

EON AI Ventures Unveils a Live, Playable Demo of EON Live — Industrial Safety Training on a Plant That Is Actually “Alive”

Experience the Future: Interactive Safety
Training with Real-Time Industrial Plant
Simulations



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EXECUTIVE SUMMARY

EON AI Ventures has taken a significant leap forward in industrial safety training with the introduction of **EON Live**, a groundbreaking simulation tool that transforms the traditional learning experience into an interactive, hands-on opportunity for trainees. By leveraging **AI-driven, physics-based simulation** technology, EON Live provides a dynamic platform where users can engage with a fully simulated industrial plant in real time. This innovation marks a departure from conventional training methodologies, such as passive slideshows and multiple-choice quizzes, by immersing trainees in a virtual environment where they can simulate real-world operations and learn from their actions without the risks associated with actual plant operations.

The essence of **EON Live** lies in its ability to bring the plant to life, allowing trainees to operate a working plant model where variables such as pressure, flow, temperature, and electricity are computed in real time. This ensures that the consequences of every action play out exactly as they would in a real-world scenario, but with the safety net of a simulated environment. The system's interactive nature ensures that trainees not only observe but actively participate, learning through doing rather than watching. As Dan Lejerskar, founder of EON AI Ventures, aptly put it, "EON Live is something you do." This approach not only enhances knowledge retention but also equips the workforce with practical skills and understanding that are crucial for high-consequence work environments.

A standout feature of EON Live is its innovative approach to hazard visualization. The simulation renders invisible energy hazards visible through a consistent color code system—red for trapped pressure, yellow for live electricity—allowing trainees to identify and respond to these potential dangers proactively. This visualization, combined with real-time feedback and guidance, offers trainees an unparalleled opportunity to understand and manage risks effectively.

The demonstration of EON Live includes three core scenarios: **Lockout / Tagout**, **Pump Dead-Head**, and **Pump Dry-Run**. These scenarios are designed to replicate common industrial challenges, providing trainees with the opportunity to experience and rectify mistakes in a controlled setting. For instance, in the Lockout / Tagout scenario, trainees learn to isolate, bleed, and verify trapped pressure, with any oversight highlighted through the simulation's visual cues. Similarly, the Pump Dead-Head and Pump Dry-Run scenarios simulate equipment failures due to operational errors, teaching trainees to anticipate and prevent such occurrences.

Beyond individual scenarios, EON Live's flexibility allows a single real incident to be expanded into numerous variations, fostering a comprehensive understanding of potential risks and outcomes. This adaptability is further enhanced by the integration of **EON Situation Rooms**, which offer curated libraries of real-world incidents that can be replayed across various industries, including oil & gas, mining, aerospace maintenance, and healthcare. Through these Situation Rooms, EON AI Ventures offers a unique opportunity for organizations to transform real-world knowledge into interactive, measurable training experiences.

In conclusion, EON Live represents a transformative shift in industrial safety training, bridging the gap between theoretical knowledge and practical application. By providing a safe, interactive training environment, EON AI Ventures not only enhances workforce capability but also ensures that trainees are better prepared for the demands of high-stakes operations. As industry needs continue to evolve, EON Live stands as a testament to the potential of AI-driven solutions in shaping the future of workforce training.

THE PROBLEM/CHALLENGE

Traditional industrial safety training has long relied on passive learning methods, predominantly characterized by slideshows and multiple-choice quizzes. While these methods have served as a foundation for imparting necessary safety protocols, they fall short in preparing trainees for the complexities and unpredictability of real-life industrial scenarios. The primary limitation of these conventional approaches is their inability to provide a visceral understanding of the consequences that arise from specific actions or inactions in an industrial setting.

The static nature of traditional training means trainees often lack the opportunity to experience the direct impact of their decisions. This gap in experiential learning can result in a workforce that is theoretically knowledgeable but practically untested. Without the chance to engage with dynamic simulations, trainees may find themselves ill-equipped to respond effectively to unexpected situations, potentially jeopardizing safety and operational integrity.

EON Live addresses this critical challenge by transforming the learning process into an engaging, hands-on experience. Unlike traditional methods, EON Live immerses trainees in a real-time simulated industrial plant where they can interact with the environment and witness the outcomes of their actions. This approach allows trainees to learn by doing, fostering a deeper understanding of operational procedures and the implications of safety protocols.

A significant aspect of the challenge lies in visualizing and managing invisible hazards, such as trapped pressure and live electricity, which are inherently difficult to conceptualize through traditional training. EON Live overcomes this barrier by employing a consistent color-coding system that renders these otherwise invisible hazards visible, enabling trainees to identify and address potential dangers effectively.

Moreover, the lack of real-time feedback in traditional training methods hinders the ability of trainees to learn from mistakes in a safe environment. EON Live provides immediate, context-specific feedback, guiding trainees through correct procedures and allowing them to understand errors without the risk of real-world consequences. This immediate feedback loop is crucial for building confidence and competence in high-stakes operations, where even minor errors can have significant repercussions.

The three core scenarios demonstrated in EON Live—**Lockout / Tagout**, **Pump Dead-Head**, and **Pump Dry-Run**—illustrate the practical application of this interactive training approach. Each scenario is designed to replicate real-world challenges, providing trainees with the opportunity to engage with complex systems and learn from their interactions. For example, the Lockout / Tagout scenario teaches the importance of isolating and verifying trapped pressure, while the Pump Dead-Head and Pump Dry-Run scenarios highlight the consequences of operational errors on equipment functionality.

In summary, the limitations of traditional industrial safety training underscore the need for innovative solutions that bridge the gap between theoretical knowledge and practical application. By offering a dynamic, risk-free environment for experiential learning, EON Live not only addresses these challenges but also sets a new standard for workforce readiness in the AI era. Through its interactive, physics-based simulations, EON AI Ventures is empowering organizations to transform their training programs and prepare their workforce for the demands of high-consequence work environments.

SECTION 3: THE SOLUTION

EON Live redefines industrial safety training by addressing the critical gaps inherent in traditional training methodologies. Traditional safety training often relies heavily on passive learning methods such as slideshows and multiple-choice quizzes, which fail to fully engage trainees or adequately prepare them for real-world scenarios. **EON Live** offers a transformative alternative by immersing trainees in a fully simulated, interactive plant environment where they actively engage with the training material.

At the heart of **EON Live** is the integration of **AI-driven, physics-based simulation**. This advanced technology enables the creation of a realistic plant model that operates with real-time computation of pressure, flow, temperature, and electricity. Trainees interact with this dynamic environment, where every decision they make is met with immediate and realistic consequences. This hands-on approach allows trainees to make safety-critical decisions in a controlled environment, where they can safely make mistakes and learn from them without risking real-world consequences.

Dan Lejerskar, founder of EON AI Ventures, encapsulates the essence of **EON Live** by stating, “Most safety training is something you watch. EON Live is something you do.” This shift from passive observation to active participation marks a significant advancement in training methodologies. Trainees are no longer mere spectators; they are active participants in a live, reactive environment. The simulation is designed to respond to actions rather than simply instruct, offering a more engaging and effective learning experience.

One of the standout features of **EON Live** is its ability to visualize otherwise invisible hazards. Through a consistent color-coded system, trainees can see potential dangers such as trapped pressure, live electricity, and rising temperatures. This visualization aids in understanding complex safety protocols and ensures that trainees can recognize and respond to hazards before they escalate into real threats.

The system's interactivity is further enhanced by scenarios that simulate real-life industrial challenges. Trainees engage in exercises such as **Lockout/Tagout**, **Pump Dead-Head**, and **Pump Dry-Run**, each designed to teach critical safety procedures and the importance of following protocol. These scenarios allow trainees to experience the direct consequences of their actions, reinforcing the learning process through practical application.

Moreover, **EON Live** leverages the power of **Situation Rooms**, curated libraries of real-world incidents that trainees can explore and replay. This feature expands a single incident into numerous variations, offering different operator decisions and sequences. By experiencing these variations, trainees gain a deeper understanding of potential outcomes and develop the skills needed to handle complex situations across various industries, including oil & gas, mining, aerospace maintenance, and healthcare.

In conclusion, **EON Live** offers a comprehensive solution to the limitations of traditional safety training by providing an interactive, immersive, and realistic training environment. Through **AI-driven, physics-based simulation**, trainees gain valuable hands-on experience, making safety-critical decisions in a safe and controlled setting. This innovative approach not only enhances learning outcomes but also prepares the workforce for high-stakes operations, ultimately bridging the gap between theoretical knowledge and practical application.

SECTION 4: KEY FEATURES/CAPABILITIES

EON Live is equipped with a suite of features and capabilities that set it apart as a leading solution in industrial safety training. At its core, the platform utilizes **real-time physics simulation** to create a dynamic and interactive training environment. This advanced technology allows trainees to engage with a fully simulated industrial plant, where real-time computation of pressure, flow, temperature, and electricity brings the plant to life.

One of the standout capabilities of **EON Live** is its ability to render invisible hazards visible. Using a consistent color-coded system, the simulation highlights potential dangers, such as trapped pressure, live electricity, and rising temperatures. Red indicates trapped pressure, while yellow signals live electricity. Temperature readings climb on a timer, alerting trainees to potential trip points. This visualization is crucial for understanding and recognizing hazards that would otherwise be invisible in a real plant setting.

EON Live offers trainees the opportunity to engage with three representative scenarios that simulate real-life industrial challenges:

- **Lockout/Tagout:** In this scenario, trainees learn to isolate, bleed, and verify trapped pressure before opening equipment. If the bleed step is missed, the stored energy remains, visually represented as a red glow. This feature teaches the importance of following protocol to ensure safety.

- **Pump Dead-Head:** This scenario involves running a pump into a closed outlet. Trainees observe as pressure and temperature climb on a timer until the machine trips. The exercise highlights the consequences of improper operation and emphasizes the need for careful monitoring and intervention.
- **Pump Dry-Run:** In this scenario, trainees run a pump with no liquid, witnessing the machine fail as it overheats. This exercise demonstrates the risks associated with running equipment under inappropriate conditions and reinforces the importance of proper procedure.

Beyond these scenarios, **EON Live** expands the learning experience through its innovative **Situation Rooms** feature. These are curated libraries of real-world incidents that trainees can step into and replay. By transforming a single real incident into multiple variations, **EON Live** offers trainees a comprehensive understanding of potential outcomes and decision-making processes. This feature is applicable across various industries, including oil & gas, mining, aerospace maintenance, and healthcare, making it a versatile training tool.

The integration of these features and capabilities within **EON Live** ensures that trainees receive an engaging and effective training experience. By simulating real-world scenarios and visualizing potential hazards, the platform prepares the workforce for high-consequence work, enhancing both safety and operational efficiency. Through **EON Live**, EON AI Ventures continues to lead the way in transforming industrial safety training, delivering measurable outcomes in time-to-competency, knowledge retention, and overall safety.

HOW IT WORKS

EON Live represents a groundbreaking shift in industrial safety training by presenting a working plant model driven by **AI-powered, physics-based simulation**. This innovative approach allows trainees to engage directly with a simulated industrial environment where real-world physics such as pressure, flow, and temperature are dynamically calculated and rendered in real-time. This interactive demonstration transcends traditional training methodologies by offering a hands-on experience where actions yield immediate and visible consequences.

At the core of **EON Live** is the ability to convert theoretical learning into practical understanding. Trainees operate within a fully simulated plant environment, where every action they take is mirrored by the plant's response. This is not merely a static model; it's a living, reactive simulation. For instance, when trainees engage in **Lockout/Tagout** procedures, they must isolate, bleed, and verify trapped pressure before opening equipment. The simulation visually represents any oversight by displaying a red glow, signifying retained energy. This immediate feedback mechanism is crucial in reinforcing correct safety practices without the risk of real-world repercussions.

Moreover, the simulation includes scenarios such as **Pump Dead-Head** and **Pump Dry-Run**, each meticulously designed to mimic real-life industrial challenges. In a **Pump Dead-Head** scenario, a pump operates against a closed outlet, causing pressure and temperature to escalate towards a critical trip point. Conversely, in a **Pump Dry-Run**, the absence of liquid leads to overheating and eventual failure. These scenarios emphasize the importance of proper operation and maintenance procedures, allowing trainees to witness the ramifications of errors firsthand.

A distinctive feature of **EON Live** is its ability to render invisible hazards visible. The simulation employs a consistent color-coding system to alert trainees to potential dangers: red for trapped pressure, yellow for live electricity, and a progressive temperature gauge leading to a trip point. These visual cues, alongside guidance from a calm, instructional voice, facilitate an immersive learning experience. The voice not only walks trainees through each procedure but also assesses their performance, offering a comprehensive understanding of their actions' outcomes.

The adaptability of **EON Live** is further exemplified through its capability to transform a single real incident into countless variations. Trainees can explore different scenarios by altering variables such as valve positions or operational sequences. This variability is encapsulated in **Situation Rooms**, curated libraries of real-world industrial incidents that learners can explore and replay. Through these **Situation Rooms**, trainees gain exposure to a broad spectrum of challenges across industries like oil & gas, mining, aerospace maintenance, and healthcare.

In summary, **EON Live** offers a rich, dynamic platform where trainees can learn by doing, fostering a deeper understanding of industrial operations. By allowing them to make mistakes in a controlled environment, **EON Live** ensures that when they face similar situations in the field, they do so with the confidence and competence necessary to maintain safety and efficiency.

BENEFITS/OUTCOMES

The interactive approach of **EON Live** revolutionizes industrial safety training by embedding experiential learning at its core. By enabling trainees to learn through doing, **EON Live** significantly mitigates risks associated with real-world operations, enhancing overall safety and preparedness.

One of the most profound benefits of **EON Live** is its ability to transform industrial incidents into valuable learning opportunities. Traditional training methods often rely on passive learning through slideshows and quizzes, which can fail to adequately prepare individuals for the complexities of high-consequence work environments. In contrast, **EON Live** immerses trainees in a realistic, risk-free setting where they can actively engage with industrial processes, witnessing the consequences of their actions in real time.

The realistic simulation of industrial environments allows for a vast array of scenarios that can be tailored to specific industry needs. **EON Live** offers scenarios across multiple sectors, including oil & gas, mining, aerospace maintenance, and healthcare. This versatility ensures that trainees are not only prepared for common industry hazards but also equipped to handle unique challenges that may arise in their specific fields.

By simulating real physics, such as pressure, flow, and temperature, **EON Live** provides a level of detail and realism that is unmatched by conventional training methods. Trainees gain a comprehensive understanding of how industrial systems operate and the potential hazards they may encounter. This hands-on experience is crucial for developing the skills needed to perform effectively and safely in the field.

A key outcome of **EON Live** is the improvement in time-to-competency. By engaging with the simulation, trainees can quickly acquire and retain the knowledge necessary to perform their duties safely and effectively. This accelerated learning process not only enhances individual performance but also contributes to the overall efficiency and safety of the organization.

Furthermore, **EON Live** promotes knowledge retention through its interactive and immersive approach. Trainees are more likely to remember procedures and safety protocols when they have actively participated in simulated scenarios. This retention is critical in preventing accidents and ensuring that employees are prepared to respond appropriately in high-stakes situations.

In addition to individual benefits, **EON Live** offers organizational advantages by fostering a culture of safety and continuous improvement. By embedding safety training within a simulated environment, organizations can ensure that their workforce is consistently exposed to best practices and up-to-date procedures. This ongoing training contributes to a safer workplace and reduces the likelihood of incidents, ultimately protecting both personnel and assets.

In conclusion, **EON Live** delivers transformative outcomes by providing an interactive, realistic training platform that prepares trainees for the complexities of industrial work. By transforming incidents into learning opportunities and offering a vast range of scenarios across industries, **EON Live** enhances preparedness, reduces risk, and fosters a culture of safety and continuous improvement.

Conclusion

EON AI Ventures has fundamentally transformed the landscape of **industrial safety training** with the introduction of **EON Live**. This revolutionary platform offers an **interactive, real-time simulation environment** that transcends traditional training methodologies. By simulating a fully operational industrial plant where real physics dictate outcomes, EON Live

provides trainees with an unparalleled opportunity to engage with their training material in a meaningful, hands-on manner.

Unlike conventional training programs that rely heavily on passive learning tools such as slideshows and quizzes, EON Live immerses trainees in a dynamic environment where they can actively participate in the learning process. Trainees are no longer passive recipients of information; instead, they become active participants in a simulated world where their actions have tangible consequences. This not only enhances their understanding of safety procedures but also prepares them for the complexities and unpredictability of real-world challenges.

A key feature of EON Live is its ability to render unseen hazards visible. In a real plant, dangers such as trapped pressure, live electricity, and temperature fluctuations are often invisible until they manifest as serious incidents. EON Live addresses this by using a consistent color-coding system to highlight these hazards. For example, trapped pressure is shown as a red glow, while live electricity appears in yellow. This visualization helps trainees to recognize and respond to potential hazards in a controlled environment, thereby reducing the risk of accidents in real-life scenarios.

The **EON Live** platform showcases three critical scenarios: **Lockout / Tagout**, **Pump Dead-Head**, and **Pump Dry-Run**. Each scenario is carefully designed to replicate real-life industrial challenges. In the Lockout / Tagout scenario, trainees learn to isolate, bleed, and verify trapped pressure before opening equipment, a process that is critical to ensuring safety yet often misunderstood. The Pump Dead-Head scenario allows trainees to witness the consequences of running a pump into a closed outlet, where pressure and temperature rise until the machine trips. Similarly, the Pump Dry-Run scenario demonstrates the repercussions of operating a pump without liquid, emphasizing the importance of proper operational procedures.

Furthermore, the versatility of EON Live is showcased in its ability to transform a single incident into countless variations, thanks to its **simulation capabilities**. This flexibility is encapsulated in the **EON Situation Room**, where curated libraries of real-world incidents from industries such as oil & gas, mining, aerospace maintenance, and healthcare are available. These **Situation Rooms** enable trainees to explore various scenarios and outcomes, promoting a deeper understanding of cause and effect in industrial settings.

The significance of this innovation cannot be overstated. With a substantial proportion of the workforce nearing retirement, capturing and transferring their knowledge to the next generation is imperative. EON Live acts as the **acceleration layer between AI capability and workforce readiness**, bridging the gap between expert knowledge and workforce execution. This is not merely about achieving compliance; it is about equipping employees with the skills and understanding necessary to thrive in high-consequence work environments.

EON Live's **AI-driven, physics-based simulation** technology stands at the forefront of industrial training, offering measurable outcomes in terms of time-to-competency, knowledge retention, and safety. By allowing trainees to "learn by doing," EON Live ensures that the

knowledge gained is not only theoretical but also practical, enabling employees to perform their duties with confidence and precision.

In conclusion, EON Live represents a significant leap forward in the realm of industrial safety training. By inviting organizations to experience its capabilities through demonstrations, EON AI Ventures extends an open invitation for companies to witness firsthand the transformative potential of EON Live. This is more than just a training tool; it is an investment in the future of workforce safety and effectiveness, offering a comprehensive solution that meets the rigorous demands of today's industrial sectors.