# Readi / Fatigue Risk Management System

Predict fatigue risk before it occurs—at the start of shift and for the next 18 hours, so you can take action and conduct countermeasures before costly incidents occur.



# The Hidden Costs of Fatigue

Fatigue is a common underlying root cause of many incidents and near misses, leading to worker's compensation claims, sick days, and lost productivity.



This means fatigue isn't just a safety problem, it's a productivity and cost problem, as well.

# By the numbers

- <u>65% of mining haul truck accidents can be</u> <u>attributed to operator fatigue</u>.
- Up to 13% of all workplace injuries could be attributed to fatigue.
- A fatigued driver experiencing a microsleep can travel over 20 meters with their eyes closed.
- 66% of employers reported decreases in productivity and 45% said they had experienced safety incidents due to fatigue.
- 70% of transportation employees report feeling tired at work.
- Workers with sleep problems had a 1.62 times higher risk of being injured than those without.
- There is an estimated 2-4% productivity loss across industry due to fatigue.

## Readi makes it possible to mitigate fatigue risks proactively, creating unprecedented opportunities to improve health, safety, and productivity.

#### SUCCESS STORY

A Central American mine that implemented Fatigue Science's Readi alongside their existing reactive camera-based system observed a substantial 50% reduction in fatigue alarms generated by the Caterpillar DSS system.



**Related Incidents** 

# Who uses Readi?

Readi helps safety-critical industries predict and prevent fatigue risks before they lead to costly incidents.

## **Mining Operations**

Reduce haul truck accidents, optimize shift schedules, and monitor underground fatigue where cameras can't be used.

## **Heavy Machinery**

Reduce operator errors, improve maintenance scheduling, and enhance warehouse safety.

#### **Transportation & Fleet**

Predict driver fatigue, prevent microsleeps, and improve safety decisions

## **HSE & Safety Teams**

Access real-time fatigue dashboards, compliance reports, and risk trends to prevent workplace injuries.

"Fatigue Science's Readi platform allows us to proactively manage and substantially reduce our fatigue risk every day. We can now pinpoint fatigue hotspots and implement targeted countermeasures tailored to the specific needs of our workers."

# How Readi Works

# A Complete Fatigue Risk Management System

Readi does so much more than just identify fatigued employees. It is the only true end-to-end fatigue risk management platform.

This means that you can start and finish a fatigue workflow within the tools.

Evaluate, assign, and schedule mitigations actions to align with the most risky time of day



Analyze both quality and quantity of sleep to identify fatigued and soon-to-be-fatigued workers

Analyze historical data to assess effectiveness of the actions and adjust policy and procedure accordingly



## Readi/Watch™

High-Resolution Fatigue Monitoring

- Fatigue alerts and forecasts pushed to supervisors' phones
- Best-in-class sleep tracking with 92% validated accuracy

The wrist-worn ReadiWatch captures high-resolution sleep data.

Workers simply wear the watch, and their sleep data syncs automatically upon arrival at work.

With a 14-day battery life, ReadiWatch offers a <u>seamless</u>, <u>low-maintenance solution</u> to track sleep and predict fatigue risk accurately.



## ReadiML

AI-Powered Fatigue Prediction Without Wearables

- Wearable-free fatigue predictions
- Non-intrusive & easy to deploy

For operations that prefer nonwearable solutions, ReadiML leverages electronic logging data (ELDs), worker demographics, and globally validated sleep profiles to predict fatigue.

By clustering workers into sleep profiles using over <u>15 years of</u> <u>sleep data</u>, ReadiML continuously refines its predictions, ensuring accuracy even without direct sleep tracking.

R/ Readi	8.00 pn
Grew Member Fatigue Alert	
John Connor will reach 70 in 1 hour. Group: Haul Truck Drivers (Denver)	

# Readi/Supervise

Proactive Fatigue Management for Supervisors

- 14-day fatigue forecasting
- Fatigue alerts and forecasts pushed to supervisors' phones/tablets
- One-tap intervention logging
- Heatmaps showing upcoming periods of fatigue risk

Supervisors need personalized insights into individual workers to manage fatigue risks effectively on shift.

ReadiSupervise provides <u>hour-</u> by-hour fatigue forecasts for each worker, allowing supervisors to plan tasks proactively.

_326	Vehicle 0001	Shift 13 Dec 2021, 8:00AM - 8:00PM			
ult dri	ver	ID	Name	Risk Assessment	Hourly Fal
	Dispatch	43501	Harlan Noles	High probability of fatigue Consider dispatching alternative driver	
lable a	alternative	s		Risk Assessment	Hourly Fat
	Dispatch	33209	Kelly Hipps	Normal	
	Dispatch	00225	Marcelo Ringdahl	Normal	

## Readi / Analytics

Data-Driven Fatigue Insights for HSE and Operations Teams

- Real-time visibility into workforce fatigue levels
- Forecast fatigue risk for the entire operation over the next 30 days
- Simulate fatigue risk using new shift patterns
- Visualize your operation's overall fatigue risk profile
- Detail the area of the business where fatigue is having the biggest impact

ReadiAnalytics enables organizations to visualize, analyze, and optimize workforce fatigue exposure.

With benchmarking tools, risk hotspot identification, and trend tracking, teams can make informed decisions that enhance both safety and productivity.



Choose the configuration that fits how your business already runs: Wearable, ML, or hybrid.

Readi/Score™

92

Scientifically-validated SAFTE Fatigue Model

### Instant Insights

Optimizing Shift Schedules for Safety and Productivity

Fatigue forecasts based on configurable assumptions about sleep profiles

## The SAFTE Fatigue Model: The Science Behind Readi

Readi is powered by the SAFTE Fatigue Model, the world's leading biomathematical model for fatigue prediction. Developed by the US Army and validated by the US Department of Transportation and Federal Aviation Administration, SAFTE quantifies fatigue risk based on sleep quality, circadian rhythms, and workload.



