

High Cost of Downtime

The dramatic costs of downtime and how training can stop it.



Introduction

Production downtime is one of the most significant expenses for industries worldwide.

This guidebook is for training leaders exploring how training - particularly live training - can help slash downtime.



ABOUT ADMINISTRATE

Administrate is a training management system purpose built for managing live training at scale.

Our software is the training technology infrastructure that enterprise organizations depend on to plan, schedule, communicate, and resolve training management.

Teams that rely on live training have fewer downtime incidents and those incidents are much shorter.

The escalating cost of downtime

A [report](#) from Siemens highlights that unplanned downtime now costs Fortune Global 500 companies 11% of their annual turnover, a staggering \$1.5 trillion. This alarming increase from \$864 billion just a few years ago underscores the escalating risk and expense associated with unplanned downtime.

Among the many causes of downtime, human error is a critical factor, often caused by inadequate training. This guidebook explores the financial impact of downtime, the role of human error, and the importance of effective training and management systems to mitigate these costly disruptions.

The financial impact of unplanned downtime is severe across industries, and it has been worsening at an alarming rate. Among Fortune Global 500 companies, the [annual cost of downtime per facility has skyrocketed to \\$129 million](#)—a 65% increase since pre pandemic norms. This surge is driven by several factors, including inflation, strained supply chains, and the increasingly complex technological landscapes within which these companies operate.

In the automotive industry, the cost of an hour of downtime is now \$50,000 per minute, or 3 million dollars an hour. This is particularly concerning given the industry's reliance on just-in-time production methods, where even a short disruption can lead to significant delays and lost revenue. Similarly, in the oil and gas sector, the cost of an hour of downtime has more than doubled, reaching nearly \$500,000. These figures illustrate that the financial stakes are high, with every minute of downtime translating to substantial losses.

Manufacturers, too, are feeling the pressure. The average cost of downtime in the manufacturing sector is estimated to be \$260,000 per hour, with the industry experiencing approximately [800 hours of downtime annually due to maintenance, equipment failures, and other disruptions](#). The cumulative cost of these disruptions is staggering, underscoring the urgent need for better prevention and management strategies.

The rising cost of downtime is not just a reflection of higher production costs or inflation, it also highlights the increasing complexity of industrial operations. As companies strive to remain competitive in a global market, the financial penalties for downtime become more severe, making it critical to invest in robust strategies that minimize disruption.



Live training and human error

Human Error Risk Factors

While equipment failure is often cited as the primary cause of unplanned downtime, human error remains a significant and often underappreciated risk factor.



In fact, human error is more prevalent in manufacturing than in any other sector, [contributing to nearly a quarter of all downtime incidents](#). This high incidence of human error can be attributed to improper use of equipment, failure to follow established protocols, and mistakes made under pressure. These errors are often compounded by insufficient training, which leaves employees unprepared to handle unexpected situations or operate complex machinery.

Moreover, human error is not just a problem at the operator level. It can occur at any stage of the production process, from planning and scheduling to maintenance and quality control. For example, poor planning or inadequate communication between departments can lead to scheduling conflicts, resource shortages, or delays in maintenance, all of which can trigger costly downtime.

Environmental factors, such as extreme weather or natural disasters, can also contribute to human error. In these situations, workers may be forced to make quick decisions under stress, increasing the likelihood of mistakes. While these external factors are often beyond an organization's control, their impact can be mitigated through effective training and preparation.

Live Training Reduces Human Error

While e-learning and virtual training have gained popularity, live training remains the most effective method for reducing human errors in production environments. Live training sessions provide employees with hands-on experience, immediate feedback, and the opportunity to engage directly with instructors, all of which contribute to better

retention of skills and knowledge.

Another advantage of live training is the ability to simulate real-world scenarios. Simulations allow trainees to experience the pressures and challenges of their job in a safe environment, where mistakes can be made and corrected without consequences. This experiential learning is invaluable in preparing employees to handle the unpredictable nature of industrial operations, where quick thinking and problem-solving skills are essential.

While e-learning and virtual training have their place, particularly for delivering basic information or training large numbers of employees, they cannot replace the depth of understanding and confidence that live training provides. By investing in live training, organizations can ensure that their workforce is not only well-trained but also well-prepared to minimize downtime and maintain continuous production.



Training management systems

As the complexity of industrial operations increases, so too does the need for effective training management. Traditional Learning Management Systems (LMS) have been the go-to solution for many organizations, but they often fall short when it comes to managing the scale and specificity of training required in high-stakes environments. This is where Training Management Systems (TMS) like Administrate come into play, offering a more comprehensive solution for delivering high-quality training at scale.

Qualifications and Credentials Management

One of the biggest challenges of live training is managing the various qualifications and credentials of both instructors and students. In many organizations, only certain instructors are certified to teach specific courses, and

calendars and sessions. They need to ensure that the right instructor is available to teach the required course to the employees who need it most, without causing scheduling conflicts or gaps in essential training.

A traditional LMS lacks the functionality to solve this intricate planning problem. While an LMS is primarily designed for content delivery, it doesn't have the capability to manage and coordinate the many moving parts involved in scheduling live training sessions. It's not equipped to handle the complexities of matching instructors with the right qualifications to the appropriate courses, nor can it effectively track the credentials and past performance of students to ensure they are placed in the correct training sessions.

In contrast, a TMS is specifically designed to handle these challenges. A TMS like Administrate has access to all necessary data: instructor credentials, student qualifications,

UPCOMING EVENTS			ISSUES ONLY	MY EVENTS ONLY	NEXT 30 DAYS
203			16	2	
UPCOMING EVENTS			EVENTS WITH ISSUES	NEW ISSUES (MARK AS SEEN)	
PPD - Professional Development with the Org in Mind				1	
1 Feb, 2024 Pembroke					
GSE - General Skills Enhancements Examination				2	
2 Feb, 2024 Fairfield					
IHA - Intermediate Health Advisory Assessment					
2 Feb, 2024 Naperville					
ACS - Active Communication Within Organisations Team Struture and Fell...				3	
4 Feb, 2024 Toledo					
ACW - Active Communication in the Workplace				2	3
5 Feb, 2024 Austin					
BHS - Basic Health & Safety Training				3	
5 Feb, 2024 Austin					
LFW - Leading as a Follower and How To Do It Well				4	
5 Feb, 2024 Austin					

Conflict alerts dashboard in Administrate

likewise, only certain students are qualified to attend them. This creates a complex planning scenario where training staff must spend days—or even weeks—carefully plotting out

past performance in previous training sessions, and even detailed calendar information for both instructors and students. This comprehensive access allows the TMS to automate much of the planning process, ensuring that training sessions are scheduled efficiently and effectively. It can quickly match qualified instructors with the right courses and ensure that students are placed in sessions that align with their needs and qualifications.

Real-Time Conflict Resolution

Live training means dealing with sudden, enormous, changes to your training plan. For

example, if an instructor becomes unavailable or if there is a sudden need to reschedule a session, the TMS can quickly find an alternative instructor who meets the necessary qualifications and adjust the training schedule accordingly. How does this work? A TMS, unlike an LMS, understands the complex interconnected nature of the elements in your training plan.

Tracking and Analyzing Training Data

Another key feature of a TMS is its ability to track and analyze training data. This data can be used to identify trends, measure the effectiveness of training programs, and make informed decisions about future training needs. For example, if

a particular training program is found to be highly effective in reducing downtime incidents, it can be expanded to other parts of the organization. Conversely, if a program is not delivering the desired results, it can be adjusted or replaced with a more effective solution. By investing in a TMS, organizations can ensure that their training programs are not only effective but also aligned with their overall business objectives. This alignment is crucial for minimizing downtime and maximizing productivity, making a TMS an indispensable tool for any organization that values continuous improvement and operational excellence.

Report Name	Entity	Action
Active Instructor List	Contact	Action ▼
Event Profitability as % YTD	Event	Action ▼
Fill Rate for Best Courses	Event	Action ▼
	Event	Action ▼
ions	Qualifications	Action ▼
port	Task	Action ▼
	Contact	Action ▼

Report: *Active Instructor List* Save ▼

Contact matching: ALL ▼

Is tutor: Yes ▼ ⊗

Dormant: No ▼ ⊗

Inactive: No ▼ ⊗

Reporting in Administrate

Double your training volume in 12 months

Administrate automates 90% of training tasks like planning, scheduling, communications, and conflict resolution. Our customers see dramatic 200% growth in training volumes within a year.

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