A DECADE OF GAME

DEVELOPMENT WITH NESTE

For over 10 years, Neste has been looking for ways to renew operator training. Neste developed their first training exercise together with Neste Engineering Solutions and throughout the years the cooperation grew into next generation NAPCON Games, a series of advanced training methods that make operator training both fun and effective.

Educational games provide measurable benefits. Firstly, they are a fun and engaging training method, resulting in increased learning motivation and better results. Furthermore, learning with NAPCON Games can easily be measured and assessed by the plant managers due to a sophisticated scoring system and easy access to vital learning information. The scoring system also helps in shift optimization i.e. to select workers who best complement each other to each shift.

The effectiveness of gamified solutions in training has been researched by the National University of Singapore. They found, that gamified training methods helped increase student motivation by 71%, and decrease the time it took students to submit their work by 70%.

"We have a long relationship with Neste Engineering Solutions in developing games for operator training together. Our cooperation has always worked well and they have managed to combine process industry experience with gamification to help us to make our operator training more effective".

ESA TAMMINEN
SENIOR PROCESS SPECIALIST
NESTE

WHY GAMES?

Gamification is an easy way to make learning more compelling and interactive. Compared to traditional learning methods, games are more fun, which can have a significant impact on learning. According to a research by the University of Colorado, simulations, games, and gamified e-learning increased skill-based-knowledge assessments by 14%, terms of factual knowledge by 11% and retention rate by 9%.

With some 3 billion hours spent playing games every week, games are undeniably an essential part of our everyday life. Thus, it only makes sense to utilize our natural affinity to games when it comes to learning.

Compared to traditional classroom training, learning through trial and error has significant advantages. It allows operators to learn different processes in a safe but thorough manner, which is essential in working environments where there is no room for error. In the process industry, training plant staff properly is crucial, but NAPCON Games also make training fun and interesting.

10 YEARS IN THE MAKING

Neste Engineering Solutions and Neste started developing games together in 2008. The first exercises were called "The Basics of Distillation" and "The Basics of Streams". Since then, these exercises have been developed into professional training games.

In addition to the existing NAPCON Games, that deal with processes in the oil and petrochemical industry, there are considerable possibilities for creating new games based on various phenomena in different fields of process industry such as gas, food, wood and pulp.

FINDING THE TOUGHEST DISTILLER

In 2016, as a continuum to years of development work on games, Neste arranged a distillation competition to find "Neste's Toughest Distiller". Operators competed against each other in distilling raw oil into different end-products.

The competition included a multicomponent distillation column simulation and the player had to find out whether a stream will fit into a certain point. The highest and lowest concentration of the distillation column in regards to key components could be viewed by the player.

The game included an analysis of two products. With the help of an analyzer, the player could follow the status of the game and where it was headed. The analyzer would inform the player of the situation every 20 minutes. There was also a possibility to buy a faster analyzer with points, which let the player follow the status of the game non-stop.

The operator with the highest score won the competition. There were monthly prizes based on the results that were openly displayed at Neste intranet during the competition period.