

É.C.L.A.I.R.: Recognition of Continuous Improvement at PACCAR of Canada Ltd.,¹ Sainte-Thérèse, Quebec

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The PACCAR of Canada Ltd. plant in Sainte-Thérèse, Quebec, assembles Kenworth and Peterbilt brand trucks. It is the only plant in North America that produces more than one truck brand. PACCAR has a production capacity of 120 trucks per day in three shifts and manufactures six different models.

In 1907, the owner, Arthur Sicard, had the idea to blow snow using the principle of a grain thresher. In the early 1960s, the Sainte-Thérèse plant, built under Sicard inc., manufactured snow blowers. In 1967, Pacific Car & Foundry bought Sicard inc. and the plant started manufacturing heavy vehicles under the Kenworth banner. In 1971, Pacific Car & Foundry became PACCAR Inc. In April 1996, the Sainte-Thérèse plant closed after a nine-month strike and various market and labour relations problems (absenteeism, communication problems, lack of employee recognition, etc.). In September 1997, it was announced that plant operations would resume. To do this, the old plant was demolished and a new one was built. In August 1999, operations reopened under the name of PACCARof Canada Ltd.

Today, the plant employs approximately 875 employees. Unionized personnel are represented by local 728 of the PACCAR unit of the National Automobile, Aerospace, Transportation and General Workers Union of Canada (CAW-Canada). Many of the specialized employees who worked at the plant when it was closed in 1996 were rehired in August 1999.

Culture and Management Values

When the plant reopened, a radical change in the culture and management structure was necessary. To accomplish this, the plant's management committee, in collaboration with the union and former plant employees, established the vision, mission, values and guiding principles that were to lead management of the new plant.

The directors of the plant wanted to make their company the "best truck assembly plant in the industry." Accordingly, the mission was announced as: Assemble the most innovative, highest quality and most efficient trucks, in terms of operation costs, in the industry. Furthermore, within the plant, all employees are considered plant ambassadors and they are responsible for promoting the following seven values:

¹ In 2002, the company won the IRIS award from the Ordre des conseillers en ressources humaines et en relations industrielles agréés du Québec for its contribution to organizational change. It also won two other awards; one at the Mercuriades in 2003, and the other at the Grands Prix québécois de la qualité in 2004.

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- **Health and Safety:** Behave in a manner that ensures one's safety and that of others.
- **Quality:** Work with the objective of producing quality.
- **Mutual Respect:** Adopt an attitude of respect in behaviour with others.
- **Communication:** Communicate in a manner to make yourself understood and respond in a constructive manner.
- **Teamwork:** Participate actively and constructively in teamwork.
- **Continuous Improvement:** Continually work to improve working methods.
- **Customer Satisfaction:** Demonstrate your involvement in satisfying internal and external customers.

Beyond this strategic reflection, the opening of the new plant in 1999 was an opportunity to implement a lighter organizational structure, with two management levels and three production centres (mini plants), which included the production team, the support team and the management team. This smaller hierarchy made it easier to reach production objectives and better meet the requirements of customers, while giving employees more responsibility. More specifically, switching to a modular work layout and "just-in-time" supply system provided the flexibility required to manufacture different truck models that met the specific requirements of customers.

At PACCAR, the strategy for managing human resources encourages reaching the plant's operational objectives and developing a culture of participation and continuous improvement. Personnel management focuses on accountability, communication, recognition and skills development. In order to involve employees more in their work and in the success of the company, the directors have decided to adopt a continuous improvement process called É.C.L.A.I.R.

Description of the Continuous Improvement Recognition Program

When the plant was reopened in 1999, the employees decided to name the continuous improvement program É.C.L.A.I.R., which stands for "*Reconnaissance immédiate à l'idée de chaque employé*" (immediate recognition of each employee's ideas), when read backwards in French.

É.C.L.A.I.R. is based on the concept that every small improvement is important and that employees are in the best position to apply suggestions and make improvements to the work area. Continuous improvement activities can be carried out individually or in a group. This program was implemented to facilitate and implement the proposals for improvement expressed by the employees. It also supports the following two organizational priorities: trust employees and make them accountable, and add value to the product. Until now, most continuous improvement proposals came from the production centres and involved assembly and business procedures. They covered many themes, including quality, productivity and the work environment (health

and safety). The continuous improvement program was modified and improved over the years and now targets specific areas for enhancement.




In order to remain competitive, the directors of PACCAR realize that they must continually find better ways to carry out daily activities. The É.C.L.A.I.R. program is based on the idea that improvements, while small but frequent, will have a faster impact than ideas that require a great deal of study and significant investments. Furthermore, this program presumes that employees are best placed to make suggestions to improve their work. All employees are educated about the concept of added value and methods for improving workstations and work processes. They can submit their proposals immediately and implement them themselves. In fact, continuous improvement proposal is any idea that improves the quality, productivity or work environment.

The continuous improvement process at PACCAR uses three approaches: Kaizen for individuals, Kaizen for groups and the Six Sigma process.

Kaizen for Individuals

Most continuous improvement activities (70%) follow the Kaizen for individuals approach. An employee can submit a proposal at any time (Kaizen for individuals) on a form developed for this purpose. Employees can obtain this form in a number of ways: on the intranet, at communication centres, from quality coordinators or members of the É.C.L.A.I.R. committee. The proposal, which must put forward a solution, is then hand-delivered to the team representative or support coordinator for the team. Prior to submitting a continuous improvement proposal, management suggests that employees discuss it with their work team.

It is important for management that the proposal of a suggestion is acknowledged quickly. After a suggestion is submitted, the coordinators have a maximum of 48 hours to respond to the

Continuous Improvement Proposals Form	
Proposal no. : <input type="text"/>	
	
	
First name: <input type="text"/>	Surname: <input type="text"/>
Employee no.: <input type="text"/>	Date of the proposal: <input type="text"/>
Proposal originating from: <input type="checkbox"/> CPO <input type="checkbox"/> CP1 <input type="checkbox"/> CP2 <input type="checkbox"/> CP3 <input type="text"/> Other: <input type="text"/> <input type="checkbox"/> Office OR <input type="checkbox"/> Plant	
Proposal for: <input type="checkbox"/> CPO <input type="checkbox"/> CP1 <input type="checkbox"/> CP2 <input type="checkbox"/> CP3 <input type="text"/> Other: <input type="text"/> Name of the team representative or coordinator for the sector: <input type="text"/>	
Details of the proposal This proposal changes working methods to improve: <input type="checkbox"/> Health and safety <input type="checkbox"/> Product quality <input type="checkbox"/> Productivity <input type="checkbox"/> Achievement of plant objectives The benefits generated by this proposal include: Has this idea already been implemented in other sectors of the plant? <input type="checkbox"/> Yes <input type="checkbox"/> No Please include any relevant documents with your proposal (drawing, sketch, etc.) Sketches or drawings can be provided on the reverse ➔	
<input type="checkbox"/> Approved: <input type="text"/> Representative or Coordinator <input type="checkbox"/> Rejected <input type="text"/> <input type="text"/> <input type="text"/> Manager (over \$500)	
Idea implemented by you without outside support and/or you coordinated whole implementation. <input type="checkbox"/> Yes <input type="checkbox"/> No CONFIRMED BY: _____ (signature of the Coordinator)	
Choice of coupon type if proposal accepted: Sears <input type="checkbox"/> Canadian Tire <input type="checkbox"/> Réno-Dépôt <input type="checkbox"/> The Bay <input type="checkbox"/> Sports Experts <input type="checkbox"/> Promotional items: KW <input type="checkbox"/> PB <input type="checkbox"/>	

initiator and inform him or her whether the suggestion is accepted, rejected or whether more time is necessary to analyze the suggestion.

To date, nearly 90% of continuous improvement proposals have been accepted. The É.C.L.A.I.R. committee meets every week to review the process, progress and results, and to plan specific activities related to the É.C.L.A.I.R. program. To monitor the progress of the implementation of suggestions, a list describing proposal activities is updated and posted in the communication centres and on the computer network in the plant.

Suggestions with implementation costs lower than \$300 can be approved by the department manager, representative or team coordinator. If the implementation cost is between \$300 and \$600, the department manager must approve the suggestion. Finally, if the implementation cost exceeds \$600, approval is required from the plant manager, quality manager and department manager. Annual redevelopment budgets are usually allocated to the implementation of continuous improvement proposals.

Continuous improvement suggestions allow employees to perform their tasks more efficiently. To illustrate, below are two examples of Kaizen for individuals that were implemented thanks to the É.C.L.A.I.R. program: (1) the construction of a workbench on wheels, with compartments for storing tools, allowed production employees to perform their tasks seated; (2) the addition of a piece of metal at the end of a perforating machine made it easier to install the rubber around truck windows. If a suggestion is not difficult to apply, the coordinator may allow the employee to implement it immediately himself. However, if the application is more complex, specialized employees are assigned to the task.

Kaizen for Groups

Kaizen for groups requires the participation of five employees from different departments (production, office, engineering, etc.) during a period of five days. The purpose of a Kaizen for groups is to find a solution to a significant problem that can affect management, assembly procedures or the layout of work. For example, a Kaizen for groups was used to create work cells in a 'U' shape for assembling dashboards, which increased productivity by 30%. Employees who participate in a Kaizen for groups are removed from their positions during the exercise and receive one day of training on brainstorming techniques, statistics, procedures to be followed, etc. When a Kaizen for groups is held, a sign with a description of the project and the names of the participants is posted at the staff entrance and in their sector. Absolute priority is granted to employees that are members of a Kaizen for groups. Thus, all other employees in the plant are required to work with them, help them to reach their mandates and provide any help they request. When the Kaizen for groups is completed, the participants present their results to the management committee.

Six Sigma Process

The Six Sigma process is used for handling very complex problems that take time to resolve, and affect the product, processes or equipment. Based on statistical analyses, mathematical validations and engineering concepts, 160 hours of training is required. At the Sainte-Thérèse

plant, approximately 40 employees have been trained in analysis techniques and problem resolution using the Six Sigma process.

Recognition of Continuous Improvement Initiatives

PACCAR realizes the importance of recognizing the initiatives of employees, primarily in a psychological or symbolic form, but also in monetary form. PACCAR recognizes the continuous improvement suggestions made by employees by granting them ÉCLAIRs. More specifically, every idea is worth five ÉCLAIRs. When an idea is implemented by its initiator, the number of ÉCLAIRs is multiplied by two, giving the employee ten ÉCLAIRs. Accumulated ÉCLAIRs can be exchanged. Each ÉCLAIR is worth \$1 in coupons from various merchants (e.g. Sears, Canadian Tire, Réno-Dépôt), or for purchasing promotional Peterbilt or Kenworth products.

Given the high number of suggestions made by employees, all of the recommendations are not posted in the plant. However, the most important—those that affect other departments or sectors of the company—are distributed to everyone through the television network and in the plant's newsletter. Furthermore, once per year, management organizes a contest to compensate employees that participated in the É.C.L.A.I.R. process. According to the number of suggestions they have submitted, the employees obtain a certain number of tickets for a draw, and the names of the winners are posted in the plant.

Efficiency of the Continuous Improvement Recognition Program

The management of PACCAR finds it very important to be interested in how changes in culture and values are introduced. When the plant was reopened in 1999, management made a decision to inform and involve employees. In addition to explaining the various projects during general union meetings, plant management sent a letter to the home of each employee describing and explaining the need for changes and the status of current and future work. Although employees initially resisted the continuous improvement program, they later understood the validity of the program and then quickly supported it. This program has helped to develop a sense of pride and belonging. Over time, it was noticed that workers were more likely to make suggestions to help improve their work areas and be recognized for their contributions.

Since the plant was reopened, approximately 14,000 Kaizen for individuals (ÉCLAIRs), nearly 100 Kaizen for groups and 30 Six Sigma processes have been implemented. Although PACCAR has not calculated the savings exactly, the directors confirm that calculable savings have reached nearly \$10 million. In addition to improvements in productivity, it must also be noted that the suggestions have made it possible to improve the work environment, employee satisfaction at work and their commitment to the organization. According to PACCAR management, the É.C.L.A.I.R. program requires minimal investments in management, but provides a significant potential return in business results and in the atmosphere at work.

According to PACCAR management, quick feedback by team coordinators and representatives to suggestions made by employees is a key factor for success of the program. This is why employees must be recognized quickly and sincerely for their suggestions.

In 2003, the average number of continuous improvement suggestions made by each employee at PACCAR per year was six compared to a Quebec average of one per year and to an initial management objective of five on average. However, since the average number of proposals dropped to four in 2004, PACCAR's management group is currently reviewing the program in order to revitalize it. In fact, the continuous improvement program must also be improved and reviewed regularly to optimize the benefits.