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WESTNETZ GMBH

Adaptive Learning Module with Area9 Rhapsode™ for "Personal Protective Equipment (PPE) in Electricity Networks"

Westnetz GmbH, a subsidiary of Westenergie AG and the largest distribution network operator for electricity and gas in Germany, supplies approximately 7.5 million people with electricity, gas, water and district heating over an area of 50,000 square kilometers.
In order to ensure the safety of employees working in technical areas, especially in operations, a mandatory training course on "Wearing Personal Protective Equipment and Removing Jewelry" has been introduced.

Challenges:

The mandatory training to teach basic principles related to PPE mindset and PPE in specific technical areas faced several challenges:

- In the past, rules and information were communicated differently from region to region.
- Complex content was delivered with varying levels of prior knowledge.
- Employees' knowledge levels varied widely based on age and experience.

Solution:

- The Area9 Rhapsode™ pilot was conducted in two phases.
- Allocation and access was through the existing LMS, including mobile devices.
- The module could be completed at an individual pace, regardless of time or place.
- The average learning time was 30-45 minutes, or even less depending on the level of knowledge, and lasted until 100% competence was achieved (see Figure 1).
- Learner performance was automatically recorded in the learning history in the LMS.

Outcomes:

- All 2,227 employees successfully completed the Personal Protective Equipment (PPE) adaptive learning module and achieved 100% competency.
- The adaptive learning system adapts to each learner's knowledge level, meaning experts move through the course faster while beginners receive additional explanations:
  - 65% of learners complete the module in less than 45 minutes (see Figure 2).
  - The average competency of all employees increased from an initial 73% to 100%.
  - Compared to classroom training, there were significant cost and time savings, with an estimated total savings of approximately 360,000 EUR based on an assumed replacement time of 180 minutes (see Figure 3).

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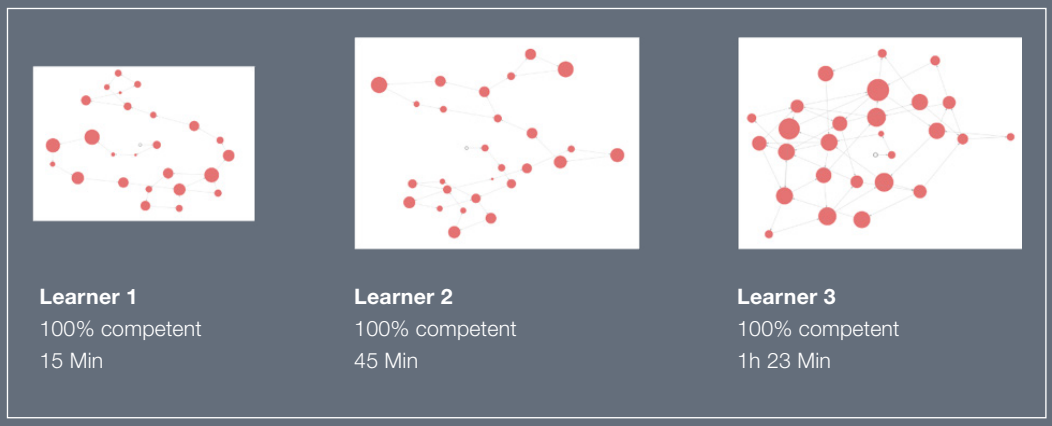

Figure 1: Shows the different learning paths of 3 learners in the Personal Protective Equipment (PPE) module. The time taken to achieve 100% competence varies. While learner 1 needed a total of 15 minutes to complete the module, learner 3 invested more than 1 hour.

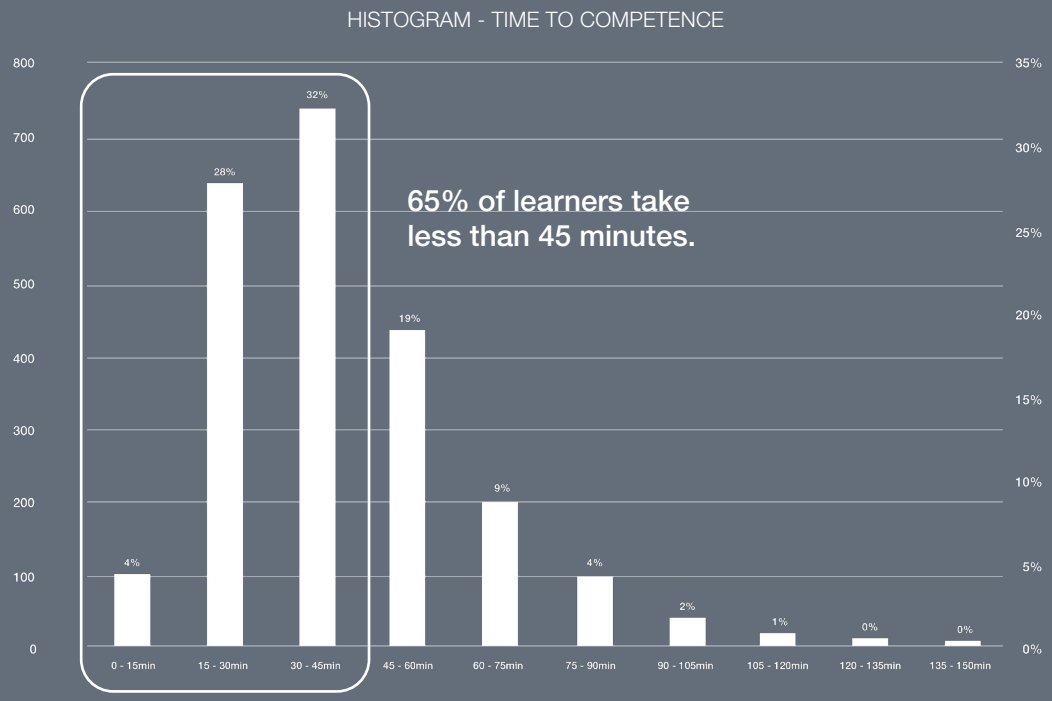

Figure 2: The histogram shows the individual learning times according to their frequency of occurrence.

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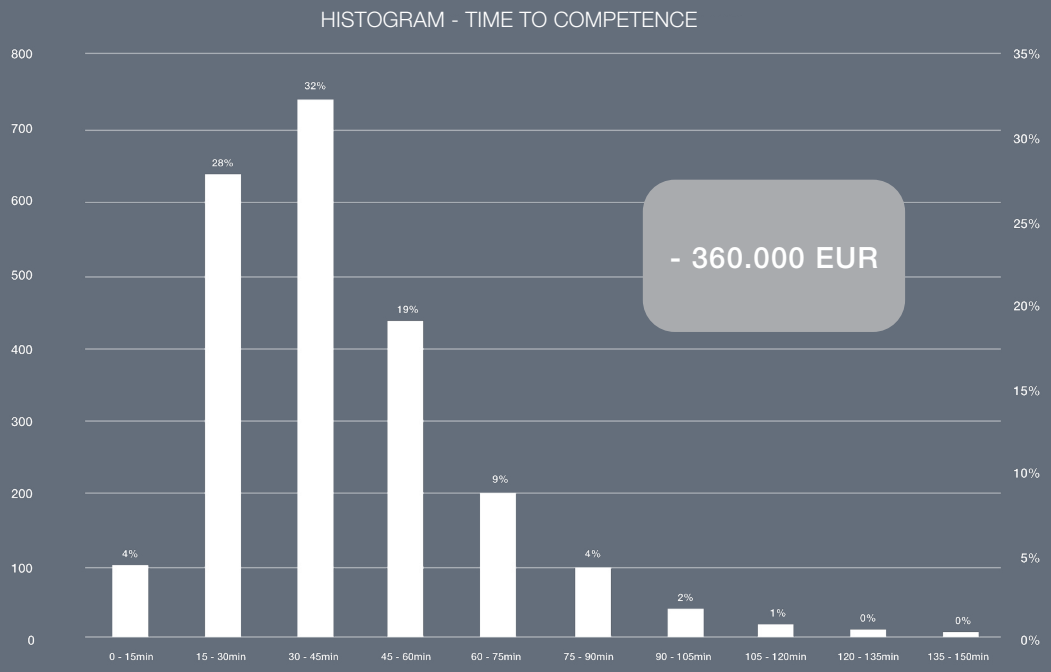

Figure 3: The calculation example assumes that the adaptive learning module replaces 180 minutes of classroom time.

“Participants appreciated the intuitive interface, the variety of interaction elements, and the ability to self-assess. The flexible implementation at self-determined times and the possibility to work at one’s own learning pace were rated particularly positively. The majority of participants recommend this innovative form of training without reservation due to its user-friendliness and effectiveness.”

Dominic Sarah Loos, Head of Knowledge Management, Westnetz GmbH

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