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CONTROL CENTRE OPERATIONS AS THE FOCUS FOR
BUILDING STATION TEAMWORK - ISSUES AND
RESOURCE IMPACTS
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FOR
BUILDING STATION TEAMWORK - ISSUES AND RESOURCE IMPACTS

By

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ABSTRACT

Effective teamwork among station work groups is essential for plant production and safety in all phases of plant operation. To achieve effective teamwork, all contributing work groups must have ongoing access to and share a common perspective on station work priorities, and recognize how their individual contributions fit with and support the contributions of other groups in support of the larger station goals. Achieving and maintaining this alignment in perspective across all workgroups can be a challenge in large organizations.

This paper discusses the experience at Darlington in building and maintaining station teamwork among the station workgroups in support of day-to-day plant operations. The issues encountered and the resource impacts of specific teamwork supporting practices adopted are outlined.

INTRODUCTION

Multi – unit CANDU Nuclear facilities, due to their size and complexity, place heavy demands on an Operating organization. These demands lead to workgroup specialization and division of work activities. Division of work and workgroup specialization leads to requirements for coordination of workgroup contributions for effective station operations. There are many challenges to achieving cohesion and coordination of station work, especially as an organization grows and adapts to industry changes practices.

Thus, establishing solid teamwork has become recognized as an extremely important component to safe and reliable operation of a facility, not only in the Control room, but throughout the whole organization. Effective teamwork, rather than just individual contributions can pay off with significant benefits in achieving:

- Optimized production – maximize income
- Operating efficiency - Minimize costs and resource use

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- Safety - minimization of error, upset, personnel risk, investment risk
- Response to ongoing change – appropriate, timely, organizationally effective

The role of shift organization and control centre operations in providing direction and coordination alignment for station teamwork is key to ensuring the organization is properly focused.

BACKGROUND

Teamwork is defined by Webster's as work done by several associates with each doing a part but all subordinating personal prominence to the efficiency of the whole. Within the nuclear organization we experience facets of teamwork in many areas and situations. The primary example is in our Control room transient response approach that is trained, monitored, coached and tested, in our shift teams on a regular basis. We have learned many lessons from how this team works effectively, most importantly, establishing a common goal, and perspective.

Achieving and maintaining this common perspective beyond the Control centre, in large organizations can be a challenge, as large organizations tend to be bureaucratic, and with multiple goals. Optimum choices for station work priorities are subject to ongoing change, from changes in station conditions, work status and resourcing, equipment breakdown and maintenance needs, external environmental or grid demands, business and budget needs. The perspectives and local priorities of individual groups, although well intentioned, can often disrupt the larger cohesion and coordination between work groups that is necessary to maintain effective station operations.

TEAMWORK EXPERIENCE

Station experience has highlighted specific organizational teamwork challenges and issues and led to the adoption and development of improved work cohesion and coordination among contributing workgroups. Key teamwork experience includes:

- Alignment - Importance of sharing a common perspective - Use of 'Operational Focus' as top-level basis for alignment of all workgroup priorities. Note that the concept of "Operational Focus" is not easily learned or understood, by those outside of the Operator family. It is not about "focusing on Operators", but about ensuring that the facility continues to be operated in a safe and reliable manner. The trick to this is the understanding of potential "operational impacts" of a work activity, and recognizing how it integrates in to the "greater good". As an organization, we cannot expect to tell our staff to be "operationally focused", and then expect staff to do the right things. Often, our staff does not have the entire context to be able to make all of the right decisions and moves. It is incumbent upon the Operations organization to be involved in decision making, to provide support and context as required. One of the aspects that often undermines the team, is Operations own reluctance to attend meetings and activities that are not related to the immediate needs of the facility. In the absence of an Operational presence, staff will do the best they can to meet the business needs. Occasionally this manifests itself in design issues, human interface issues, process challenges, and

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schedule challenges, budgetary and organizational angst. To ensure our organizational team is effective, other workgroups must ask for Operations input to key decisions and activities, and Operations must respond, and "be there" when asked.

- Stages of Development - Teams (e.g., Forming, storming, norming, performing) There are millions of published articles about how to put together an effective team, and how to run an effective team. Most concepts will work and be effective. We do not plan to suggest one is better than another, but the key is ensure there is proper context, alignment with the business goal, commitment, and clarity.

- Planning – As an effective station team, we must consider longer horizons and allowance for contingencies to minimize need for real-time crisis correction for the activities we perform. To do so, we must understand how what we are doing fits in with all the other activities that are occurring, and do our best to understand the impacts of what we are doing on others. Even though we have many processes and tools to identify issues, conflicts, and provide integration of work, we cannot rely only on the tools and processes to provide adequate "due diligence". We must think, share, ask, and communicate to maximize our effectiveness.

- Direction - Recognition of the importance of leadership and supporting followership behaviours is critical to an effective station team. Someone has to set and define goals for the organization, and ensure that context is clear. This often takes ongoing coaching and confirmation that we are headed in the right direction. Further, the importance of team-members being able to exchange leadership-followership roles in team activities is key, to ensure the most knowledgeable have an opportunity to course correct. This is often a difficult concept for a leader, to have adequate trust in their staff, to allow them to periodically take the lead and make key leadership decisions. This is an especially difficult concept for Operations organization, since they see themselves as "the keepers of the key", so to speak.

- Communication – The need for continual attendance to communication as the means to confirm alignment of perspective and correction as needed for activity coordination. The trick in this case, is to make critical and pointed communications with the right people, so as not to overwhelm the organization with "Communications". One of the most effective tools, in this case, is to utilize face to face communications, and this will force you to identify your target audience most effectively. E-mail is a fantastic communications tool, but is all too often these days, overwhelmed with noise. Further, for critical communications, the concept of 3-way communication has been utilized in the control centres for many years. The idea of the receiver of a message repeating back a key action or communication, and the sender confirming that the message was properly received, is an important piece of ensuring message is understood and context is correct.

- Individual and Team Accountability – Clear accountabilities in a team environment enable activity partitioning/sharing and delegation. The concept of

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"I've got it" is an example of taking accountability, and this may be on an individual basis, delivering on a task, or on behalf of a larger team or subset of the organization. Effective teamwork in a large organization hinges on clear understanding of "what by when" and how correct completion of an assigned task fits into the big picture. However, staff must recognize when they are being overloaded, so as not to take on too much, and put their deliverables at risk. The organization must also recognize this and not place undue demands and strain on their staff by overwhelming them with accountabilities.

- Prioritization – In a large organization, with multiple specialized groups, often tasks come into a group from another part of the organization. The group will have to fit these tasks in to their own list of tasks and priorities. To be an effective team, the prioritization must be consistent across the organization. This is an extremely difficult approach to master, because of the rules, expectations, commitments, and different contexts associated with different groups. In this case, the alignment is critically important, as well as communication to clearly understand context of tasks that travel cross-functionally.

- Process and tools – Processes and tools (nominally software) can be effective in assisting organizational communication, and alignment, as well as prioritization and tracking of tasks. Unfortunately they are only as good as the information provided (garbage in – garbage out), and both processes and tools must be appropriately aligned to be effective for the organization as a whole. One of the problems that we continue to face is the situation where each specialized group has developed a process or multiple processes, by which they perform their function. Unfortunately, these processes were developed with minimal integration and cross-functional "team" involvement. What we end up with are multiple processes that impact multiple groups that are not quite fully aligned, and lead to duplication of effort, and business "waste". Alignment of both process and tools across an organization are key to supporting effective teamwork. Mis-aligned processes and tools can lead to a very unhappy and dysfunctional family.

- Conflict Resolution – There are many strategies for overcoming conflict and moving forward. Recognition of impasses is the first step. Once conflicts are recognized, they need to be effectively resolved, and leadership and compromise come into play. The overall goal of the organization must be kept in mind. Note that most conflicts come from simple differences in context, since everyone is nominally trying to "do the right thing". An excellent phrase that has been utilized with some regularity in many meetings by a very progressive team member is "being in violent agreement" where the conflict is often about saying the same thing in different ways.

- Training – As previously stated, the Control centre teams are regularly trained and practice teamwork. We all practice teamwork, to varying degrees within our organizations. Rarely to we train people to be effective team members. Importance of training in individual and team behaviours is key for developing a solid organizational team. Once again, training is simple communication of an approach

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or concept, that, if effectively delivered will provide consistency of context, and behaviours.

RESOURCE IMPACTS

The development and maintenance of teamwork within and among workgroups create additional and new demands on station resources. Some important resulting station resource impacts include:

- Time Investment - Investment in team-member training and team-formation required to enable effective teams to develop.

- Financial Investment – There is some cost associated with becoming an effective organizational team. Costs can relate to process enhancements, facility changes, or possible re-organization of staff on small or large scale basis. Change is never free, but can pay significant dividends if managed appropriately.

- Team Workspaces - Need for assignment of dedicated workspaces for meetings as minimum but also to support work planning, coordination, document and reference material accessibility, issue resolution, and minimize disruption, congestion, and distractions in individual workgroup workspaces.

- Access to Shared Perspectives - Means for concise presentation of the information comprising shared perspectives for all to commonly refer within shared or spatially separated workspaces.

- Communication - Fostering team-member presence in overcoming language, spatial, or organizational barriers.

- Coordination of Response to Change - Ensuring communication and common interpretation of changes guides local workgroup response initiatives consistent with overall shared perspectives on work priorities. How local workgroup initiatives

- Team Resource Allocation - Need for direct funding of team needs on a project basis rather than dependence on individual workgroup contributions, especially for the 'heavy-lifting' project phases.

- Organizational Resource Allocation - From an organizational basis, and especially in the nuclear business, improving organizational team effectiveness can be developed by "cross-pollinating" the organization. As an example, a smattering of Operations staff in Engineering organizations, and Engineering staff in Ops organizations can go a long way to improving a shared goal and context.

CONCLUSION

This paper has outlined the Darlington experience with promoting, developing, and maintaining teamwork within and among workgroups in support of effective station

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operations. Darlington staff continues to further refine teamwork capabilities, work practices, and resource support based on local and international peer experience.

ACKNOWLEDGEMENT

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