

Understanding Health and Safety Programs: Information versus System-based Approaches

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Over the past 10 years, the forestry industry has seen tremendous changes in the way that health and safety is managed. Many companies have devoted substantial time and resources to the development of formalized safety programs in order to better protect their workers, and achieve compliance with evolving regulatory and industry requirements. As a forestry workforce researcher and a certified external auditor with the BC Forest Safety Council, I have had the opportunity to examine the different methods that companies have adopted in developing their programs. I have paid close attention to the strategies that are helping companies succeed, and the pitfalls that are holding others back. During these observations, I have identified two distinctly different approaches to health and safety program development. These include system-based programs (*System-programs*) and information-based programs (*Info-programs*). These two approaches to health and safety program development offer different challenges and benefits to the companies that use them.

System-programs and *Info-programs* can generally be distinguished according to six basic characteristics (see Table 1).

Table 1

	Info-programs	System-programs
1. Foundation	Based on the <i>accumulation of information</i> over time.	Based on the efficient flow of information and activity within a <i>clear organizational structure</i> .
2. Development	Easy to develop and implement at first, but <i>less efficient over time</i> .	Requires more time and resources to develop and implement, but <i>more efficient over time</i> .
3. Efficiency	Efficiency depends on employees' <i>internalized sense of order</i> .	Efficiency depends on <i>completion of clearly assigned tasks</i> and occupational duties.
4. Learning	<i>Difficult</i> for new employees to master because understanding of program is based on experience.	New employees provided with <i>structured orientation and clear instructions</i> regarding their role in maintaining the program.
5. Problem-solving	Correcting deficiencies and responding to emergencies depends on ability of employee to locate and use correct information.	Positive outcomes facilitated by <i>clear directions</i> for resolving deficiencies and responding to critical events in a consistent manner and according to best practices.
6. Program Improvement	Improvement conducted on reactive piece-meal basis, resulting in changes generally occurring <i>after</i> problems occur.	Funnels key information towards program improvement to promote change <i>before</i> problems occur. Includes internal diagnostics for detecting problems.

Different companies experience different demands in the workplace, and have varying depths of human resources to work with. Therefore, the best program for every company may not be identical, and some companies may experience more success with an *Info-program* than with a *System-program*. However, it has been my experience in the field that companies integrating the features of *System-programs* are generally better prepared for growth and employee turn-over, have an easier time meeting the requirements of SAFE Companies certification, and are in a better position to demonstrate their due diligence in protecting the safety of their employees. These conclusions are based on observations of mid-sized to larger companies, with some level of hierarchical complexity (more than 20 employees, with multiple job titles such as manager, supervisor, foreperson, and worker). Ultimately, it is up to each company to determine the best fit for their operations. This article is intended to assist companies in evaluating their own program, and identifying desirable features when making revisions to their existing program or when working with a consultant to develop and implement a new program.

1. Foundation

The foundation is the single most important aspect of a health and safety program, and it exerts a powerful influence on the other five dimensions of a program (see Table 1). The foundation is the central concept or underlying structure of a safety program, and it is directly related to program efficiency and the fulfillment of occupational responsibilities.

The foundation of a *System-program* is based on an organized flow of information and activity within a clear company structure. A system foundation includes a clearly defined set of company policies that act as a framework to direct the flow of activity and information. The written program reflects the foundation in the form of distinct chapters or sections for different issues that are well organized with every item of information located under an appropriate heading. Relevant sections are tied directly to other parts of the program, with policies and job titles linked to specific formalized documents and safe work procedures. Each employee's job title provides them with a clear position within the program and directs them to fulfill a list of responsibilities. *System-programs* are like an assembly line, with different personnel performing different jobs, and clear divisions between different departments. Every task and documentation responsibility is attached to a specific job title in the company, so there is no uncertainty regarding who must do what. The foundation of a *System-program* revolves around the processing of each safety event or activity through the assembly line, with each member of the workplace performing their respective duties according to company policies.

In contrast, *Info-programs* are based on the accumulation of information, added in layers over time. *Info-programs* often possess a simple structure, with a lack of clear order or complex linkages between the different sections of the program. They are often developed by company owners themselves, and may begin with a set of general policies or a collection of information provided to them by a client or contracting company. Instead of an assembly line, *Info-programs* are more similar to a box of books that people reach into whenever they need an answer to a question. Although the answer is probably in there somewhere, retrieving it quickly, and ensuring that the right answer is consistently located can be a challenge. *Info-programs* are often difficult to navigate and do not provide clear boundaries between different subjects or functions. For example, there are often mix-ups between occupational responsibilities and safe work procedures, or between orientation and training. These types of errors can produce problems for the company in running their program efficiently, and lead to faulty implementation. I will elaborate on these two issues to demonstrate their relationship with the foundation of the program.

Figure 1

Training and orientation have different purposes, require the collection and distribution of different types of information, and involve different personnel requirements. The purpose of orientations is to ensure that employees are given all necessary information before proceeding to the workplace. A proper orientation includes all 13 items required for young and new workers, according to *Section 3.23 of the OHS Regulation*. Orientations simply provide employees with information regarding a company's health and safety program and their job, and do not require the employee to demonstrate any skill or competency. Figure 1 shows an example of a properly completed orientation record.

The purpose of training is to provide specialized instruction and to ensure employees are competent to perform specific tasks, before allowing them to perform the tasks independently in the workplace. While orientations simply involve *distributing* information to employees, training has the additional requirement of *collecting* information regarding the employee's competency. *Info-programs* often include training items in orientations, and simply provide information to the employee without recording any steps taken by the company to ensure they are competent.

For example, using a brush saw is a training issue that requires detailed instruction, followed by the employee's competency being observed and documented by a qualified instructor. Workplace violence, however, is an orientation issue that simply involves the company providing the employee with the appropriate information, and recording the steps taken to ensure employees are aware of the associated company policies. Figure 2 shows an example of a training record. It would be inappropriate to include tasks such as brush saw operation, driving, or any other specific job in an orientation without taking steps to ensure that the worker can perform the job safely.


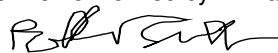

Sample Company Orientation Record	
Date: May 1, 2008-11-20	
Worker name: John Davis	
Person giving orientation: Patti Smith	
Issue Covered	Check
Name and # of supervisor	✓
Rights and responsibilities, and right to refuse unsafe work	✓
Health and safety rules	✓
Working alone or in isolation	✓
Workplace hazards (complete list)	✓
Violence in the workplace policy	✓
PPE policy and rules	✓
First aid facilities and how to get help	✓
Emergency procedures and evacuation	✓
Company health and safety program	✓
WHMIS	✓
Joint OH&S Committee	✓
Instruction and demonstration of worker's tasks	✓
Provided copy of written program	✓
I verify that I have been given an orientation and additional information regarding the issues above: 	

Figure 2

Sample Training Record		
Brush Saw Operation		
Date: May 1, 2008		
Worker name: John Davis		
Name of Qualified Trainer: Patti Smith		
Training Topic	Training complete Worker Initials	Training complete Trainer Initials
Use of PPE	JT	es
WHMIS for fuels	JT	es
Tool design	JT	es
Saw maintenance	JT	es
Blade guards	JT	es
Refuelling the saw	JT	es
Starting the saw	JT	es
Proper saw handling	JT	es
Safe cutting techniques	JT	es
Changing blades	JT	es
Saw storage	JT	es
Saw Hazards	JT	es
Lock Out procedures	JT	es
Competency of worker verified by: Patti Smith		
Signature: 		
Worker signature: 		

Training must be completed by a person that is either certified or qualified to provide instruction in the specific task. Training records must include the identity of the trainer and the employee being trained, and confirmation by the trainer that the employee has demonstrated the ability to perform the task safely. Orientations, on the other hand, can be completed by virtually any knowledgeable employee with access to the correct information.

The foundation of a *System-program* clearly distinguishes the types of information that are involved in training and orientation, and ensures that tasks requiring demonstration of competency are located in the appropriate (training) section of the program. A *System-program* assigns responsibility for completion and documentation of training and orientations to correct personnel as part of their occupational responsibilities. This protects the company and workers by ensuring that all employees are fully prepared for the workplace, and the company has taken adequate steps to ensure workers are fully informed and able to perform their jobs safely.

Table 2

Safe Work Procedures	Occupational Responsibilities
<ul style="list-style-type: none"> • Applies to a specific task in the workplace For example: Operating an ATV • Includes a different set of procedures for each specific task performed in the workplace. • Makes reference to sections of the Occupational Health and Safety Regulation and other pieces of legislation that are relevant to the specific task (such as the <i>Ministry of Transportation Regulations</i> or <i>Transportation of Dangerous Goods</i>). For example, safe work procedures for chain saw operators in a thinning operation may reference <i>Section 8.11(1)</i> of the <i>OHS Regulation</i>, requiring the use of head protection when falling objects are present. • Includes step-by-step instruction to perform the task safely • Makes reference to formalized documents when they are relevant to the task For example, safe work procedures for changing a flat tire should include the requirement to make an entry in a <i>Corrective Action Log</i>. 	<ul style="list-style-type: none"> • Applies to a specific job title For example: Field Supervisor • Includes a different set for each distinct job title in the company • Begins with the general duties listed in <i>Part 3, Division 3, sections 115-120 of the Occupational Health and Safety Regulation</i> • Identifies the employee's position in the chain of command, including who they report to and who they must supervise • Identifies the formalized documents that the employee is responsible for completing on a regular basis For example, a Field Supervisor may be responsible for completing a <i>Worksite Inspection Form</i> once per day, a <i>Crew Meeting Form</i> once per week, and a <i>Contract Safety Report</i> once per month.

Another common mix-up associated with *Info-programs* is confusion between occupational responsibilities and safe work procedures. Safe work procedures (often called job-safety breakdowns or JSBs) include step-by-step instructions for performing specific tasks, such as changing flat tires, loading and ATV, or operating a vehicle. Safe work procedures explain exactly how specific tasks must be performed in the workplace.

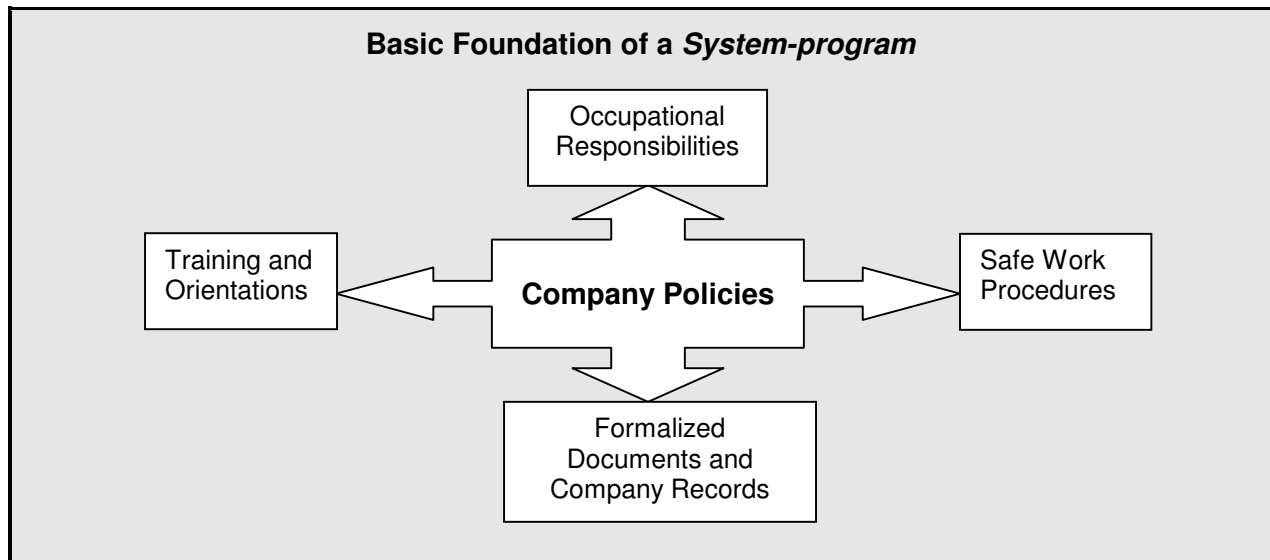
In contrast, occupational responsibilities (often referred to as job or position responsibilities or duties) are attached to specific job titles within the workplace (such as a supervisor, manager, or worker) and explain the role that the employee plays within the health and safety program (see

Table 2). Occupational responsibilities begin with the general duties listed in *Part 3, Division 3, sections 115-120 of the Occupational Health and Safety Regulation*. In addition to these general duties, occupational responsibilities in a *System-program* include lists of tasks and documentation duties.

Occupational responsibilities may also make reference to the employee's relationship with different positions in the chain of command, and identify their position in the flow of information within the company (who they provide documentation to, and who they collect information from). The foundation of a *System-program* carefully distinguishes occupational responsibilities from safe work procedures, and provides every job title in the company with a complete list of what they must do to ensure that the health and safety program operates smoothly. A *System-program* also provides safe work procedures for every task performed in the workplace, to ensure that workers utilize best practices in all situations. Mixing occupational responsibilities with safe work procedures can lead to lack of clarity regarding what tasks are to be performed by which personnel. This is especially apparent in regard to documentation responsibilities.

The central components in the foundation of a health and safety program are the company policies. A policy can be defined as a pre-determined course of action that guides decision-making. In a *System-program*, company policies are the instructions that control and organize the flow of information and activity. If a *System-program* is an assembly line, the policies are the instruction manual. Company policies dictate the relationship between all of the other components of the health and safety program, including occupational responsibilities, safe work procedures, and formalized documents (see Figure 3). Whenever an employee needs to make a decision, they should be able to obtain clear guidance from the company policies regarding the correct choice of action. The policies should then guide them towards the appropriate decision, based on specific technical content in the program.

Figure 3



Policies direct employees to their occupational responsibilities, and indicate which safe work procedures and formalized documents apply to each situation. While occupational responsibilities provide a list of tasks and duties, company policies shape them into a logical and efficient pattern. In *Info-programs*, company policies are often referred to as rules or procedures,

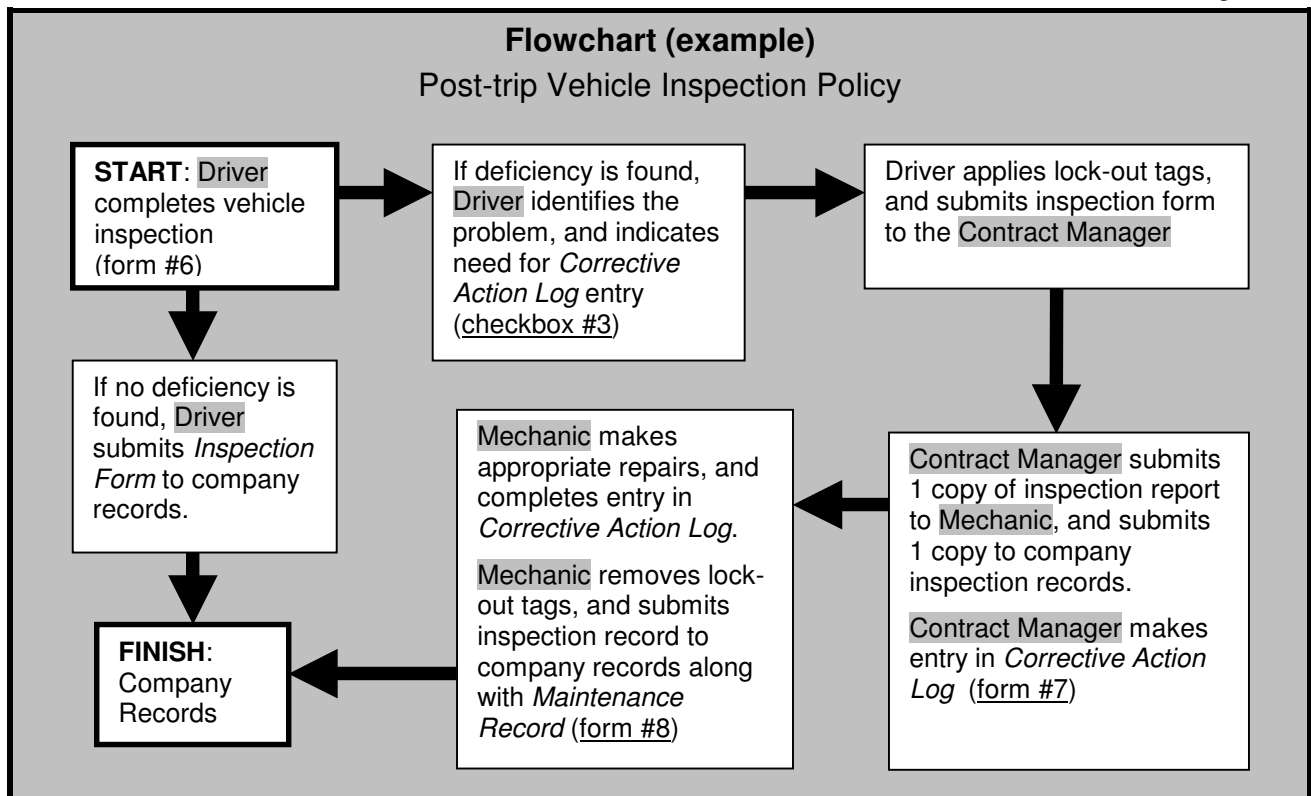
or they are mixed in with the occupational responsibilities. They are frequently treated as stand-alone directives, and do not make any clear reference to other parts of the safety program. Rules are a type of policy that outlines the boundaries of acceptable behaviour. However, policies as a whole do more than simply identify prohibited and accepted behaviour. Policies provide guidance to decision-making to assist employees in using the health and safety program. Company policies will usually make reference to specific job titles within the company, and the documents that are connected to the policy (see Table 3).

Table 3

<p>Drug and Alcohol Policy (System-program policy example)</p> <p>Any employee that is found to be under the influence of drugs or alcohol in the workplace will be immediately suspended from their duties and be subject to review before the Contract Manager.</p> <p>Any Supervisor or Foreperson that believes that an Employee (including another Supervisor or Foreperson) is under the influence of drugs or alcohol in the workplace, will fill out a Safety Incident Report (form #5), and send it to the Contract Manager.</p> <p>The Contract Manager will refer to the <i>Employee Assistance Policy</i>, when making a decision regarding the employee, and fill out an Employee Report (form #10) and add it to the Employee's file.</p>
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Some policies involve simple directions, and can easily be understood based on a few short statements. Other policies can be more complex, and involve multiple decisions that require additional clarification to assist employees in completion of their duties. For example, an inspection policy for company vehicles can be easier to understand with the provision of a flow chart that outlines the decision-making process (see Figure 4).

Figure 4



Flow charts help make policies clear and comprehensible to employees, and provide them with a convenient method of navigating the company program. They provide a visual outline of the foundation of the program, operating as an assembly line of activity and information. The foundation of a *System-program* is also clearly visible in the formalized documents utilized by the company. In order to ensure that formalized documents fit neatly into a structured flow of information, a *System-program* integrates a number of key features (see Table 4).

Table 4

Key Features of Documents in a *System-Program*

1. Requests signatures from specific job titles or personnel within the company to verify the information in the document.
2. Indicates which job titles must receive copies of the document (on the document or elsewhere)
For example, an *Incident Investigation Form* may include the requirement to provide a copy of the form to the company owner.
3. Appears in the list of occupational responsibilities for specific job titles to ensure completion by the correct personnel.
For example, completion of *Worksite Inspection Forms* may appear in the list of responsibilities for a field supervisor.
4. Includes requirements for further documentation and linkages with other forms or policies
For example, a *Vehicle Inspection Form* may include a checkbox to indicate the need for a *Corrective Action Log* entry if damage or deficiencies are detected during the inspection.
5. Referenced in the company policies.
For example, the *Incident Investigation Policy* may require an *Incident Investigation Form* to be completed following any incident in which there was an injury, significant damage to company property, or a strong possibility of serious injury or death.
6. Accompanied by flow charts to indicate the process to be followed in completing and filing the document (see figure 3).
7. Included on a documentation matrix or checklist that includes every formalized document used by the company, who is responsible for completing it, when it must be utilized, and who receives copies.

Info-programs that have grown through a gradual accumulation of content frequently exhibit deficiencies in their record-keeping practices. Their formalized documents are often free-floating items located in the appendices of the program, largely disconnected from the rest of the foundation. As the company encounters new requirements, a new form is simply added to the program, without attention to its position in the foundation. The lack of policies directing the flow of information, and the use of documents that are not fully integrated with the policies and the occupational responsibilities creates opportunities for important details to be neglected.

In contrast, *System-programs* place documents into an assembly-line pattern that ensures the document is shared with all appropriate personnel and all necessary information is collected at each step of the process. Flow charts (see Figure 4) help ensure that employees understand the paths that documents follow, the relationship between different documents in the health and safety program, and all the steps and options that are involved. A comprehensive system of document management embedded in the foundation of a health and safety program provides companies and

their employees with a clear record of their due diligence, and increases the efficiency of program by funnelling information towards appropriate locations.

2. Development

Info-programs have the appearance of being easier to develop and implement at first glance. All one needs to do is collect all of the information and policies deemed relevant to health and safety in the workplace, and place it in a file or book. The lack of linkages between different sections of the program makes it easy to develop formalized documents for specific issues or purposes, because there is no underlying flow of information that the forms must be linked to. The fractured nature of *Info-programs* allows new components to be created and added to the program without concern for their effect on other parts of the program. Implementation appears straight forward, as employees are given the impression that they simply need to review the information contained in the program. However, as explained in the next section, *Info-programs* tend to be less efficient in the long run, limiting the benefit of the quick and easy implementation.

System-programs require more time and resources to develop and implement in the beginning. Many companies need to utilize the services of a professional consultant or program developer to help them build a program that effectively manages the flow of all relevant health and safety information. Time must be taken in designing the program not only to ensure that all necessary content and technical details are included, but also to ensure that the flow of information within the program occurs in an effective and efficient manner. Responsibilities must be assigned to appropriate job titles, policies must be linked to specific formalized documents and safe work procedures, and checklists need to be created to assist employees in completing all of their duties.

The flow of information and activity needs to be carefully matched to the company's organizational structure so that the correct personnel are given responsibility for completing appropriate tasks. Some companies find it efficient to assign new worker orientations to supervisors, while other companies find the first aid attendant is the best person for this task. A *System-program* needs to account not only for the division of tasks within the company, but also for the relationship between the job titles. While the first aid attendants may report to a supervisor in one company, another company may find it more efficient for them to report directly to the contract manager. Developing and implementing a *System-program* requires knowing exactly who is best qualified and best positioned to complete which tasks within the individual company, and which personnel need to be involved in which streams of information.

3. Efficiency

Efficiency is defined as the production of positive results with minimal waste. Every time a person has to be reminded to complete a task, and every time a required task is neglected or performed improperly, waste occurs. When a health and safety program depends upon the individual understandings of employees in order to function properly, waste is inevitable. Invariably, different employees will develop different ideas regarding the way that the program must run. As soon as a company grows to a point where the employees cannot coordinate their individual understanding of the program, different approaches develop, and the company begins to waste time and resources in an effort to keep everyone on the same page.

The efficiency of *Info-programs* depends upon the ability of employees to organize the contents of the program in their own mind. Without an underlying flow of information and activity structuring the program, the efficient execution of safety responsibilities relies upon employees creating an internal sense of order for the choices they make. Without clear policies to guide them, employees must devote substantial attention to deciding which documents to fill out, what data to collect, and what tasks to complete. When the number of tasks to be completed is small, and there are only a few management and supervisory personnel involved, an *Info-program* can function efficiently without the guidance of flow charts and linkages between documents and occupational responsibilities. However, any company operating in multiple locations, or any company in which all management and supervisory personnel (including forepersons) are unable to meet together on a daily basis may find that relying on workers' internal sense of order can quickly limit the efficiency of their health and safety program.

In a *System-program*, the efficiency of the program depends upon employees completing a list of clearly assigned tasks attached to their occupational responsibilities. These lists are tied into all essential aspects of the safety program, including company policies, job safety breakdowns, and formalized documents. *System-programs* often utilize checklists to assist employees in ensuring they have completed all their necessary tasks and responsibilities, and matrixes that identify every formalized document in the program (and which job titles is responsible for completing it). Instead of relying upon their own understanding of the program, employees are guided towards their position within the flow of information and activities within the program, and provided with clear directions regarding what they must do to keep the program operating properly. In time, *System-programs* become more efficient, because they become integrated with the company's regular activities, and employee habits become shaped by the company policies.

4. Learning

Info-programs can be difficult for new employees to master because efficient use of the program depends upon obtaining experience and developing an internalized sense of order that fits with the understanding of other employees. Under an *Info-program*, new employees may experience difficulties if regular tasks are embedded in informal company habits, rather than in clearly stated occupational responsibilities or document flow-charts. Employees may even work with an *Info-program* for a lengthy period of time, without actually learning how to use it in a proper manner and without fulfilling their safety responsibilities. This can lead to inefficiencies, failures in due diligence, and potential risk to the employees and the company.

An *Info-system* may seem less complex than a *System-program* at first glance, and may appear to have less material for an employee to absorb. However, a *System-program* positions employees within a flow of information and activity, allowing them to focus exclusively on the parts of the program that apply only to themselves. In a *System-program*, employees are introduced to the role they play in the health and safety program at the very beginning of their employment training, and have their activities and responsibilities coordinated with those of other employees. As mentioned earlier, the implementation and development of a *System-program* may require more time and resources (and some company coaching may be of assistance). However, all employees should end up fully understanding their position and responsibilities within the program, and have a clear list of tasks to complete in order to keep the program functioning efficiently.

The consistent use of detailed training programs assists in ensuring that employees are taught how to perform tasks properly, and reduces the need for relearning tasks at a later date. In an *Info-system*, training tends to begin with job-safety breakdowns. In a *System-program*, training begins with company policies, the employee's role in the health and safety program, and their list of occupational responsibilities. This assists new employees in fully mastering the program because their success relies on following clear directions, rather than organizing all of the information inside their head and ensuring they interpret the program the same way as experienced workers.

5. Problem-solving

As mentioned earlier, *Info-programs* depend heavily on the ability of the worker to make sense of the program in their own mind. Using an *Info-program* to solve problems (such as correctly addressing deficiencies or responding to an emergency) can depend greatly upon the ability of the worker to locate the correct information, and make a correct decision. For example, completion of inspections should be linked directly to corrective action logs when deficiencies are detected (see Figure 4). A *System-program* has a logical flow for all documents and activities that automatically cues employees to complete additional forms or tasks when necessary. Programs without clear guidance and a lack of linkages between different documents increase the probability that important documentation tasks and other responsibilities will be performed incorrectly. Furthermore, additional time and human resources are likely to be utilized in fixing problems that have been left uncorrected, and assisting employees that are unsure of the correct course of action.

Comprehensive *System-programs* also provide clear guidance for dealing with critical events. Flow-charts for decision-making can be greatly useful for employees dealing with an emergency in the field. Choices such as deciding upon a method of emergency transportation, or coordinating radio contact by relay are easier to accomplish with the aid of logically sequenced instructions and visual aids. Such tools can save precious minutes in an emergency that may otherwise be wasted sifting through a poorly integrated collection of information. Even an employee with minimal experience should be able to pick up a written safety program, locate the relevant policy in the table of contents, and use it as a guide for making their decisions.

Even after a critical event has occurred, *System-programs* continue to provide important guidance to the company and its employees by helping funnel vital information into incident investigations. The proper collection and treatment of investigation information is vital for identifying the cause of incidents, preventing future occurrences, and protecting the interests of the companies and individuals involved. It is important that employees do not provide critical incident information to anybody or any agency following a critical event, other than key supervisory and management personnel, and any authorized investigative agencies, such as WorkSafeBC and the RCMP. Incident information should not be shared with the press or other individuals until a proper investigation has been completed. A comprehensive *System-program* ensures that all parties involved in an incident and an ensuing investigation are provided with clear instructions regarding what information they should collect, and whom it should be shared with. This increases the ability of the investigation to accurately determine the cause of the incident, and decreases the probability that misleading or sensitive information will be spread to inappropriate parties.

6. Program Improvement

Comprehensive *System-programs* are designed to enable program improvement on a pro-active basis, through an ongoing process of input and review. Documents completed during meetings or field activities can be set up to funnel key information towards review of the company program. For example, formalized documents for crew meetings and workplace inspection forms can include a checkbox for providing a copy of the minutes to the Joint OH&S Committee. In turn, the formalized document used for the committee minutes can include a checkbox for ensuring that inspection forms and meeting minutes from the past month are provided at the meeting. This effectively “closes” the system by linking the relationship between the different parts of the program (committee meetings and field activities) at both ends. This provides the Committee with valuable information to consider while fulfilling their regulatory obligation to advise the company of recommendations for program improvement, in accordance with *Part 3 Division 4 Section 130 (f)* of the *Occupational Health and Safety Regulation*.

Incident investigation forms should include the requirement to review the company program if a policy or job-safety breakdown was a contributing or root cause of an incident or close call. A comprehensive *System-program* integrates such requirements directly into the formalized documents so that employees are automatically cued to evaluate the company program on an ongoing basis, and contribute to the process of improvement. Not only does this process lead to better practices and policies within the company, but it also helps meet BASE audit requirements for utilizing worker input in the program revision process.

System-programs can also integrate features that assist in the statistical analysis of the company’s safety performance. For example, a company may choose to track a specific item of information, such as the number of close calls experienced in the field, or the number of days lost to injury. Such information can provide important indicators of employee performance and practices, and alert the company of critical issues requiring attention and sites for program improvement. Funnelling information and documents towards a specific location through a comprehensive document management system allows companies to extract such information with much greater ease than they would experience sifting through the uncoordinated files of an *Info-program*. The ability to obtain such data has been made much easier in recent years with the development of electronically based safety programs that automatically and extract key data from incident report forms and inspection records. Electronically based *System-programs* can also be set up to provide confirmation of task completions to assist in monitoring implementation, and evaluating employee performance.

Info-programs are set up to make improvements on a reactive basis, usually in response to incidents or accidents in the workplace. Furthermore, program improvements often consist of simple addition of information, whereas a *System-program* focuses on adjusting policies and shifting practices in the assembly line of information and activity. If information is simply added to the program, implementation of the changes in practice hinge upon the employees being able to integrate the additional content. This can prove to be a hindrance over time if employees become overwhelmed by the content, and do not know how to use all of the information that is included in the program. However, a *System-program* overcomes this challenge by inserting new information relative to the foundation, and linking it effectively with the policies, procedures, and responsibilities.

System-programs often include *internal diagnostic tools* that help identify deficiencies within the company and within the system. These tools include self-audits, document completion

checklists, and certification and training tracking tools. These tools help the company determine if all aspects of due diligence are being fulfilled without waiting for an incident to occur. They essentially tell the company if the system is working the way it is intended to. Certification and training tracking tools help managers and supervisors ensure that their crews have the correct personnel to recognize industry codes of practice, and help identify when training and certification renewal is required. Documentation checklists can be provided for individual positions to help guide them through their role in the program. General documentation checklists can be provided for managers to ensure that their personnel are keeping up to date with their documentation duties. Electronically based *System-programs* are particularly useful for performing internal diagnostic functions.

A Note on Due Diligence

An important function of a health and safety program is providing evidence of the due diligence taken to ensure the safety of all members of the workplace. Due diligence often gets mistaken for liability, and although they are related concepts they possess subtly different meanings. To exercise due diligence in a health and safety context is to take every reasonable measure to protect the safety of the workplace. Due diligence is created by taking positive actions, and it can exist regardless of whether or not an incident or accident occurs. Due diligence is demonstrated by proof of activities, such as written records of training, inspections, and meetings.

Liability, on the other hand, is created through negative events; it is the responsibility that one inherits when they have failed in their duties or departed from a reasonable standard of care. Liability is proven through investigative processes, and is created by failures to act properly. Therefore, an important goal in a health and safety program is to assist the company in maintaining its due diligence, and to prevent the company and its employees from ending up in a position of liability. An effective program should stimulate positive action, and does not focus solely on the liability that may only exist if the positive action is neglected. *System-programs* help employees and employers meet requirements for due diligence by providing them with a clear set of guidelines for fulfilling their responsibilities, and ensuring that accurate records are taken of the steps taken to adhere to the company policies. Checklists and formalized documents, when used correctly, provide employees and companies with a clear record of the steps taken in the field to ensure the health and safety of the workers.

A strong system foundation assists companies and employees in making correct decisions, and provides a clear record of the steps they take to ensure a safe and healthy workplace. Companies and their employees should be able to take credit for the good work they do in protecting safety, but the sense of informal order that supports an *Info-system* can make it difficult to clearly demonstrate their good intentions if and when something unfortunate occurs. High quality *System-programs* provide clear documentation of due diligence according to a precisely delineated set of responsibilities.

System-programs are especially useful to manager and company owners for measuring and evaluating safety in the workplace. These two objectives (measuring and evaluating) are key requirements in the BASE Audit leadership component, and provide an opportunity for ensuring that due diligence is being fulfilled at the highest levels of the company. Evidence of due diligence for workers and front-line supervisors can generally be demonstrated by proof of using correct safe work procedures and fulfilling occupational responsibilities. Senior management and ownership

often needs to do more than show they have worn their PPE and performed a regular inspection. In a worst case scenario, they may need to show the steps they have taken to ensure the safe performance of the supervisors they oversee, and have taken steps to measure and evaluate safety performance of their company.

A *System-program* can yield accurate and meaningful information about supervisor and worker performance that managers and ownership can use to identify areas of concern and pursue positive changes in the workplace. *System-programs* can connect upper levels of the company with the front lines in a manner that enables them to make informed decisions about issues requiring improvement, and make a meaningful contribution to protecting their employees. Almost every company owner likes to think of themselves as one of the “good” operators, and wants to believe they have a compliant health and safety program. In the case of an accident, the only thing that allows them to claim this status, is the ability to demonstrate their due diligence through program records and their efforts to protect and improve the health and safety of their workplace.

Moving from Info-programs to System-programs

It is important to acknowledge that *System-programs* and *Info-programs* are presented here as *ideal types*, without the many shades of grey that actually lie between them. Some health and safety programs are prototypical examples of one type or the other, while some possess features of both types. However, pure *Info-programs* can face significant obstacles in acquiring the positive features of system-based programs. Developing a true system within a company that already operates with an accumulation of information means breaking existing information down into separate units and putting it back together again in a meaningful order. This requires identifying the key components and re-organizing content under appropriate headings, as well as establishing the relationship between the different parts of the program.

New formalized documents and new lists of responsibilities are often required. More importantly, employees must learn new routines based on company policies, and resist taking shortcuts based upon the individualized sense of order that guided them under the *Info-system*. This process can stimulate cultural resistance from employees who are strongly attached to habitual methods of completing their duties. It is important for a company undergoing the transition to a *System-program*, to clearly communicate their objectives to their employees, and explain that the ultimate goal of a *System-program* is to provide a more efficient method of managing health and safety in the workplace, while protecting the interests of both the company and the employees. However, companies with *Info-programs* that are moving towards a system-based approach should not throw out the baby with the bathwater, as field savvy and adaptability are valuable qualities, and employees should be encouraged to focus these resources into the improvement of the program.

The concept of an assembly line has been utilized as a metaphor for efficiency and reliability. However, the goal of a *System-program* is not to transform workers into robots that lack any discretion in decision-making. In fact, a well-designed *System-program* aims to ensure that employee input is a critical ingredient in the way the company operates. Employee experience is a valuable resource for shaping the policies that guide future decision-making, and a *System-program* should aim to reflect the insights and perspectives of a company’s most experienced and knowledgeable personnel. Development of company policies and procedures should integrate employee consultations during the initial development stages and throughout implementation

through ongoing processes of review. Most importantly, employee input can be invaluable in identifying the limits of the health and safety program, and the types of situations in which judgement calls and experience come into play. These points of the program should then become sites for future improvements. In a health and safety context, employees should be treated as a company's most valuable asset. The goal of a health and safety program is not only to protect these assets, but also to incorporate the ideas they have to offer.

Conclusion

It is important to acknowledge that the *System-program* conceptualized within this article is not the only possible way of organizing a health and safety program. A company may choose to utilize different terms, such as “duty” instead of “responsibility” or “procedure” instead of “breakdown”. However, in order to operate a true system-based program is absolutely vital for a company to identify the different parts of their program, understand the purposes they serve, and accurately identify and explain them to their employees so that the program can perform effectively and efficiently. There is a nearly limitless variety in the patterns of information and activity that can be utilized, and it is the choice of management as to which pattern is most fitting for their workplace. These decisions lie at the very core of the way your company will perform, and are the essential building blocks of maintaining a safe and healthy workplace.

As more and more companies move towards *System-programs*, the forestry industry will obtain a more consistent level of health and safety performance. Training and orientation should become easier to accomplish, as workers moving between companies will become attuned to the commonalities between the different systems, as they become shaped to meet the requirements and standards set out by SAFE Companies certification initiative. As an auditor, I strongly believe that individual companies and the forestry industry as a whole will benefit from the wider use of system-based health and safety programs.

I hope that employers can use some of the ideas from this article to evaluate the efficiency of their own programs, and make modifications that will assist their company in becoming safer and more efficient. Those who feel that they would benefit from program revisions but lack the expertise to do it on their own may wish to contact a safety expert, or review the profiles of certified external auditors at the BC Forest Safety Council to find a person that can assist them in improving their program.

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