# PLANT X Case Study

**(Conclusions)**

The team presented the following findings and conclusions from their draft report:

***Evidence of organizational learning:***

* prevalence of an ‘expert’ culture where the members feel confident that they do not require procedures in hand or peer checks to ensure correct execution;
* inconsistencies across leadership levels regarding the degree of inclusion and engagement;
* differences in how members of the management team present themselves to gain respect and followership. The dynamics are a ‘topic’ within the culture;
* displays of interpersonal power used to establish distinct boundaries around what is permitted in discussion, and reinforcement of compliance by interruption and correction of people in front of peers and outsiders;
* clear sub-cultures – new employees, maintenance, operations;
* limited focus on inclusion and mentoring;
* coordination challenges exacerbated by departmental silos;
* working in department silos without full integration with in-plant groups;
* management has limited understanding of the full intent of operating experience and human performance programmes in terms of anticipating and avoiding errors, or how to implement these programmes effectively;
* formal organizational learning programmes exist more on paper than in practice, and the organization doesn’t believe that operating experience and human performance tools can make difference, relying instead on technical competence and many years of experience to sustain safety performance;
* significant power dynamics within the organization such that social standing and appearances are more important than in-plant safety, e.g., inability to resolve supply issues with direct impact on equipment condition, and inadequate fostering of an open learning environment at all levels;
* fewer responses from the mechanical maintenance group than from all other plant groups; and
* employees under 25 years of age feel key information is not commonly shared. This pattern seems to apply to electrical maintenance, mechanical maintenance, engineering, and safety specialists. In contrast, management feel very confident that key information is being shared to a degree that meets everyone’s needs.

***Organizational Culture and Safety Culture Considerations:***

From a cultural perspective, these **document review** findings give insight into several valuable dimensions. The line organization and specialty functions such as Human Performance and Operating Experience appear to be working in silos without full integration with in-plant groups such as Maintenance and Training. In addition, management and supervision do not appear to understand the full intent of the programs in terms of anticipating and avoiding errors, or how to implement them effectively.

From a safety culture perspective, these findings raise questions about whether the programs exist more on paper than in practice, and whether the organization believes that OE and human performance tools can make difference, or prefers to rely on technical competence and experience to achieve safe performance.

These four **observations** give some interesting clues to how the culture works. The Plant Manager has invited a high degree of participation and accountability from his team. The Production Manager in contrast, elicited more caution from his own staff as well as the engineering staff. Union loyalties and perceived stratification in the workforce appear evident. Contractors are included in training sessions and expected to adhere to the same safety standards. Support functions such as communications may not be well integrated with plant functions.

From a safety culture perspective, clear differences exist in how the members of the management team present themselves to gain respect and followership. The dynamics are a ‘topic’ within the culture.

From a cultural perspective these three snapshots of **focus groups** give insight into several valuable dimensions. The senior manager has clearly established authority in the room and with it, outlined the scope of permissible conversation. He has also indicated that positional power and a particular commanding image is very important. Camaraderie appears to flow strongly within functional lines, with Operations having higher status than other groups. There is a clear perception that access to learning opportunities is a privilege and potentially a level of frustration about perks that stratify the organization.

From a safety culture perspective, questions arise with respect to the influence of power dynamics within the organization and the extent to which social standing and appearances are more important than in-plant safety, solving supply issues with direct impact on equipment condition, and fostering an open learning environment at all levels.

From a cultural perspective, the stories gleaned through an **interview** give insight into several valuable dimensions. The employee felt safe reporting the error. The plant manager understood that it was more important to encourage self-reporting and to receive this kind information as early as possible, rather than to create fear in the organization by invoking disciplinary action. The Vice President was concerned about employee satisfaction and inter-generational challenges. The Maintenance Manager and the Human Resources Specialist understood the importance of procedural fairness. What is also evident is a lack of alignment between different levels of leadership about the use of disciplinary measures and constructive self-management programs to influence desirable behaviors in the organization.

From a safety culture perspective, the different views on when and why disciplinary measures will be taken can easily result in confusion among employees about what is acceptable behaviour.

***Tentative conclusion based on IAEA framework:***

On the basis of these findings, the team concluded that organizational learning at Plant X needed improvement and, when asked, gave the following reasons: “There appears to be a basic assumption or belief that past success is a predictor of acceptable future performance. Formal programmes for learning are not seen as adding value and are therefore not implemented effectively. Technical knowledge, combined with positional power and control, are considered to constitute effective leadership despite staff concerns. There also appears to be a more general belief that experience and expertise along with management prerogative are sufficient to ensure safety at our Plant. Finally, core groups within the plant do not feel that they are receiving the breadth and depth of information needed to perform their jobs effectively.”