

E&T&C Certification, new Protocol to Rate Engagement, Transparency and Communication in Industrial Activities. When the Odour Unit is not Enough

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There is a need for a framework to mainstream citizen engagement, increase Transparency and boost Communication channels in case of repeated impact episodes in neighbouring communities. When there is a conflict, most crisis communication experts agree that Engagement Transparency and Communication (E&T&C) are vital to maintaining or regaining the neighbours' trust. The Volkswagen emissions scandal is a recent case demonstrating the negative outcome of not having a participation, transparency and communication policy.

To promote a change in the traditional industrial opaque thinking paradigm, we have created the first E&T&C Certification. This Certification is designed to assess the performance of industrial plants concerning their relationship with communities nearby, making it the first Certification of its kind.

A project's performance is verified through "third-party" audits by an independent auditor, depending on the degree of depth of analysis. This third-party Certification guarantees independence and impartiality in the process. The ultimate goal is to score the degree of an industrial plant's Transparency, Communication and Participation.

1. Introduction

There is a need for a framework to mainstream citizen engagement, increase Transparency and boost communication channels in case of repeated episodes of impact in neighbouring communities.

Plant managers tend to hide or minimise the impact of their activities, letting the time go by or trying to withhold information. For example, widespread practice is staying silent when an incident in the plant may have originated a release into the atmosphere.

That is the opposite of a 'good practice' in managing a toxic release. This action might produce good results in the short term, but in the long run, citizens living near one of these opaque plants will be more prone to complaints, and the conflict will get worst.

For a plant to get to the point where citizens trust them enough to believe in a long-term plan, there is a need for Engagement, Transparency, and Communication.

An organization should document every action it takes to deal with an impact. For example, the *Odour Management Plan* (OMP) could be a good starting point in the case of odour impact. However, OMPs have certain limitations, the main ones that:

- They are neither public nor co-designed with the help of the neighbouring communities.
- They usually respond to a public administration requirement and are done with no citizen participation.
- An engagement strategy+co-design process will take several months to a year before it is fully implemented. An OMP moves on a much smaller time scale.

There is a need for a Certification to show that a plant is taking (or will take) the right actions to correct a situation of impact. In the case of odour impact, using odour units is very useful, but unfortunately, they are not a measurement of annoyance. Dose-response studies performed in the past (Miedema et al. 2000, Sucker et al. 2001) have tried to close this gap, but most of these studies are very old and cannot be a reference for every single case.

In addition, there are criteria set for Odour impact in different regulations (Bokowa et al., 2021). Still, there might always be situations where those criteria, typically set in percentiles of Odour units, are not enough.

Engagement, Transparency, and Communication are not numbers like the Odour unit is. The only way to measure these three key parameters is through a certification process that rates how well a plant deals with these critical topics. That is, there is a need to put numbers to the strategies of Engagement, Transparency, and Communication taken by a plant. Not all plants are the same in this regard.

Some of the common certifications for industrial plants are:

- ISO 9001: This certification focuses on quality management systems. It ensures that the plant follows robust quality control processes, customer satisfaction, and continuous improvement.
- ISO 14001: This certification is related to environmental management systems. It demonstrates that the plant is committed to minimizing its environmental impact, complying with regulations, and implementing sustainable practices.
- ISO 45001: This certification deals with occupational health and safety management systems. It verifies that the plant has proper safety protocols in place, identifies and mitigates workplace hazards, and ensures the well-being of employees.
- ISO 50001: This certification is specific to energy management systems. It signifies that the plant has implemented energy-efficient practices, monitors energy consumption, and continually works towards reducing energy usage and costs.
- OHSAS 18001: Although being phased out and transitioning to ISO 45001, some industrial plants may still pursue this certification. It focuses on occupational health and safety management and ensures compliance with health and safety regulations.
- Responsible Care: This certification is specific to the chemical industry and demonstrates a commitment to the safe handling, storage, and transportation of chemicals, as well as sustainability and community engagement.
- Industry-Specific Certifications: Depending on the sector and industry, specific certifications may be available. For example, in the food industry, plants can pursue certifications such as HACCP (Hazard Analysis and Critical Control Points) or FSSC 22000 (Food Safety System Certification).

These certifications provide external validation that an industrial plant adheres to specific standards and practices in areas such as quality, environmental impact, safety, energy management, and industry-specific requirements. However, none of these certifications addresses the important topic of the relationship of organizations with their communities. The aim of this paper is thus to present a methodology to rate Engagement, Transparency, and Communication (E&T&C) through a Certification process for industrial plants.

2. Methodology

The E&T&C Certification is a tool to account for Engagement, Transparency, and Communication. In this case, an appointed external auditor will examine E&T&C performance.

There is a four-step process to evaluate performance, depending on the complexity of the information required. The four levels of complexity are.

- *Direct information*
- *Letter of Assurance*
- *Technical Report (third party or not)*
- *On-site Check*

Some aspects need only a piece of *Direct Information*. For example, to the question: Does the plant have a publicly available register of complaints? The options offered would be 'yes' or 'no.' If 'yes' is selected, the respondent must indicate a link to the website section where the register of complaints is available. The points for this question are accounted for when an organization provides this information.

When a piece of *Direct Information* is insufficient, the auditor will require the facility to provide a *Letter of Assurance*. An example is when the plant is asked: *Do you have an OMP published and available?* The options again, in this case, are 'yes' or 'no.' In the case of selecting 'no,' three options are offered: 'I do have an OMP, but it is not public'; 'I do not have an OMP' or 'I do not have an OMP, but I plan to have one. In the case of selecting the third option, a *Letter of Assurance* must be provided with a compromise to carry out the OMP to account for these points.

In other cases, a *Letter of Assurance* is not enough, and a report carried out by the plant or a third party is needed. To the question, *have you carried out any evaluation of the odour emission of your plant?* The answer could be 'yes' or 'no.' In the case of answering 'yes', the system will offer an option to upload the *Technical Report*.

Last, there are some cases where a plant's E&T&C performance must be checked in the field. The *On-site Check* provides, in some cases, a direct input that the plant and its impacts are in line with the E&T&C Certification.

The final score is given in the E&T&C Certification using 30 independent indicators, 10 for each of the three chapters: Engagement, Transparency, and Communication. In general, the approach to certifying E&T&C is guided by five principles:

1. It is results-focused.
2. It involves engaging throughout the time of the project.
3. It seeks to strengthen plant communication programs.
4. It is context-specific.
5. It is gradual.

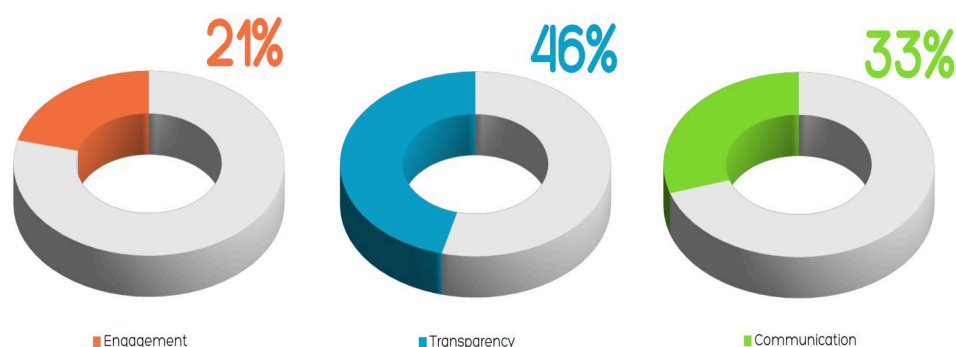


Figure 1: Example of Performance E&T&C scoring of a plant

This final E&T&C Certification consists of a number and a colour that score the state of the plant in each of the three domains taking into account these thirty different indicators. The final E&T&C Certification score is shown as a percentage of the total.

Another essential point of this Certification is that the evaluation report is public and available to everyone.

3. Discussion

The domains of Engagement, Transparency, and Communication require different approaches depending on the final aim of each chapter.

We have worked on a group of fundamental aspects that can be used to evaluate an organization's performance in each of these three domains. From this group of essential elements, we have chosen 10 for each domain and assigned them descriptors so that they are easily identifiable for an organization.

The list of descriptors for each domain is the following:

- **Engagement:** (Mailbox, Immediacy, Response, Perks, Open day, Satisfaction Survey, Compensation, Local Employment, Encouragement, and Local Suppliers.)
- **Transparency:** (Organization chart, Information Accessibility, Diplomacy, Incident analysis, Accountability, Public Process Diagram, Annual Report, Training, Website Section, Indicators)
- **Communication:** (Channels, Reception efficiency, Site visits, Change, Incident, Protocol, Knowledge, Empathy, Neutrality, Expectation.)

Many indicators are supported by existing government standards or other standardization organizations. Some other indicators are intended to change behaviour through education and policy or company culture and provide information and support on how an industrial plant can best be a good neighbour in its environment.

Most of these 30 descriptors consider additional sub-indicators.

There is no space in this paper, nor is the aim here to describe the total 30 indicators and sub-indicators. However, as an example, four indicators are presented—two for Engagement, another for Transparency, and the last for Communication.

- Encouragement (Engagement)
- Compensation (Engagement)
- Expectation (Communication)
- Empathy (Communication)

3.1 Encouragement

Encouraging the community to leave online odour observations available to everyone shows neighbouring communities that the plant is listening to them and is interested in their needs. Community observations can also help the plant manager uncover areas where it can do better, improving its ability to meet the neighbours' concerns.

Citizen complaints should be visible and offer constructive, relevant information. If that is the case, we prefer to avoid the word complaint and talk about citizens' observations. There is a need to involve the neighbouring communities through networking or regular meetings to profile how to carry out odour observations.

The more comments and feedback an industrial plant has on its site, the better. This information will be essential for a plant manager to take a suitable constructive approach and allocate the right resources to deal with the odour impact.

On the other hand, it is necessary to understand that an industrial plant will never please everyone. That is simply the reality of any industrial facility in the real world. That said, it is not a good practice to delete published complaints or any other negative feedback from the plant. Keeping those complaints and responding to them helps boost a plant's credibility.

Plant managers should use these opportunities to show that they care about their communities by responding to complainants. A register of observations with nothing but positive comments will likely make citizens assume that the plant manager is filtering out observations or that the industrial facility is planting fake comments.

3.2 Compensation

Plant managers should be aware that odour impact comes at a cost to the citizens. The two main monetary consequences are 1) The decrease in the property value affected by the odour impact and 2) The economic impact on public health. The cost of odour control can be several orders of magnitude lower than the cost of the odour impact (Diaz C. 2019).

Plant managers might incentivise the communities throughout the process to maintain trust and build long-term loyalty to a *Long Term odour Abatement Plan* (LTOAP). An LTOAP is a tool of Engagement and Communication that provides an answer if no short-term economic resources are available for a project. In addition, offering perks and other programs to compensate for odour impact is helpful, provided it is made with caution.

Care should be taken to translate this incentive to the broadest number of citizens. For example, getting t-shirts and other sports equipment for the kid's sports clubs might be a good idea, but purchasing a couch for the office of the mayor of a town reaches a smaller number of people.

In extreme cases, there might be a need to compensate the citizens affected while implementing the LTOAP. For example, the corporation Waste Management, Inc, owner of the landfill of Tullytown in the USA, has been paying 6000 dollars every year for each of the 640 residents affected by odour impact through the council of Tullytown (Rosengren C.2017; Diaz C. 2016).

3.3 Expectation

Shortcuts or overpromising will result in losing trust in the community around a plant. Citizens prefer a realistic long-term plan (LTOAP) rather than a short-term, deceptive program. Being honest about what a plant can and cannot do and making sure that the plant, at the very least, will meet the community's expectations in the long term is vital. Leveraging expectations will establish trust between the plant and the citizens and create a strong foundation for avoiding future conflicts. Installing odour abatement methods unsuitable or not dimensioned for the needs of a project will result in a lack of trust in the long term. Allocating economic resources to low-cost odour abatement systems unsuitable for a task will produce that any further odour abatement measure proposed by the plant will be taken with distrust by the communities. An LTOAP will be better accepted, provided proof of the problem's solution and a schedule for that plan.

3.4 Empathy

Friendships, like most relationships, take time and are built on trust and respect. The relationship with the communities around a plant should not be much different. Treating citizens in the same way that friends are a good policy on the road toward a successful communication strategy.

By treating citizens as if they were friends, a plant can establish a strong foundation of trust with the neighbouring communities that will give them a reason to stay loyal and focused on the LTOAP. Once reached this point, the citizens will better understand short-term incidents or accidents. However, on the other hand, one bad interaction can taint the future actions of an industrial plant for many years. Citizen friendship on a daily basis means being available for them on any channel available. It does not involve working with odour units, dispersion modelling, or chemical concentration but listening to their wants and needs while taking criticism with grace. Clear actions on this matter will show the communities how much a plant cares about them and values their lives.

3.5 Final Score

After evaluating all descriptors and sub-descriptors, the auditor must calculate the final E&T&C scoring. The final result is represented as a percentage and a colour depicting *Engagement* (orange), *Transparency* (blue), and *Communication* (green). The total E&T&C Certification score is shown as a percentage of the total.



Figure 2: Example of E&T&C score for a plant

3.6 Challenges

Implementing the E&T&C certificate can present some challenges. Here are some of the challenges that we might face when trying to promote this certificate:

- **Awareness and understanding:** One of the main challenges is creating awareness about the importance of the E&T&C certificate and its value to industries. Many organisations may not be familiar with the concept or fully understand how it can benefit them.
- **Resistance to change:** Companies may be reluctant to adopt new approaches or implement changes in the way they operate. E&T&C certification implies a commitment to transparency, citizen participation and open communication, which may require a cultural change in some organisations.
- **Cost and resources:** Obtaining E&T&C certification may involve additional costs and resources for organisations, whether in terms of hiring external auditors, implementing participation and transparency measures, or improving communication practices. Convincing companies that these expenses are worthwhile can be a challenge.
- **Regulatory and legislative changes:** Government requirements and regulations on citizen engagement, transparency, and communication can vary by location and industry. Keeping up to date with changing regulations and adapting the E&T&C certificate accordingly can be a challenge.
- **Building trust and credibility:** As E&T&C certification is relatively new, it can take time to establish its reputation and build trust among companies and stakeholders. Demonstrating success stories and providing solid evidence of tangible benefits can help to gain credibility.
- **Persuading investors and stakeholders:** In some cases, companies may need to convince investors and stakeholders about the benefits of E&T&C certification. This involves communicating how the certificate can contribute to the company's sustainability, risk management and corporate reputation.

Addressing these challenges will require a strong promoting strategy, clear communication of the benefits of E&T&C certification and a focus on customisation to suit the specific needs and concerns of each potential customer.

4. Conclusion

A framework is needed to encourage citizen participation, increase transparency and improve communication channels in case of repeated episodes of odour impact on neighbouring communities. Engagement, Transparency and Communication are critical in conflict situations.

We have created the first-ever Participation, Transparency and Communication (E&T&C) Certification to assess the performance of industrial plants in relation to nearby communities. This certification is based on audits conducted by an independent third party and aims to rate the degree of Engagement, Transparency and Communication of an industrial plant.

The paper also describes the certification methodology, which consists of four steps to assess the performance of industrial plants. These steps vary in complexity and range from direct information to on-site inspections. Thirty indicators are used to evaluate performance in the three domains: Engagement, Transparency and Communication.

In addition, examples of four specific indicators are discussed: "Encouragement", "Compensation", "Expectations", and "Empathy". These examples illustrate how a plant's performance is evaluated in each domain and how issues such as odour observations, financial compensation and expectation management can be addressed.

In conclusion, this paper proposes an innovative approach to assessing and rating the performance of industrial plants in terms of participation, transparency and communication. E&T&C Certification seeks to foster positive and lasting relationships between plants and neighbouring communities. In addition, this paper highlights the importance of the public availability of assessment reports and the invitation to odour experts to participate as E&T&C auditors. Any odour Expert wishing to participate as E&T&C Auditor is encouraged to apply to this scheme through the website <https://www.entnc.com>.

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