

TECHINT

Engineering & Construction



IPLOCA

INTERNATIONAL PIPE LINE & OFFSHORE CONTRACTORS ASSOCIATION

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IPLOCA Health & Safety Award
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SUMMARY

- **Values:** our organization adds value to our undertakings by drawing on both a **strong management system** and a **safety control**.
- We have a strong **commitment to the safety** of our people and to the **quality of the delivery**.
- We are a **Learning Organization**.
- We have carried out a deeply **Digital Transformation in Safety**.



INTRODUCTION

More than 90% of accidents and work incidents are caused by people behavior. Therefore, we must make an effort in developing accurate awareness and effective training programs.

These programs must be permanently reviewed in order to generate and achieve a safe behavior.

We believe that technology plays an important role, and therefore we have thought about using training programs based on virtual reality (VR) simulation.

VR can provide a safe work environment where users can effectively test risky tasks and improve their perception of those risks related to a specific job or task. Its visualization and simulation can eliminate the training barriers caused by the characteristics of invisibility and dangerousness of the risks. (for example: electricity).

It also allows to generate knowledge and skills for the task in a safe environment.



Virtual reality (VR) is digital technology that creates an environment of scenes, objects or risks of real appearance. The most common meaning refers to an environment generated by computer technology, which creates in the user the feeling of being immersed in it. This environment is contemplated by the user through a device known as virtual reality glasses or helmet. This can be accompanied by other devices, such as gloves or special suits, which allow a greater interaction with the environment as well as the perception of different stimulus that intensify the feeling of reality.

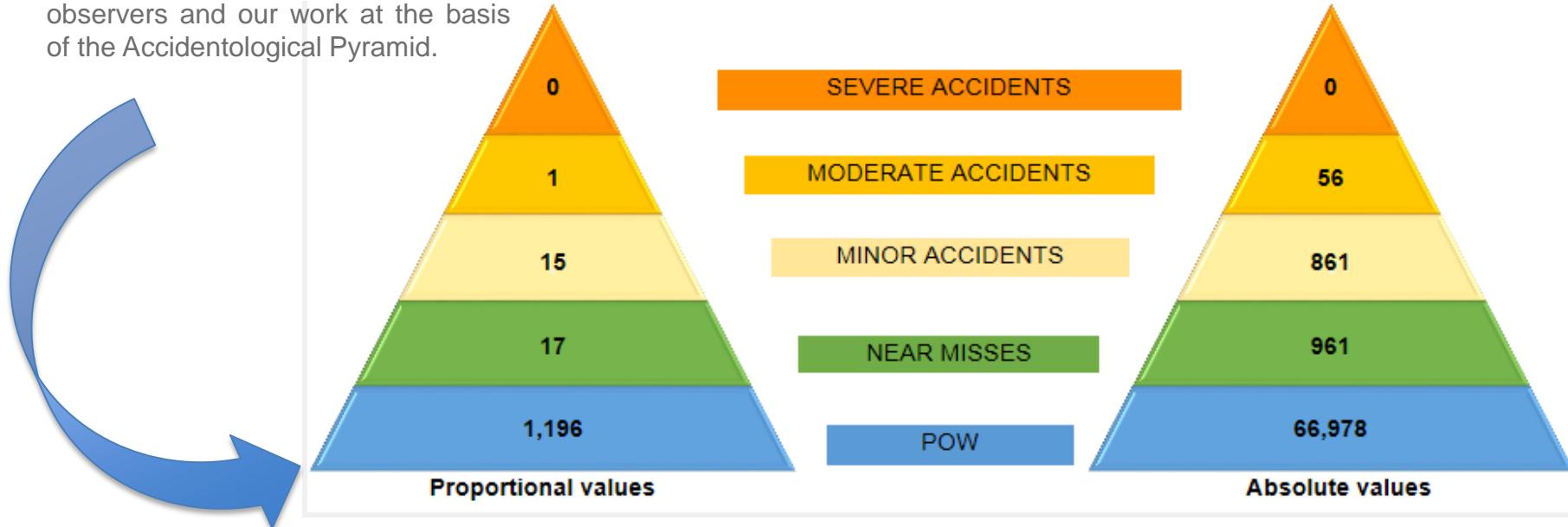


The purpose of VR-based safety training is to provide a safe work environment, where employees can effectively test, perform everyday tasks in construction and, ultimately, promote personal skills to improve the perception of risks.

The Quality, Environment, Safety and Occupational Health Direction of Techint (CMASS) has developed some VR videos that adequately complement the traditional training in prevention, and also reinforce the safe behavior of workers through dynamics that exemplify the appropriate way to execute work activities. In addition, VR allows workers to "experiment" the risks associated to their activities, without being exposed to real risks.

The implementation and use of VR tools allows the early detection of risks and / or control measures by testing their effectiveness, so that the construction sequence and tasks can result in a reduction of risks to our workers and environmental impact, within a context of safe practice and learning.

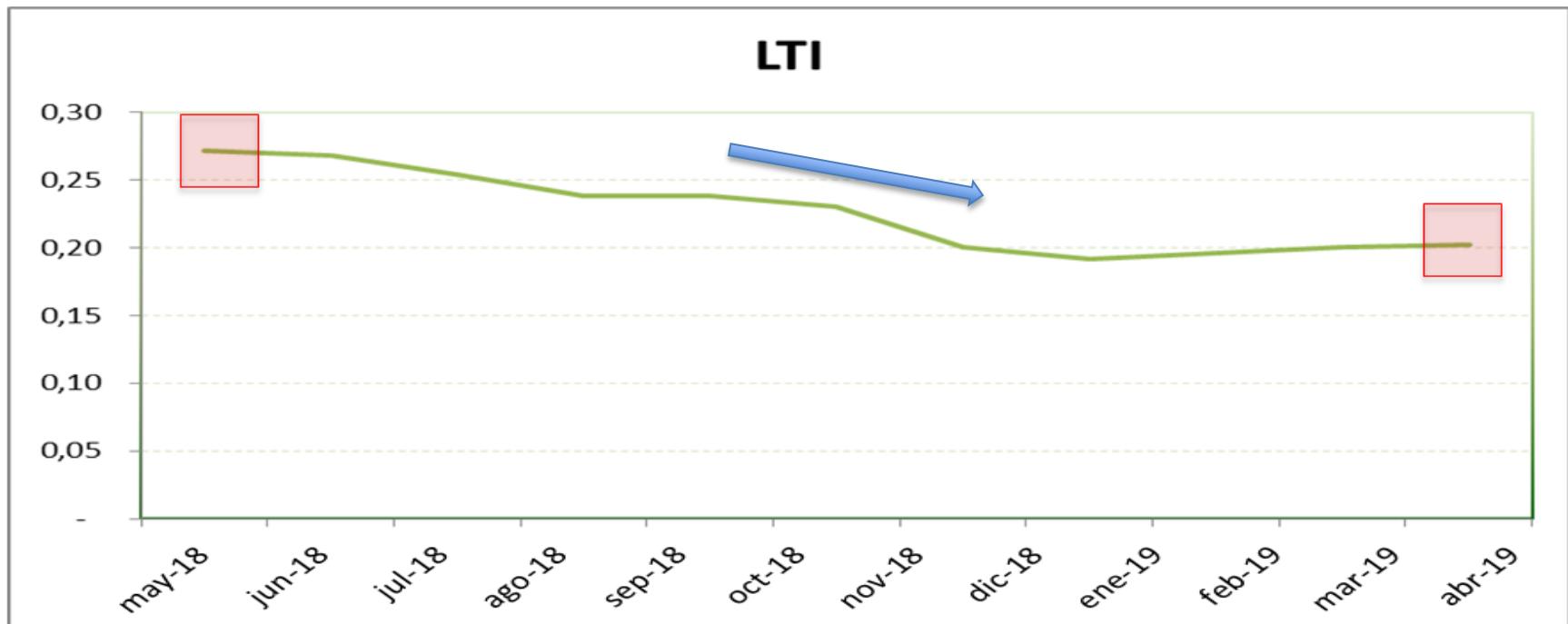
VR is another tool that helps us to correctly detect security risks, improving our quality as a preventive observers and our work at the basis of the Accidentological Pyramid.





<https://www.youtube.com/watch?v=QPKRvPouQbk&feature=youtu.be>

35 % of LTI reduction (may'18 to apr' 19)



LTI: Cases with days lost x 200.000 / Total man hours