SAFETY AND PRODUCTIVITY INCENTIVE PROGRAMS FOR TRANSPORT FLEETS

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SAFETY AND PRODUCTIVITY INCENTIVE PROGRAMS FOR TRANSPORT FLEETS

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Ce document est également disponible en français : Programmes de mesures incitatives relatifs à la sécurité et à la productivité pour parcs de camions (TP 13886F).
A 1995 Canada Safety Council report for Transport Canada (TP 12305E) identified a need for information to help fleets ensure the success of their incentive programs. A three-phase work program followed this preliminary research. Phase 1 was an industry survey completed in 1998 for Transport Canada (TP 13256E). Phase 2 of the work program involved the development of a bilingual pilot test version of a “How-To” manual (TP 13413E) for fleets to use in developing, administering and evaluating incentive programs.

This report focuses mainly on Phase 3, which consisted of the application and evaluation of the manual. The evaluation involved a series of four focus group sessions with fleet managers (three in Canada and one in the United States) and one focus group session with Canadian drivers. Pilot incentive programs were undertaken with three Canadian-based fleets that also operate in the United States.

Results of Phase 3 confirm that incentive programs can be successful when they are properly designed, implemented and administered. The How-To manual (TP 13805E) now needs to be promoted with the insurance industry, trucking associations and safety groups. To assist smaller fleets, a shortened version of the manual in checklist format is provided. The report recommends that a support network of individuals knowledgeable in this area be established across North America through “Train-the-Trainer” workshops.
### Résumé

Un rapport produit en 1995 par le Conseil canadien de la sécurité, à la demande de Transports Canada (TP 12305E), révélait la nécessité de fournir de l'information aux entreprises de camionnage pour les aider à faire un succès de leurs programmes de mesures incitatives. Faisant suite à cette étude préliminaire, un plan de travail en trois phases a été mis sur pied. La phase 1, réalisée dès 1998 pour Transports Canada (TP 13256F), consistait en un inventaire des programmes en vigueur dans l'industrie canadienne du camionnage. La phase 2 comportait la rédaction d'une version pour essais pilotes d'un manuel de procédures bilingue (TP 13413F) à l'usage des parcs de camions dans l'élaboration, l'administration et l'évaluation de programmes de mesures incitatives. 

Le présent rapport porte principalement sur la phase 3, qui a consisté en l'application et l'évaluation du manuel. Aux fins de l'évaluation, quatre groupes de discussion ont été organisés (trois au Canada et un aux États-Unis), qui mettaient en présence des gestionnaires de parcs de camions. Un autre groupe de discussion réunissait des conducteurs canadiens. Des programmes-pilotes de mesures incitatives ont été mis en place dans trois entreprises de camionnage établies au Canada, dont les véhicules sont exploités au Canada et aux États-Unis. 

Les résultats de la phase 3 confirment que les programmes de mesures incitatives peuvent être couronnés de succès, pourvu qu'ils soient conçus, mis en place et administrés correctement. Le manuel de procédures (TP 13805E) s'avère un outil bien adapté, et l'heure est maintenant venue de le diffuser auprès des compagnies d'assurances, des associations de camionnage et des groupes qui militent en faveur de la sécurité. Une version abrégée du manuel (sous la forme d'une liste de contrôle) est aussi prévue pour les entreprises de taille modeste. Le rapport recommande de constituer, à l'échelle de l'Amérique du Nord, un réseau de personnes bien renseignées sur la question, en organisant des ateliers de formation d'instructeurs.
The authors express their appreciation to all members of the steering committee, who contributed their expertise freely. This guidance and input enabled the authors to develop the content of this manual much more fully than would otherwise have been possible.

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SUMMARY

A 1995 Transport Canada report (TP 12305E) identified a need for information to help fleets ensure the success of their incentive programs. A three-phase work program followed this preliminary research. Phase 1 was an industry survey completed in 1998 for Transport Canada (TP 13256E). The objective of the survey was to identify the types of incentive programs in place within North American transport fleets, as well as their strengths and weaknesses. Obstacles to their successful implementation and measures of performance were also studied and recommendations made on further actions that would enhance the use of safety and productivity incentive programs by the trucking industry. Phase 2 of the work program involved the development of a bilingual pilot test version of a “How-To” manual (TP 13413E) for fleets to use in developing, administering and evaluating incentive programs.

Phase 3 included the application and evaluation of the manual. This evaluation involved a series of four focus group sessions with fleet managers (three in Canada and one in the United States) and one focus group session with Canadian drivers. Pilot incentive programs were undertaken with three Canadian-based fleets that also operate in the United States.

The focus group sessions provided mainly qualitative information related to incentive programs. They confirmed that the How-To manual (TP 13805E) would be a very useful tool for companies to use and that changes to the manual would be largely editorial in nature. In addition to obtaining feedback on the manual, the focus group sessions aided in answering several questions raised by Transport Canada and the US Federal Motor Carrier Safety Administration regarding the use of driver monitoring technologies.

The three pilot programs provided quantitative information used to complete benefit-cost analyses. The types of incentive programs tested included a safety incentive program,
a productivity (or performance) program, a fuel economy incentive program and a driver retention incentive program. One of the fleets tested a safety incentive program, a productivity program and a fuel economy incentive program. Another tested a driver retention program and a safety incentive program, while the third tested a safety incentive program. All three companies showed positive results, often with benefit-cost ratios of three to one or better.

Overall, the results of Phase 3 confirm that incentive programs can be successful when they are properly designed, implemented and administered. The How-To manual was received well with only minor editorial revisions required. It now needs to be promoted with the insurance industry, trucking associations and safety groups.

The pilot programs and focus group discussions both indicated that many fleets with 50 or fewer vehicles will need help in developing and administering their incentive programs even with the How-To manual. These companies require a support network of low-cost, easily available expertise. It is recommended that the Canada Safety Council maintain the manual and update it as required. Local organizations will need to be trained to provide local consulting expertise. In this context, it is recommended that a “train-the-trainer” program be developed to provide local resources for trucking companies to contact.

It is also recommended that additional work be done with smaller fleets (those with fewer than 50 vehicles) to further demonstrate the benefits of incentive programs. This could take the form of a long-term research project that would monitor such fleets to demonstrate the benefits of incentive programs over the medium to long term.
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**Appendix A**: Checklist for Developing an Incentive Program
1 INTRODUCTION

To meet the challenge of improving safety and productivity in a competitive marketplace, transport fleets are increasingly turning to safety incentive programs. A preliminary study for Transport Canada\(^1\) concluded that:

- Of currently available accident countermeasures, those that affect people’s motivation seem to be the most promising;

- Those that reward people for crash-free performance hold the most promise;

- Some promise to be more effective than others because they contain elements that appear to further enhance motivation toward safety.

A three-phase work program followed this preliminary research. Phase 1 was an industry survey completed in 1998 for Transport Canada\(^2\). This work was completed under the guidance of a steering committee with representatives from trucking associations, safety organizations, the insurance industry and commercial fleets.

The objective of the survey was to identify the types of incentive programs in place within North American transport fleets, as well as their strengths and weaknesses. Obstacles to their successful implementation and measures of performance were also studied and recommendations made on further actions that would enhance the use of safety and productivity incentive programs by the trucking industry.

\(^1\) Wilde, G. J. S., *Improving Trucking Safety and Profitability Through Safety Incentive Schemes*, TP 12305E, Transportation Development Centre, Transport Canada, July 1995. (French version TP 12305F also available.)

\(^2\) Canada Safety Council, *Incentive Programs for Enhancing Truck Safety and Productivity – A Canadian Perspective*, TP 13256E, Transportation Development Centre, Transport Canada, June 1998. (French version TP 13256F also available.)
Phase 2 of the work program involved the development of a bilingual pilot test version of a “How-To” manual\(^3\) for fleets to use in developing, administering and evaluating incentive programs.

This report focuses mainly on Phase 3 of the project: the application and evaluation of the How-To manual. A copy of this manual\(^4\) can be downloaded from the Canada Safety Council website at www.safety-council.org.

The methodology for Phase 3 was as follows:

- Make presentations to transport fleets and transport associations/organizations to establish cooperation for this work and identify transport fleets willing to participate in the evaluation process.

- Establish incentive teams and data collection protocol with the transport fleets that agreed to participate in the validation process.

- Collect and analyse quantitative data gathered from transport fleets.

- Organize focus groups in parts of Canada and the United States and publicize the events with transport fleets, associations and organizations.

- Collect and analyse qualitative data gathered from the five focus groups.

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\(^4\) Canada Safety Council, *How To Implement Incentive Programs for Safety and Productivity Guidelines for Transport Fleets*, TP 13805E, Transportation Development Centre, Transport Canada, July 2001. (French version TP 13805F also available.)
• Publish the Phase 3 results in a final technical report. Throughout this validation process the research team was guided and assisted by the same Steering Committee as in the first two phases of the research.

2 RESULTS FROM PHASES 1 AND 2

As noted above, previous work by the research team was conducted in two phases: an industry survey and the development of tools to assist transport fleets in implementing incentive programs. The two phases were conducted over a period of three years (1997 through 1999).

2.1 Phase 1: Industry Survey

An on-site personal interview survey\(^5\) was conducted in 1997-98 with 40 Canadian-based trucking fleets regarding their use of incentive programs. The interviews focused on long-haul trucking firms. The companies varied in size (from fewer than 20 vehicles to over 500) and type (private, for-hire, bulk, LTL, etc.). Of the fleets interviewed, 29 had some form of incentive program in place, four were considering one and seven did not have a program in place and were not considering one. Two of these seven previously had programs in place but had discontinued them because they felt they had not been effective.

The survey demonstrated that some firms achieve more success with their programs than others. Factors critical to the success of an incentive program were identified. Also, companies did not have a reference point from which to develop their programs. Typically, they relied on their own judgment and word-of-mouth from industry contacts. This lack of reference material means that ad hoc programs often have inherent problems that lead to their demise.

\(^5\) Canada Safety Council, *Incentive Programs*, TP 13256E.
It was also noted that there was a lack of information on the benefit-cost of incentive programs. It was felt this was an additional obstacle to the use of incentive programs, as management generally requires proof of return on investment before embarking on such a program.

2.2 Phase 2: How-To Manual – Pilot Testing Version

As a result of the survey findings, a pilot testing version of the How-To manual (TP 13413E) for guiding fleets in developing and administering their incentive programs was developed in 1999-2000. The manual’s objectives were as follows:

- Provide transport fleets with reference material should they decide to investigate the implementation of incentive programs or make modifications to existing ones.
- Provide smaller transport fleets with an easy-to-use manual.
- Provide smaller transport fleets with examples and case studies of incentive programs implemented in other transport fleets and statistical results following implementation.
- Provide guidance to transport fleets on definitions of accident preventability.
- Provide guidance to transport fleets on assessing the costs and benefits of incentive programs.

3 PHASE 3: PILOT TESTING OF THE MANUAL AND RESEARCH QUESTIONS

The objective of Phase 3 was to test and validate the manual developed in Phase 2 with three fleets and through industry focus groups.
3.1 Sample of Pilot Program Fleets

The fleets that pilot tested incentive programs are as follows:6

- A less-than-truckload (LTL) carrier with 80 vehicles implemented two incentive programs: an employee retention program and a safety incentive program.

- A truckload carrier with 30 vehicles implemented an Excellence Incentive program aimed at improving safety and fuel economy; reporting overages, shortages and damages; and increasing Sunday departures.

- A bulk carrier with 350 vehicles implemented a driver retention program.

The results of the pilot tests are reported in Section 4.

3.2 Sample of Focus Groups

In addition to the pilot programs, a series of discussion group sessions was held with fleet managers and drivers as follows:

- Montreal, October 12, 2000: Sixteen people in attendance, with seven fleets represented.

- Toronto, November 8, 2000: Fifteen people in attendance, with eight fleets represented.

- Calgary, November 8, 2000: Ten people in attendance, with six fleets represented.

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6 To ensure confidentiality, the names of these fleets are not provided.
• Oakville, December 2000: Four drivers in attendance, with three fleets (for-hire and private) represented. Driving experience ranged from 3 to 20 years.

• Pittsburgh, June 6, 2001: Seven people in attendance, with two fleets represented.

A wide range of fleets participated in these discussions. Both for-hire and private fleets were represented. Long-haul as well as local fleets were represented, as were bulk freight carriers, LTL carriers and general freight carriers. Experience with incentive programs also varied, from very little to many years.

4 RESULTS OF PILOT PROGRAMS

As part of the validation of the How-To manual (TP 13413E), several different types of incentive programs were tested with three different companies. The types of incentive programs tested included a safety incentive program, a productivity (or performance) program, a fuel economy incentive program and a driver retention incentive program. One of the fleets tested a safety incentive program, a productivity program and a fuel economy incentive program. Another had a driver retention program as well as a safety incentive program. The third tested a safety incentive program.

4.1 Company One: Driver Retention and Safety Incentive Programs

This company is a non-unionized LTL carrier operating one terminal and 80 vehicles. All highway vehicles are equipped with on-board recorders and some are also equipped with satellite tracking devices. The company also has contractual arrangements with six owner-operators. Including the administrative and maintenance staff, the company currently has 120 employees. It has been in operation for more than 40 years, and currently operates in both Canada and the United States.
The driver retention incentive program was based on driver hiring policies and practices, self-esteem and continuous improvement. From October 1996 until March 1997, the first mandate of the newly hired Safety Director was to meet with all employees individually and in groups to introduce himself and the new program. At the same time, the company completed a driver turnover analysis. This analysis showed that over 60 percent of driver turnover occurred within the first six months of employment. It was concluded that part of the problem was due to the company’s rapid growth and that any such future growth would need to be better managed.

In 1997 the company had a turnover rate of 98 percent for employees with zero to six months’ experience with the company. In 1998 the company introduced a per-mile bonus for drivers who had less than six months’ experience with the firm. The bonus was paid to the employee at the end of a six-month period provided the driver did not have a preventable event/collision during that period. An employee with no preventable events/collisions would receive the full amount of the bonus. If a new employee were involved in a preventable event/collision, the direct cost of that event would be deducted from the bonus. In 1999 the turnover rate for drivers with less than six months’ experience had dropped to 15 to 20 percent, about the same turnover rate for drivers with more than six months’ experience. This turnover rate includes normal change in company personnel through retirement. The overall bonus cost per driver retained by this program was about $2,000. The cost to replace a driver is estimated to be around $8,000. Thus the driver retention initiative program provided a benefit-cost ratio of 4:1 for each employee retained.

The safety incentive program was based on recognition awards as incentives. Although the company increased its exposure (miles driven) by 15 percent during the two-year period following the introduction of the safety incentives program, total annual events/collisions decreased by nearly 25 percent. Overall, the company experienced a
35 percent decrease in the number of events/collisions per unit and events/collisions per million vehicle miles after introduction of the safety incentive program.

Company records indicated that the direct cost of all events in 1998 was $320,000. Indirect costs were estimated to add another 20 percent, for a total cost of $384,000. Total estimated direct costs for 1999 and 2000 averaged $130,000 per annum. These increased to $156,000 per annum with indirect costs included. Total savings were therefore estimated to be $228,000 per annum ($384,000 before minus $156,000 after). The cost of the program was estimated to be in the order of $60,000 per annum, including the salary of the Director of Safety. Thus the safety incentive program provided an approximate benefit-cost ratio of 3.8 to 1. Note that some of the cost savings may have been due to the lower driver turnover; however, it was not possible to determine whether this was the case and, if so, what portion could be attributed to the decrease in turnover.

4.2 Company Two: Performance and Fuel Efficiency Incentive Programs

This company is a unionized truckload (TL) carrier operating approximately 30 vehicles in Canada as well as the United States. The company wanted to use incentive programs for two reasons: improve employee motivation and sense of belonging, and maintain fuel efficiency in the face of rising energy costs.

The programs focused on key operational aspects of the company and were based strictly on monetary rewards for safety; overages, shortages and damage reports and log books; willingness on the part of the drivers to leave on a Sunday; and fuel efficiency.

Considered individually, the incentive programs gave mixed results for the first year. However, the cumulative effect of the programs on driver turnover meant that the overall incentive program was quite successful. The programs are being continued into the
second year with several adjustments aimed at motivating more drivers to obtain the bonuses. Results available to date are as follows:

*Events/Collisions:* In 2000, the company recorded 30 events/collisions. All were minor collisions. In 2000, drivers were deemed responsible in 22 of these events. Reliable data for previous years are not available. In 2000, the company paid the full bonus to 25 percent of eligible drivers. Because of a lack of data on events/collisions prior to the incentive program being introduced, it was not possible to complete a benefit-cost calculation on this program. Management felt its losses were already very low and was not really expecting any immediate reductions. The incentive program was introduced as a way to keep these costs low and perhaps reduce them even more over time. It was also seen as a way to reward the safer, more motivated drivers.

*Overages, Shortages and Damages:* With the incentive program, the company began tracking these events with a report filed for each incident. Management indicated there was a marked continual improvement in this area but did not have any previous data to allow a detailed evaluation. Three drivers qualified for this bonus in the first year. The company expects this number to increase over time. Data were not available to do a benefit-cost analysis of this incentive program. One of the side benefits of the incentive program was that a need was identified for a manual illustrating proper documentation.

*Sunday Departure:* This was a problem area for the company and hence a priority for the establishment of an incentive program. In 2000, the company gave a bonus to seven drivers for Sunday departures while a total of 12 drivers signed up during the year for Sunday departure. The five additional drivers simply fell short of the minimum 25 trips necessary for the bonus to take effect. A refinement to the program for 2001 was a bonus of $10 for each Sunday departure beyond 25. Overall, the company was encouraged by the drivers’ reaction to this new initiative.
**Fuel Efficiency:** This was one of the more important elements of the incentive programs implemented at the company. The company was hoping to improve its fleet fuel economy by 0.25 mpg (2 L/100 km) with the incentive program. From a driver’s point of view, this was also the area where major financial gains could be made. After adjustments for winter driving conditions, first quarter results for 2001 indicated that the program achieved a 0.12 mpg (1 L/100 km) improvement in fuel economy. About 50 percent of drivers received bonuses, double the number of the previous year. Prorated over the entire year, this would mean annual savings of $15,000 in fuel costs with bonus payments of $6,100, resulting in a benefit-cost ratio of 2.5 to 1. The company believes that, as more drivers respond to the program and as fuel economy driving techniques are further improved for all drivers, the fleet fuel economy will be improved by at least 0.25 mpg (2 L/100 km).

**Indirect Benefits – Reduced Driver Turnover:** Driver turnover was reduced by 50 percent in 2000 compared to 1999. Based on a cost of $8,000 to replace a fully productive employee, this represents a saving of $56,000 per annum. Company management attributes at least part of this improvement to the introduction of the incentive programs. These cost savings mean that from a benefit-cost point of view, the overall program has been a success.

4.3 **Company Three: Driver Retention Program**

This company is a non-unionized TL carrier operating approximately 350 vehicles, mostly within Canada but also into the United States. The company wanted to use incentive programs to reduce driver turnover, which had averaged 80 percent a year for the previous three years. The company undertook a number of initiatives over a two-year period aimed at reducing its high rate of driver turnover. Each of these is described below. The company feels that it is the cumulative effect of all of these initiatives that
lead to a major reduction in driver turnover. In effect, the company built a solid foundation for its program.

In March 1997 the company held an emergency management meeting to review the crisis situation concerning driver turnover. All branch managers and assistant branch managers attended the ½ day symposium to brainstorm the issue. Presentations were made using the videotapes, “A Day in the Life of a Trucker” and “A Day in the Life of a Dispatcher”. These videos expound on the theme that it is, in fact, a positive collective corporate culture and attitude toward drivers that will solve the problem. Agreement was reached to embrace this concept and look for ways to work toward reducing driver turnover. One of the first initiatives was to review the compensation package.

Key subsequent initiatives to reduce driver turnover included:

- symposiums with dispatch, management and the driver advisory board that focused on team building and corporate culture;

- the rental of six billboards along main highways during National Driver Appreciation Week;

- employee appreciation days held in each terminal; and

- the introduction of new terminal manager’s performance evaluation criteria, with 70 of 100 points assigned to safety and human resource issues.

A driver turnover analysis identified that 60 percent of drivers who left the company had been with the company six months or less. Also, an exit interview analysis indicated that the company’s orientation and training programs for new drivers were well accepted and
did not require any modifications. As a result, efforts were made to increase feedback to new drivers to make them feel more accepted and welcome.

A “Driver of the Year” incentive program with clear and documented eligibility criteria was introduced near the end of 1999 and made available to all drivers. For the first five years, the program will be recognition-based with a certificate awarded at the company banquet. After year five, each eligible driver will receive $500. This will increase by $100 each year until year ten, after which it will increase by $200 per year. Prior to implementing the program, it was determined that approximately 30 drivers would have qualified in the previous year had the incentive program been in place. After the first year of operation, a total of 92 drivers received the certificate, indicating the program did improve driver performance.

In the first year of the Driver of the Year Program, driver turnover was reduced by nearly 40 percent, for a total reduction of 100 drivers. Based on a cost saving of $8,000 per driver, the total cost savings were estimated at $800,000. This reduction in turnover has continued into 2001 with turnover reducing even more. Should the trend for the year continue, turnover will have fallen by 60 percent. Total costs for the initiatives, including billboards, banquets, hats, and guest speakers, is $150,000, providing a benefit-cost ratio of 5.3 to 1.

The dramatic reduction in turnover cannot be attributed to any one of the initiatives noted above; rather, it is the cumulative effect of all initiatives. This indicates the importance of building a strong foundation for any incentive program. The Driver of the Year incentive was well received and drivers responded to it in a very positive way.
5 FOCUS GROUPS AND RESEARCH QUESTIONS

In addition to obtaining feedback on the pilot testing version of the How-To manual (TP 13413E), the focus group sessions (see section 3.2 for details) aided in answering several questions raised by Transport Canada and the US Federal Motor Carrier Safety Administration.

- Should incentive programs focus on driving behaviours (speed, headway, etc.), outcomes (violations and crashes), or both?

- Should rewards be monetary or are there other rewards that can be as effective (e.g., praise, recognition)?

- When monetary rewards are used, is there any tendency for drivers to falsify records to hide incidents/crashes?

- When monetary rewards are used, is there any evidence that the motivation for safety becomes more “external” and less “internal”?

- What form should industry-based recognition programs take? How should drivers benefit from these programs? What are the necessary steps for ensuring the long-term success of such programs?

- What is the best compromise between privacy of data and accountability? How much data should managers have access to – for example, daily averages, weekly averages, other summary data?

- In general, does increased driver feedback improve performance?
• Which on-board safety monitoring technologies, if any, would drivers willingly accept? Which would they least be likely to accept?

• Does experience with the use of on-board safety monitoring lead to increased or decreased driver acceptance?

• If on-board safety monitoring is used, should there be continuous feedback in the vehicle or should it be after-the-fact summary feedback?

• What are the best approaches to remediation – interventions to improve the safety of poor-performing drivers?

• How should management deal with poor performers?

• What should be done to help commercial fleets to implement incentive programs?

5.1 Research Results: The Focus Groups

The data collected through the five focus groups listed in section 3.2 was mostly qualitative. In total, 48 representatives from 23 companies participated in four focus groups. For the fifth focus group, four drivers from three companies participated.

In addition, the three transport fleets participating in the pilot programs provided some quantitative data as a result of the implementation of incentive programs within their fleets.

In general, response to the How-To manual (TP 13413E) was very positive. Participants in the focus groups supported the work and found the manual to be a useful document, even those representing fleets with considerable experience with incentive programs. Six
fleets indicated they would be making improvements to their incentive programs as a result of knowledge gained from reading the manual and/or participating in the focus group discussions.

The discussions confirmed that although incentive programs are not yet widespread in the trucking industry, they have existed for a long time. Fleets with 50 or more vehicles are the most frequent users of incentive programs. The larger the fleet, the more likely the fleet is to have an incentive program.

The focus group discussions also confirmed that it takes time for incentive programs to work and that successful programs are those that have been implemented with long-term objectives in mind. Driver involvement is critical to the success of these programs, but it is equally true that without long-term management commitment, these programs are unlikely to produce good results.

The data analysis focused on five specific areas: behaviour, technology, rewards, poor performance and benefit-cost.

**BEHAVIOUR**

- Incentive programs have a positive impact on management as well as driver behaviour. The introduction of incentive programs draws attention to problem areas of a company and generally leads to the resolution of these problems and other irritants within the fleet. Incentive programs mean better record keeping which, in turn, aids management decision-making.

- Employee motivation is a significant issue for transport fleets. Approximately half of the fleet representatives attending the focus groups felt that motivation is declining. They indicated that while about 80 percent of employees would have positively
responded to the introduction of company programs in the past, that number is around 60 percent today. The remaining 40 percent can be divided equally between good employees who do not want to get involved in any program and employees who simply do not care and are transient by nature. This situation is probably exacerbated by the chronic shortage of qualified drivers and the problems that lead to high driver turnover. The fleets’ awareness of these reduced motivation levels was part of the reason for their interest in incentive programs.

• Drivers agreed that behavioural change is achievable through positive reinforcement with or without incentive programs. Incentive programs do reinforce motivation.

• There are two diverging opinions on the benefits of posting driver performance results. On the one hand, management has found that the approach works well. On the other hand, the drivers who participated in the focus groups were unanimous in stating that posting the results can discourage poor or marginal performers instead of motivating them.

• Fleet representatives participating in the focus groups noted that the potential for under-reporting accidents exists within any safety incentive program; however, this is normally a minor issue and has minimal impact on the effectiveness of the incentive program. Some fleets counteract this possibility by releasing anyone found not reporting an accident or incident.

• Behavioural change can also be noticed more when the desired change affects some of the fundamental tasks related to driving a truck. It was found that drivers could respond well to technical discussions regarding their driving habits provided that management had the proper measurement tools to prove their point.
• None of the companies involved in the focus groups fully include their owner-operators as part of their incentive programs. The drivers suggested that including owner-operators could improve industry performance. Owner-operators are an integral part of the industry.

• The role and participation of families at events organized by transport fleets is positive in all cases encountered in this research.

• Truck stops were identified as a point of negative influence for drivers of all ages as conversations about incentive programs at these locations tend to centre on problems that drivers have experienced with these programs in the past (e.g., programs being cut just as they start producing results or earned bonuses not being paid).

TECHNOLOGY

• Fleet managers attending the focus groups noted that although transport personnel do not like change in general, they see technological changes as unavoidable in their quest for more competitive practices. They also realize how it helps them improve their performance. The way in which the technology is introduced is the key to acceptance.

• Management participants in the focus groups agreed that monitoring technologies were beneficial. Family-owned transport fleets usually take a more cautious approach toward technological changes.

• Drivers generally accept new technologies better when they are introduced gradually. Fleet representatives confirmed that, in any event, they do expect resistance from the

7 Many companies, however, do include owner-operators in their incentive programs.
start. Resistance to technological innovations is strongest for on-board computers that monitor performance and generally require some driver involvement to operate.

- Incentive programs can work better if accompanied by clear measurement guidelines. Monitoring technologies can provide the detailed performance data required of the more sophisticated incentive programs.

- Because they own their own equipment, owner-operators are often treated separately when it comes to technology implementation. Transport fleets treat them as subcontractors rather than employees. Some transport fleets have introduced financing/payment plans to assist owner-operators wishing to acquire on-board technologies and have brought owner-operators into their incentive programs.

- Drivers who attended the focus group found that the on-board technologies were not user-friendly and that they seem to be getting more complex rather than easier to use.

- The human factor aspect of on-board computers appears to be more important than is currently recognized. All drivers attending the focus group admitted to a certain level of distraction when they use on-board monitoring devices. Simply put, few drivers can ignore the fact that they are being monitored.

**REWARDS**

- Generally speaking, drivers prefer cash bonuses to non-monetary rewards.

- The tax implications of monetary rewards must be explained clearly to all beneficiaries.

- The issue of fairness is important for both non-monetary and monetary rewards.
Monetary rewards seem to work better when issued quarterly and when the payment cycle is timed to coincide with family events requiring special expenses such as Christmas, back to school and summer vacation.

If there were an industry-wide program to recognize incentive programs, drivers and fleet management would have confidence in a government-run program rather than an industry-based program. Insurance corporations can play a positive role but it is unfair to expect them to be involved financially or otherwise in broader recognition of incentive programs.

**POOR PERFORMERS**

All fleet representatives who participated in the focus groups stated that their companies have a punitive system in place to deal with poor performers.

They also indicated that truck drivers are often more strict in accident preventability determinations than non-drivers.

Proper definition of the preventability of incidents/accidents is a major obstacle to the enhancement of safety programs within transport fleets. A poor definition tends to discourage employees.

Transport fleets cannot track poor performers properly because they move from fleet to fleet. The problem is exacerbated by the fact that there has been a chronic shortage of qualified drivers for some time now. Furthermore, transport fleets are often reluctant to provide references for a former employee.
Drivers attending the focus group felt that if new drivers were better trained, industry safety records would improve. Lack of proper training for new drivers was a major issue with the driver focus group.

The “just-in-time” environment in which most drivers are hired today makes it difficult for management to do a proper check of a prospective employee’s records.

**BENEFIT-COST**

Because of the time, resources and complexities involved in collecting the data, few companies maintain databases that would allow them to do a benefit-cost analysis of their incentive programs.

In most cases, transport fleets that have had long-standing incentive programs retain these programs on their personal belief that these programs are beneficial for their fleets.

One transport fleet representative stated that the company’s operating cost has decreased by 7 percent as a result of using incentive programs.

Another transport fleet representative noted that after the introduction of an incentive program, turnover rate decreased from 85 percent to 15 percent. It is estimated that turnover costs can be as high as $8,000 per employee.

5.2 Conclusions from Focus Group Discussions

Incentive programs are generally perceived as positive by the transport fleets that have been able to properly manage the implementation of those programs.
• It is sometimes difficult to strike the right balance between punitive measures and positive incentive measures.

• There is no universal methodology for the introduction of incentive programs to transport fleets. Each transport fleet is unique with its own culture. Therefore, programs need to be adjusted to match each fleet’s management style, needs, financial ability, and personalities.

• Networking among fleets is an effective way for fleets to improve their existing incentive programs.

• All transport fleet representatives participating in the focus groups found the How-To manual (TP 13413E) useful as a good internal reference document. Improvements to the manual should therefore be evolutionary rather than radical.

6 CHANGES TO MANUAL

Changes to the manual as a result of the pilot testing were largely editorial in nature. A major change was the inclusion of a section on how to successfully employ monitoring technologies within incentive programs. Also, a chapter was added on the results of the three pilot programs. The revised manual has been published as How to Implement Incentive Programs for Safety and Productivity: Guidelines for Transport Fleets (TP 13805E).

7 REPORT DISSEMINATION

During the course of the project, efforts were made by the study team to distribute the manual and the results of the research to industry. These include:
• Canada Safety Council website: The manual and the industry survey report are posted on the website for anyone to download (www.safety-council.org, click on “traffic”).

• Transportation Development Centre website: The manual and industry survey report are posted on this site as well (www.tc.gc.ca/tdc/projects/road/d/9161.htm).

• Private Motor Truck Council of Canada Annual Conferences: Presentations were made at the 1999 and 2000 annual conferences on the manual and research findings.


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8 CONCLUSIONS

Incentive programs can be successful when they are properly designed, implemented and administered, as proven by the successes companies have had with their programs and the results of the pilot programs described in Section 4. The How-To manual (TP 13413E) was well received with minor revisions required. It now needs to be promoted with the insurance industry, trucking associations and safety groups.

To assist smaller fleets, a shortened version of the manual in a checklist format is recommended (see Appendix A).

The pilot programs and focus group discussions indicated that many fleets, especially those with 50 or fewer vehicles, will need help in developing and administering their incentive programs even with the How-To manual. These companies require a support network of low-cost, locally available expertise. While the Canada Safety Council can maintain the manual and update it as required, local organizations need to be trained to provide local consulting expertise. In this context, there is a need for a “train-the-trainer” program to develop local resources for trucking companies to contact.

Additional work needs to be done with smaller fleets (fleets with fewer than 50 vehicles) to further demonstrate the benefits of incentive programs. This could take the form of a long-term research project that would monitor such fleets to demonstrate the benefits of incentive programs over the medium to long term.

9 RECOMMENDATIONS

The work performed by the project team from 1998 to 2001 has lead to some realizations and observations. It is essential that incentive programs be accessible to smaller and medium-sized transport fleets if they are to be effective. Those fleets constitute the
majority of transport fleets in both Canada and the United States. However, small and medium-sized transport fleets are probably not willing to pay typical consulting fees to implement incentive programs within their organization. With this in mind, we would like to recommend that:

1. The Canada Safety Council (CSC) act as both a repository for the How-To manual and a coordinator for the ensuing implementation process.

2. The revised How-To manual be distributed widely to insurance companies, safety organizations, trade magazines and trucking associations.

3. Seed money be found for a “train-the-trainer” program organized by the CSC as a pilot project for a workshop. Individuals affiliated with the transport industry and willing to offer consulting services to small and medium-sized transport fleets at less than market rates would be trained to implement incentive programs, through use of the How-To manual, within transport fleets. Those expected to attend this workshop would be semi-retired people with experience in the transport industry or people from organizations affiliated with the trucking industry and willing to assist small transport fleets.

4. CSC issue a certificate stating that the individuals attending CSC workshops on incentive programs are certified to implement the programs outlined in the How-To manual.

5. Train-the-trainer workshops be organized in both Canada and the United States to establish a network of professionals ready to help smaller fleets implement incentive programs.

6. A research project be undertaken to demonstrate the benefits and the difficulties of incentive programs for smaller and medium-sized transport fleets.
BIBLIOGRAPHY


APPENDIX A
CHECKLIST FOR DEVELOPING
AN INCENTIVE PROGRAM
1 INTRODUCTION

Transport Fleets implement incentive programs to achieve one or more of the following general objectives:

- Improve safety
- Enhance productivity and efficiency
- Improve employee retention
- Identify training needs

On the safety side: Act on small problems to prevent big ones, as illustrated by Figure 1.

![Figure 1: Relationship Between Minor Incidents and Major Collisions](source)

2 PREPARATION CHECKLIST

This checklist ensures the necessary foundation for a successful incentive program.

- Is top management fully committed to the program?
- Does management understand that an effective incentive program requires a long-term commitment and investment?
- Will management make a written commitment to the program?
- Has a budget been allocated for the program?
- Has a co-ordinator been named to take overall responsibility for the program?
- Will a mechanism be established to work with the employees’ group targeted by the program?
- Will a team of employees be formed that is willing and able to help with implementation?
- Will the program be evaluated regularly, and changes made as needed?
- Is the program being introduced for the right reasons (e.g., NOT in reaction to a crisis)?

You will find that considering incentive programs will force you to think about some of the areas in your company that may need improvement.

3 DECIDING ON THE INCENTIVES

After the target areas for incentives have been chosen and a budget has been set for the program, the next task consists of choosing the types of incentives and the way these incentives will be given to participants.

- Do you have suggestions to be presented to your incentive team?

Do you want the incentive program to be:
- Cash
- Recognition awards
- Rewards
- Merchandise
- Special event
- Combination of things above

Factors to keep in mind:
- Will the participants see the reward as being desirable and attractive?
- Are you rewarding long-term performance?
- Do the employees see the program as being fair and consistent?
- Are the rewards attainable?
4 ACTION PLAN

You have to know where you’re going if you want to get there. Here is a sample of a Goals and Action Plan for an incentive program on fuel efficiency.

Also
- Have you thought about introducing some form of monitoring system?
  - YES
  - NO

- Will the technology being introduced aid drivers in the performance of their daily duties and provide positive feedback on how to improve their performance?
  - YES
  - NO

Table 1: Sample Goals and Action Plan
(Provided courtesy of the Council of Driver Trainers, Eastern Ontario Chapter)

<table>
<thead>
<tr>
<th>GOALS &amp; ACTION PLAN (GAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong> Fuel Incentive Program</td>
</tr>
<tr>
<td><strong>Company:</strong> ABC Trucking</td>
</tr>
<tr>
<td><strong>GOAL:</strong> (What do you want to accomplish? What is your purpose or broad objective?)</td>
</tr>
<tr>
<td>To reduce fuel consumption by 61,600 imperial gallons.</td>
</tr>
<tr>
<td>To improve fleet performance from 7.1 miles per gallon to 7.5 miles per gallon during the period (day/month/year) to (day/month/year).</td>
</tr>
<tr>
<td><strong>OBJECTIVES:</strong> (How will you know what you accomplish? State your specific targets or yardsticks by which you will measure improvement.)</td>
</tr>
<tr>
<td>Effective (day/month/year) we will be purchasing 61,600 fewer imperial gallons than we did in (year). Fuel costs in (year) will show minimum savings of $151,536 over the same period in (year). We will be able to gauge savings by the month as fuel costs for each month of (year) are calculated and recorded.</td>
</tr>
</tbody>
</table>

**ACTION PLAN**

<table>
<thead>
<tr>
<th>ACTION PLAN</th>
<th>TARGET DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formulate a plan to increase our miles per gallon from 7.1 mpg to 7.5 mpg and have it ready for presentation to the decision maker.</td>
<td>(day/month/year)</td>
</tr>
</tbody>
</table>

| Outline the program to the heads of both the maintenance and administrative departments. The maintenance department is to ensure all vehicles are fully capable of supplying the miles per gallon to our goal standards. The administrative department is to ensure the mechanisms are in place to track fuel consumption of each vehicle. We also want to be able to track monthly progress of our goal. In view of the fact each vehicle has a specific driver, we want to set up a competitive situation. | (day/month/year) |

| Outline the program to all drivers at meeting. | (day/month/year) |
### ACTION PLAN

<table>
<thead>
<tr>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete the training program and spend one week with the driver trainer.</td>
</tr>
<tr>
<td>Complete lesson plans and a detailed program for presentation to the drivers at meetings between Christmas and New Year’s.</td>
</tr>
<tr>
<td>Commence program of driver trainer taking trips with each driver and ensure we have an evaluation program in place.</td>
</tr>
<tr>
<td>Check progress of program and make necessary changes.</td>
</tr>
<tr>
<td>Prepare a monthly progress report for all drivers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TARGET DATE</th>
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<tbody>
<tr>
<td>(day/month/year)</td>
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<tr>
<td>(day/month/year)</td>
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<tr>
<td>(day/month/year)</td>
</tr>
</tbody>
</table>

### COST

<table>
<thead>
<tr>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two times $1,520 for engine and cab heaters for trial on tractors 16 and 22.</td>
</tr>
<tr>
<td>Pay driver trainer $600/week for approximately 22 weeks.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BENEFIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save in excess of $150,000 over present fuel cost.</td>
</tr>
<tr>
<td>Improve our fuel consumption by one mile per imperial gallon.</td>
</tr>
</tbody>
</table>

### REVIEW 7 & AGREEMENT

<table>
<thead>
<tr>
<th>SIGNATURE:</th>
<th>DATE:</th>
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<tr>
<td>SIGNATURE:</td>
<td>DATE:</td>
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### 5 INCENTIVE TEAM

Incentive programs that take a team approach typically achieve far better results than programs driven by one person.

An incentive team has three main responsibilities:

- To serve as a communication point within the fleet
- To implement agreed-upon incentive programs
- To watch for problems and achievements

- Have you established your own incentive team?
- Have you thought who could be on the incentive team?
- What will be the implementation role of the incentive team?
- Who will chair the meetings?
- Who will take notes at meetings?
- Have you thought about the following before your first incentive team meeting?
  - [ ] Statement of purpose
  - [ ] Scope of activities
  - [ ] Number of members
Meeting frequency

☐ Is the team setting fair and objective standards for the program?
☐ Is the team focusing on facts or faults?
☐ Has an appeal process been established to deal with drivers not satisfied with the decisions of the incentive team?
☐ Have you identified outside services with specialized expertise in case you need it?

6  COMMUNICATION

An ongoing flow of information will maintain interest in the program.

☐ Do you have information about the incentive program in your employee manual?
☐ Are you meeting with employees to discuss one-on-one?
☐ Are you posting information on bulletin boards?
☐ Are you using your internal newsletters/bulletins effectively?
☐ Have you designed and distributed suggestion boxes?
☐ Are you planning training sessions to help drivers reach the objectives?
☐ Are you planning special events like a reception to honour the best drivers?
☐ Are you networking to exchange ideas with other transport fleets using incentives?

7  OBJECTIONS AND OBSTACLES TO INCENTIVE PROGRAMS

Expect to have some employees who object to a program. You must remember that incentives may not work for all employees. Here are some of the most common objections and obstacles. Which ones are you encountering?

☐ Drivers tend to under-report collisions so that they can have the rewards.
☐ We sometimes have so-called phantom collisions where no one is apparently to blame.
☐ New employees complain that they feel excluded.

Implementing incentive programs also demands commitment on the part of the company. Here are some objections on the management side:

☐ Administrative costs of running incentive programs are too high.
☐ Administering incentive programs is time-consuming.
☐ Incentive programs demand a re-organization of data collection within a fleet.

One of the major problems with incentive programs using cash as rewards relates to the taxation of the rewards.

☐ Make sure employees are aware that payments under an incentive program are taxable.
8 PUBLIC IMAGE BUILDING

Don’t be shy about your program.

- Have you informed your customers about your incentive program?
- Have you informed government officials and the general public about your incentive program?
- Have you sent local newspapers information about your incentive program and about the drivers winning rewards?
- Don’t forget to advertise your company to future employees. Have you built ties with training schools to present your company to new drivers?

9 EVALUATE YOUR PROGRAM

All programs need to be evaluated and adjusted regularly.

- Are you taking a “before and after” approach?
- Have you set realistic time frames?
- Are you keeping complete records?
- Have you developed costing and benefits procedures?
- Have you included in your calculations indirect costs and benefits in your evaluation?

REMEMBER – BE A MENTOR…NOT A TORMENTOR