Railway Association of Canada

Action Planning and Safety Culture Change

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Railway Association of Canada

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Section 1 - Introduction

The Railway Association of Canada (RAC) has conducted safety culture assessments with member railways since 2015 as part of its safety culture initiative. During this time, the safety culture assessment process has evolved and now includes a combination of a safety culture perception survey, focus groups, interviews, and document review[1]. Upon completion of the assessment, the participating organization is tasked with developing an action plan based on the insights gathered from the assessment. As of February 2024, 19 railways and contractors have completed a safety culture assessment[2].

This paper is intended to provide RAC members with action planning best practices. This paper provides an overview of the type of action items member railways have developed based on the RAC's five-dimension safety culture model, which includes: leadership commitment to safety, two-way communication, employee engagement, learning culture, and fair/just culture. Next, the best practices in action plan development are discussed, including the prioritization of initiatives, action plan design, communication, implementation, and reinforcement. Lastly, safety culture change is discussed, including common challenges and strategies for overcoming pitfalls.

Section 2 - Action Plan Review

Between October 2015 and February 2024, 19 railways and contractors have completed a safety culture assessment with the RAC resulting in 20 reports[3] (see Appendix A). There were 145 action items in total with an average of 7.3 action items per assessment. Action plans ranged from 2 to 16 action items per organization. The RAC recommends that organizations include no more than 5 action items in their safety culture action plan (see Appendices B and C). This approach facilitates focus, impact, and prioritization, allowing organizations to concentrate their efforts on a smaller, more manageable set of tasks.

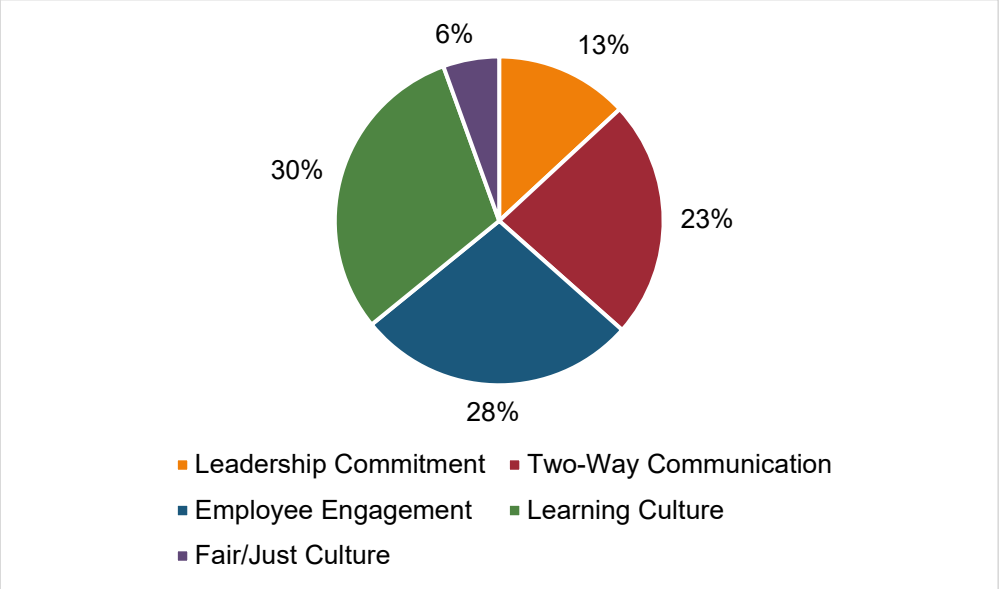
The action plans from each assessment were reviewed for common themes and categorized based on the RAC's 5-dimension safety culture model. Some action items were related to more than one safety culture dimension but for the purpose of this paper, each item was categorized based on the safety culture dimension it was most directly related.

[1] The RAC recently conducted a successful pilot of a document review methodology as part of the safety culture assessment. This methodology requires minimal effort for the participating organization and provides insight into what an organization says about itself with respect to safety and culture.

[2] In 2021, the RAC piloted a safety culture reassessment. Reassessment action plans have not been included in this review. Action plans are optional in the reassessment process, but they are strongly encouraged.

[3] In one assessment, contracting organizations participated in individual assessments. Each company received an individual report and as well as a report with the combined assessment findings and a joint action plan.

Figure 1. Action Items by Safety Culture Dimension



2.1 Leadership Commitment

There were 19 action items related to leadership commitment. These action items focused on two main areas: 1) increase leadership visibility and 2) provide training to supervisors, managers, or senior leaders. Types of training included safety leadership, felt leadership, basics of supervision, coaching and feedback, and policy and decision making. Items related to increasing senior leadership visibility included implementing site visits and improving the quality of site visits.

2.2 Two-Way Communication

There were 34 action items related to two-way communication. These items were varied and included the review of current communication processes, development of feedback processes, increasing availability of safety information for employees, implementation of electronic communications (ex. emails, dashboard), and safety meetings. Many of these items were intended to raise employee awareness of safety processes and resources which is an example of top-down communication rather than two-way communication. Ensuring employees are aware of safety process and resources is vital but there is room to expand these action items to include two-way communication.

2.3 Employee Engagement

There were 40 action items related to employee engagement. These action items were wide-ranging and included plans to implement safety recognition programs, ask staff to share their knowledge and experience, create employee safety working groups and/or committees, increase engagement in pre-shift job briefings, involve employees in training and the development of policies, encourage staff to watch out for each other, and make changes to the occupational health and safety committee. Planned changes to the OHS committees included: changing the time of the meeting to allow night shift participation, promoting and tracking employee and leadership participation in the OHS committee, enhancing awareness of the committee and its responsibilities, as well as where meeting minutes are posted, who OHS representatives are, and utilizing the OHS committee to review and provide feedback on safety plans and initiatives.

2.4 Learning Culture

There were more items related to learning culture than any other safety culture dimension, with a total of 44 action items. This is not surprising as learning culture is a broad theme that includes the approach the company takes with incidents, accidents, and near misses, training and development, whether the organization encourages reporting, staff's comfort level in sharing information, and so on. Learning culture action items included plans to improve incident and accident investigation processes, establish a near miss reporting system, implement a hazard reporting system, raise awareness of reporting protocols, establish a paper-based reporting system, and changes/additions to training. Training initiatives included items such as review training programs to identify and address inconsistencies, implement annual safety training, mentorship programs, and orientation training for new hires.

2.5 Fair/Just Culture

There were 8 items related to fair/just culture. Items related to improving fair and just culture were often vague and included the promotion of incident investigations as a learning opportunity- not a blame-finding exercise, ask staff to review policies, continue to use the new discipline policy, create a discipline policy, and review the disciplinary policy. For many of these items, the organization would state the goal was to foster a fair and just culture however, it was not clear how these plans would lead to improvement.

2.6 Insights

There are three key insights based on an analysis of 19 action plans created between October 2015 and April 2023.

- The average number of action items per improvement plan is 7.3, with the maximum number of items being 16. In future assessments, the number of action items should be limited to 5 or less to narrow the scope of the organization's change initiative and not overwhelm the staff with too much change at once. Safety culture change requires ongoing commitment and effort. Items that are not addressed in the initial plan can be targeted at a later date.
- Many items related to two-way communication were top-down communication initiatives. There is opportunity to provide more guidance and resources to organizations aiming to improve communication.
- There were only 8 fair/just culture action items, and it was not clear how most of these items would contribute to the development of a fair and just culture.

These insights suggest that organizations developing post-assessment action plans may benefit from additional support. Sections 3 and 4 of this paper are intended to provide organizations with additional guidance and best practices in action planning and safety culture change.

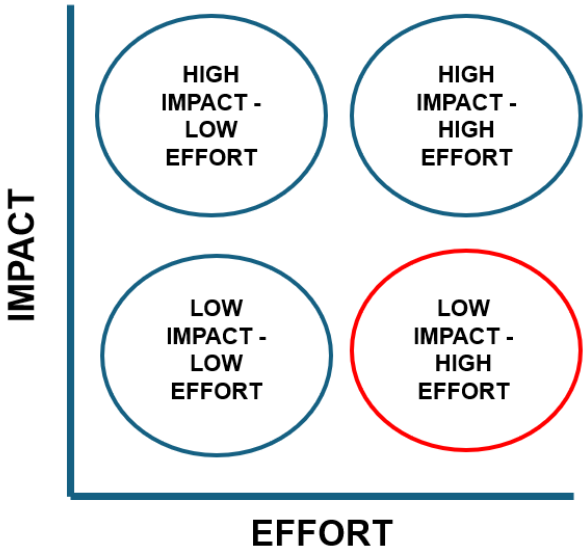
Section 3 - Best Practices in Action Plan Development

This section is intended to guide organizations in action planning from inception, through to implementation, and reinforcement. Five aspects of action planning are discussed, including prioritization of initiatives, design, communication, implementation, and reinforcement. While action planning is a key part of implementing a change, it should be noted that an organization can carry out an elaborate action plan without changing their culture. This section is focused on the process of planning and implementing change and borrows from the fields of change management and quality improvement. Action plans can, and often are, implemented in a tick-the-box manner. Safety culture improvement requires change in the organization's values, beliefs, and assumptions, and this cannot be done in a tick-the-box manner. The challenges and facilitators to safety culture change are covered in Section 4.

3.1 Prioritization of Initiatives

The first step in action planning is to create a list of potential initiatives by reviewing current opportunities for improvement. Opportunities for improvement can be based on safety culture assessment results or other data the organization collects (ex. incident trends, training data, etc.). Once a list is generated, the actions need to be prioritized based on effort of implementation and potential value (see Figure 2). Actions that are low in effort and high in value can result in “quick wins” for the organization. High effort-high impact actions are worthwhile efforts that take longer to implement and require more resources. Low effort-low impact actions may provide some value to the organization, but it is important for the organization to consider how much effort and resources are going towards low impact action items. Lastly, high effort-low impact action items are those which are not worth implementing.

Figure 2. Prioritization Matrix



Credit: Product Plan (2020)

3.2 Design

The design phase involves creating a feasible plan for achieving change initiatives. This phase begins by clearly defining specific, measurable, achievable, realistic/relevant, and time-based (SMART) goals (see Appendices B and C) aligned with the organization’s safety vision. The scope of the intended change should also be specified during this phase. Consideration of the scope involves identifying the specific areas, departments, or processes that will be affected by the proposed changes. This helps to manage expectations and ensures that the plan is not overly ambitious or too conservative. By clearly defining the scope, the organization can communicate the boundaries of the change initiative to all stakeholders and foster a shared understanding of what to expect. This comprehensive approach during the design phase establishes a strong foundation for change initiatives.

It is crucial to involve employees in the design phase of action planning. Employees often hear about changes as they are being implemented. By involving employees in the design phase, organizations can get a more diverse perspective on the barriers and facilitators to the proposed change. Early involvement also gives employees the opportunity to champion new initiatives and can increase buy-in and support for change among frontline staff [2]. When employees are not given the opportunity to provide feedback or share ideas, this can contribute to the perception that management does not trust employees to make decisions about their job. There is evidence to suggest that employee

involvement activities are correlated with increased job satisfaction, trust in management, commitment, and belongingness [2-3].

3.3 Communication

Communicating planned changes to the workforce is a key aspect of implementing change. This is how staff learn about the steps leadership is taking to make the workplace safer; it is an opportunity for leadership to demonstrate their commitment to safety and improvement. Additionally, communication is needed to get staff buy-in for the change initiative. This facilitates awareness and understanding about the need for change, its rationale, and anticipated outcomes. Communication is vital in reducing and overcoming resistance to change. Through ongoing communication, opportunities for misinterpretations are reduced and the organization can foster a more positive reception to new initiatives.

It might be obvious to those who created the action plan why each change is needed. For those outside of the group, the change might seem unexpected, unnecessary, or underwhelming. To motivate staff to participate in the change, they need to understand what the change is, how it will benefit the organization and individual employees, and what their role is in creating change. In 2022, the RAC created a one-page document providing guidance on how to introduce planned changes to the workforce (see Appendix D).

3.4 Implementation

The implementation step is when the plan developed in the design phase is executed. During this time, the organization should study the effectiveness of the change initiative to determine if changes need to be made. There are three types of measurement to consider when studying change: outcome, process, and balancing measures. The outcome measure is directly related to the change initiative. For example, if the aim is to increase near miss reporting, the outcome measure would be the number of near miss reports received in a specified timeframe. Process measures are another key measure which tell us if we are doing what we need to do to reach our goal. A process measure related to near miss reporting could include the percentage of staff that have received training on what a near miss is and how to report a near miss. Lastly, balancing measures indicate if the strategies employed to reach the goal are detrimental. For example, determining if the quality of near miss reports diminishes with the increase in quantity.

Studying the effectiveness of change initiatives should be multi-faceted and does not need to be solely quantitative. It is equally as important to get staff's perceptions of change initiatives and ask them for their suggestions for improvement. By studying the change initiatives during the implementation phase, the organization is demonstrating a commitment to learning and ongoing improvement.

3.5 Reinforcement

Reinforcing change is a crucial and often overlooked aspect that determines the long-term success and sustainability of change initiatives. After the initial implementation phase, the reinforcement stage is essential for embedding new behaviors, processes, and attitudes into the organization's culture. Repetition of new behaviors and processes is vital for ingraining them into the daily routines of employees. This consistent reinforcement establishes a sense of normalcy and familiarity with the changes, reducing resistance and promoting acceptance over time.

Employee engagement and morale are significantly influenced by the ongoing reinforcement of change. Recognizing and celebrating successes, both small and large, contributes to a positive work environment. Positive reinforcement not only acknowledges the efforts of individuals and teams but also serves as motivation for sustained commitment to the new way of doing things. Returning to our

near miss reporting example, interviews with RAC member railways revealed reinforcement as a crucial component of maintaining a near miss reporting system[4].

Lastly, safety culture improvement requires an ongoing approach. Action plans should be:

1. A work-in-progress.
2. A multi-year commitment and journey.
3. Reviewed at least annually for their effectiveness.
4. Built on strengths and progress made the previous year.

3.6 Action Planning Summary

The best practices discussed in this section are an important component of change but are not sufficient on their own to contribute to a change in culture. As discussed in the next section, culture change is more challenging and complex than a change in process. Increasing the number of near miss reports may contribute to improving an organization's learning culture, depending on what the organization does with the near miss reports, how and if employees are informed about trends in near misses, and whether staff are rewarded in the short and long term for reporting near misses. The goal to increase near miss reporting could be viewed by staff as a tick-the-box activity or as an opportunity for learning. The former is ultimately a change in process; people report more near misses, but they do not see the value in it. Changing staff's beliefs and assumptions about near miss reporting is a significant cultural change that takes time and consistency.

Section 4 - Implementing Safety Culture Change

4.1 What Makes Culture Change Difficult?

Implementing safety culture change is different than implementing a general safety initiative. For example, it is possible to implement a new safety process (ex. a new training program) in a relatively short time with minimal resistance. It is more challenging and less straightforward to implement a safety culture change (ex. improving leadership commitment to safety or instilling a learning culture) because these initiatives require a change in how people think. Culture is made up of artifacts, shared beliefs, values, and assumptions [5]. An organization's culture is comparable to a blueprint; it informs how people should act in different situations, what is acceptable and unacceptable behaviour, what is rewarded and punished, and so on. Culture change is threatening because it requires people to follow a new blueprint and this change causes feelings of uncertainty.

Culture is formed over time when founding members of an organization respond to different situations [5]. When an organization adopts a solution that has worked on multiple occasions, they continue to use the same solution going forward. Over time, this solution becomes an ingrained assumption and deviating from the normal course of action becomes unthinkable. Although culture change is challenging, organizations can facilitate change by leveraging their cultural strengths.

4.2 Aligning Culture Change with Cultural Strengths

Part of the way culture is changed or remains the same through time is hiring practices. Research suggests that individuals within an organization tend to share certain personality traits. This doesn't imply that everyone in the company is identical, but rather people exhibit more similarities to their colleagues within the same organization compared to those in different organizations [6]. During hiring, organizations may be selecting for "cultural fit" whether they are aware of it or not. Through attraction, selection, and attrition the organizational personality is reinforced over time [6]. People are naturally drawn to organizations that they perceive as a good fit for their personalities. During the interview process, individuals learn more about the organization, and those who accept job offers

[4] The paper "Near Miss Insights – Interviews with Canadian Railways" is available on the RAC members website.

likely see it as aligning with their values and beliefs. If a new hire finds that the organization is not a good fit, they may choose to leave. Over time, these three factors - attraction, selection, and attrition - shape and reinforce the collective personality of the organization.

Since organizations share personality traits to some extent, those responsible for change initiatives should consider working with the organization's personality rather than go against it. To achieve this, it's crucial to evaluate whether proposed changes align with the typical behaviors and comfort zones of the company's employees [6]. If the intervention requires people to act in a way that significantly deviates from the norm, it is likely to be unsuccessful. Surveys exist which can be administered to better understand personality traits in an organization (ex. Big Five Inventory [7]). However, the organization can also gain insight into whether a proposed change suits the organization by asking for staff perceptions of proposed changes and of previous change initiatives (ex. why they were or were not successful).

> "There is little evidence from studies of organizational change that ambitious change efforts automatically capture the hearts and minds of people."
>
> Alvesson & Sveningsson, 2016, p.118.

Role modeling is a suggested strategy for promoting change and leveraging the organization's strengths [6]. Influential or trusted people within an organization, such as respected supervisors, can set an example by demonstrating behaviors related to the intervention in a way that doesn't require a major departure from what is considered normal. This showcases to the rest of the workforce that change is possible without the need for a monumental shift in values or typical behaviors.

4.3 Consistent Approach and Shared Understanding

Regardless of what the organization's goal is regarding safety culture change, the people involved in implementing the change need to be on the same page. This means having a shared understanding of the overarching vision for safety culture, the goal, and the strategy the organization will use to achieve their goals. For example, if an organization's goal is to create a fair and just culture, there needs to be a discussion among the leadership team about what that means. The manager of the engineering department may think this goal is about holding all levels of staff accountable for safety whereas the safety manager might view this as an opportunity to build trust between managers and employees. Assuming that different managers are on the same page allows for miscommunication [5, 8]. The same is true of more specific action items, such as increasing near miss reporting by 20% within 6 months. The organization needs to be on the same page about defining what constitutes a near miss, how to encourage reporting, how success will be measured, and so on.

4.4 Recognition and Reward System

Aligning the organization's recognition and reward system with change initiatives is another vital way to embed change. Recognition and rewards act as powerful motivators, incentivizing employees to embrace and actively participate in the change process. Organizations can foster a positive and supportive environment that encourages employee engagement in change initiatives by recognizing staff for their efforts to contribute to change initiatives. Recognition and rewards serve not only as a means of acknowledgment but also as reinforcement for desired behaviors. Recognition and rewards are a way for senior leaders and managers to communicate what behaviours and attitudes are valued in the organization. Rewards may be monetary or in the form of evaluation and feedback [9]. When rewards are aligned with the organizations short and long-term goals, they can bridge the gap between the current culture and the envisioned future.

Section 5 - Conclusion

This paper provides an overview of the 145 action items included in 19 RAC safety culture assessment reports followed by two components organizations should consider when developing an action plan. First, the company needs to decide how they will prioritize initiatives, design, communicate, implement, and reinforce the change. In tandem with this, there needs to be consideration for how cultural norms, leadership practices (consistency), and reward structures will facilitate or hinder change initiatives. To support member railways participating in safety culture assessments, the RAC safety culture team will review current guidance materials and explore opportunities for additional supports. Resources are also available on the RAC's member website.

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Appendix A – RAC Safety Culture Assessment History

Assessment Reports Included in Review	
Organization	**Date Completed**
Central Maine & Quebec Railway	October 2015
Cando Rail & Terminals	April 2017
GO Transit and Contractors	July 2017
GO Transit Internal	July 2017
Toronto Terminals Railway	July 2017
PNR Railworks	July 2017
Bombardier Transportation Operations	July 2017
Bombardier Transportation Maintenance	July 2017
Southern Railway of British Columbia	November 2018
Prairie Dog Central Railway	October 2019
VIA Rail	December 2019
Ontario Northland Railway	February 2021
Quebec Gatineau Railway	April 2021
Universal Rail Systems	April 2022
Toronto Terminals Railway	May 2022
Ottawa Valley Railway	August 2022
OWS Railroad Construction & Maintenance	March 2023
Metrolinx	April 2023
Great Plains Rail Contractors and North American Rail Products Inc.	January 2024
GIO Rail Corporate Holdings	February 2024

Appendix B – Action Planning Guidance Document

Developing an Action Plan

Developing an action plan for improvement occurs after the focus groups results have been disseminated to the in-house team. Action plan items are created by the in-house team and reflect opportunities for improvement based on common themes found in the survey assessment and focus group interviews.

The purpose of creating an action plan is to incorporate feedback from employees gathered during the assessment to target relevant safety improvement areas This information gathered in earlier stages is categorized into 5 safety culture elements: leadership commitment to safety, two-way communication, employee involvement, learning culture, and fair/just culture.

After discussing the focus group results with the RAC Safety Culture Team and the railway organization's in-house team, the in-house team is tasked with creating an action plan. There are often many topics discussed during the dissemination of focus group results. Not all themes require an action item. **An action plan should contain no more than four or five items.** Addressing too many themes will be difficult to implement. It is up to the in-house team to decide what the action plan will contain; however, guidance can be sought from the RAC Safety Culture Team as needed.

To create an effective action plan, it should contain SMART goals. These are goals that are Specific, Measurable, Achievable, Realistic, and Time-based. These elements are explained in more detail below:

- **Specific:** Action plans should clearly state what they are intended to change and the process in which the changes will be made. The steps to attain the goals should be written in a clear, concise language to avoid confusion and ambiguity. Goals can be broken down into smaller phases to outline and simplify the process.
- **Measurable:** Action plans should measure an outcome so that there is tangible evidence that progress is being made.
- **Achievable:** Action plans should be challenging but not impossible. A goal that is unattainable is demotivating, whereas a challenging but possible goal motivates staff to achieve safety objectives.
- **Realistic/Relevant:** Action plans should be realistic/achievable and relevant in relation to the feedback collected from employees.
- **Time-based:** Action plans should be accompanied by a timeline that states completion dates for each phase of the goal. This ensures organizations stay on track and are held accountable to their goals.

In addition to the above, it is important to consider the following elements in the action plan:

a) **Clear Responsibilities** should be written for each action so that there is a clear understanding of who is accountable.
b) **Work-In-Progress and Milestones:** The action plan should be viewed as work-in-progress which will be followed by a subsequent action plan to build on the results achieved by the initial actions. Therefore, it is important to establish a milestone where the action plan will be assessed for success and a subsequent action plan will be developed to sustain improvement. It is recommended to establish a milestone about 1 year after the initial action plan.

Check-ins should be done with employees to get their perspectives and feedback on the effectiveness of action items at a timeline that is suitable to the change (e.g., 3-months, 6-months, or 1-year post action implementation).

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Appendix C – Action Planning Template

Action Planning Template

Instructions: Complete the template for **each** action item. Action plans should be limited to 3-5 action items.

Specific	What is the action item?	
	Who is responsible for (leading) the action item?	
Measurable	What outcome measure(s)* will be used?	
	What process measure(s)** will be used?	
	What balancing measure(s)*** will be used?	
Achievable	What are the barriers to implementation?	
	What are the facilitators to implementation?	
Realistic/Relevant	How does the action item relate to the results of the safety culture assessment?	
Time-based	When is the goal for completing the initiative?	

Appendix D – Change Communication Guidelines

Change Communication Guidelines

The purpose of this guideline is to assist railways taking part in the RAC's safety culture assessment to effectively communicate action items to employees.

Research suggests that many employees do not know why a change is happening in their organization which reduces the likelihood of a change being successful. In this case, it might seem obvious that a change is happening because the railway participated in a safety culture assessment. However, there are more complicated reasons as to why certain actions are being addressed and not others. Action items should be meaningfully communicated to employees to reduce ambiguity and drive change.

Meaningful communication should (1) inform employees of the upcoming change (including why, how, and when a change is happening) and (2) motivate the workforce to support the change. Initial communication about action items is the organization's first opportunity to introduce change to employees and motivate and drive change. For this reason, change communications should be viewed as a strategic opportunity for the organization.

An evidence-based list of best practices in change communication was created as a resource for railways. This resource can be used when creating employee communications about the safety culture assessment action plan:

- If relevant, tailor the communication to different audiences (i.e., departments, contractors, etc.).
- Consider the most optimal communication method for each department.
- Use multiple methods to communicate about upcoming changes.
- If relevant, gather employee feedback about the process for implementing change.
    - Only gather feedback if the intent is to learn from employees and act on their suggestions. Avoid tokenistic feedback.
- Give employees the opportunity to ask questions about the change.
    - Immediate supervisors are in a good position to answer these questions. It is important to make sure supervisors have practical information about the change.
- Ensure communications about change are clear and transparent. Be honest about what is known and unknown.
    - Clarity in change communications reduces the opportunity for misunderstandings and rumors.
- Connect the proposed changes to the company's vision for the future.
    - The communication should inform employees what the consequences of the change will be. When the consequences of the change are unclear, it can lead to reduced participation or rejection of the change.
- If available, engage the communications department in the development of change communication.
- If relevant, keep employees informed about the change by providing updates to employees on the status of the change and new developments.