend to a project to apply for the Malcolm Baldrige National Quality Award (MBNQA). Enlightened CEO, however, are about leading their organisations to competitiveness not necessarily “awards” and see the award as a recognition medium.

DVIRC has a six phase approach to deliver quality education, training and implementation to local companies.

Phase 0: Management Awareness and Commitment
Phase 1: Assessment
Phase 2: Implementation Plan
Phase 3: Education, Training and Communication
Phase 4: Process Action Teams Deployed
Phase 5: Continuity of TQM Program

Phase zero is to feel out and train the CEO and management team and get commitment from the executive team for change and the quality process implementation. The phases allow for large diversity in companies and for flexibility. Certification to ISO9000 for some companies might be the goal, while others may want to simply start at a basic step of continuous improvement.

Supply Side Quality

Supply Side Quality as defined by the DVIRC, is the push for quality, from the end product manufacturer down through its chain of suppliers.

This is not a new process, but what the DVIRC found was the unnerving fervour (for small suppliers) with which many large manufacturers embraced programs like Total Quality Management and Just in Time.

When Ford Motor Company, General Electrix, Xerox and 3M Incorporated adopted company wide quality programs, they expected nothing less from their suppliers.

An example provided by DVIRC is from Lavelle Aircraft, a Pennsylvanian company making quality consciousness of it supplier base a big issue for the 90s. Lavelle is also a supplier trying to meet quality standards of its own customers like General Electric Company Aircraft Engineering Division.

GE started demanding better from its suppliers, lower defect rates, better customer response.

In 1988 Lavelle won a quality award from GE, one of many such recognition awards (*Pennsylvania Technology,* First Quarter 1991).

The company, however, still had many problems. The quality of its high-tech sheetmetal parts increased which earned Lavelle some awards, but the quality of parts and materials coming into Lavelle from its suppliers has decreased.

Between 1986 and 1988 Lavalle was busy buying lots of parts from lots of suppliers.

However, when it started to get data together and look at the quality of the parts it was buying, it found about 15% of all material was flawed one way or another. By the end of 1988 the defects rose to about 25%.

Lavalle Aircraft, through its President, Richard Ludwig, decided to do for its suppliers what its customer GE had done for Lavalle, pass on the directive for its suppliers to become more quality driven and **demand** results.

Lavalle sponsored a seminar for its suppliers, told them what Lavalle's customers were demanding of them and therefore what Lavalle demanded of their suppliers.

Ludwig stated: "It helped having GE's clout behind Lavalle when it started pushing for better quality from its suppliers."

Lavalle's supplier rejection rate dropped from 20% to 6% in one year. Today the company reports the percentage of flawed material delivered by its suppliers is down to only 5%.

After nearly a year of monitoring and documenting the quality of products received from its suppliers, Lavalle eliminated many of its suppliers that did not measure up to standards.

The DVIRC co-organised and partially funded the Lavalle supplier seminars.

It also helped in networking between other companies and getting more information on potential suppliers, as well as helping Lavalle improve their operations through loans and paid consultations.

Through the combined effort of General Electric, Lavalle Aircraft and the DVIRC, the push for quality was driven two layers down into General Electric's supplier chain.

The Lavalle case study example and the success emanating from it, have stirred more original equipment manufacturers in the USA to utilise the IRC's program.

They are beginning to view their suppliers as part of the process and members of the team.

Larger Australian companies together with organisations like the Australian Quality Council, the Australian Manufacturing Council and CSIRO, are active in many areas similar to the DVIRC.

However, further initiatives are needed to assist Australian small and medium sized business to become globally competitive.

The challenge is to have an integrated approach to give practical support, investigation and/or financing, similar to the Delaware Valley Industrial Resource Center, with funding support by government and larger corporations.

With an integrated approach, Australia could take the lead in quality improvements and build a position in markets that will form global partnerships and grow export business.