



SoterAnalytics

SoterTask

AI-driven Ergonomic Risk & Task Assessment Tool

GUIDE

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The guide contains information useful at different stages of the introduction to SoterTask solution:

Overview

→ High-level overview

Use cases

→ Description of the use cases

Instructions

→ Step-by-step description of how to implement the solution

SoterTask overview

The solution can be accessed and used via:

- Smartphone: App for **on-site** coaching and assessment
- Browser: Online dashboard for in-depth analysis and reporting

How the tech works

- **You** record a video of the task using the app or any video recording software.
- **AI** collects and processes the data that would otherwise have to be gathered by the naked eye and:
 - ◆ Defines a person and the body parts: neck, back, both shoulders & knees
 - ◆ Evaluates exact angles within any movement at every moment of the task
 - ◆ Calculates if the angles are within safe or risky range and gives an intuitive traffic light visual indication for all the body parts:
red for risky, **green** for safe angles



Why use SoterTask

Benefits for H&S team:

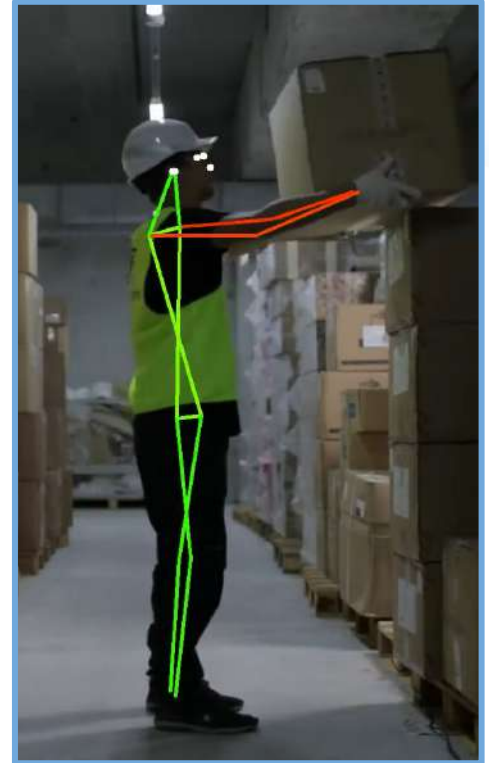
- You get complete task analysis in less than a minute: it requires just a video, all the reporting and calculations are done for you, immediately
- The video is uploaded to the cloud automatically, no need to convert, store , download.

Benefits for the management:

- Cost savings by reducing the time of the assessment
- Clear rationale for H&S cost justification
- Evidence-based workplace improvement (by comparing before and after task analysis)

Benefits for the workers:

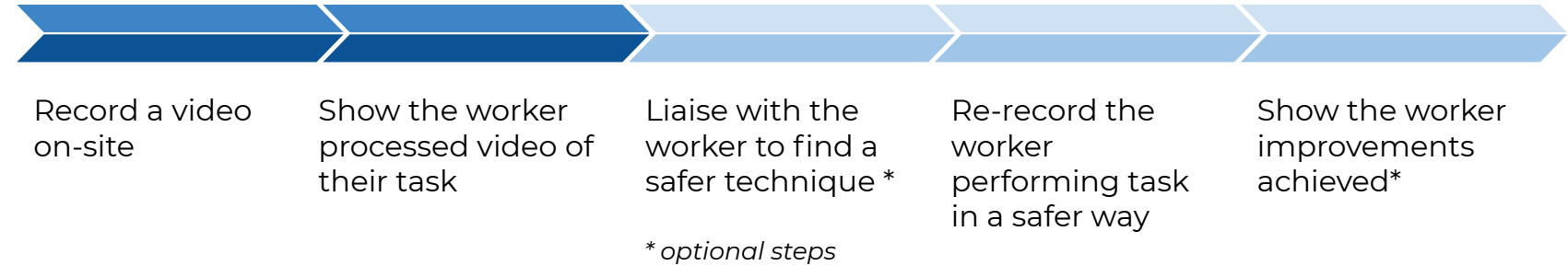
- Soter tech doesn't show the productivity data
- The data shown in the Dashboard can be anonymized, including face-blurring option
- Good visual explaining risks of the tasks.



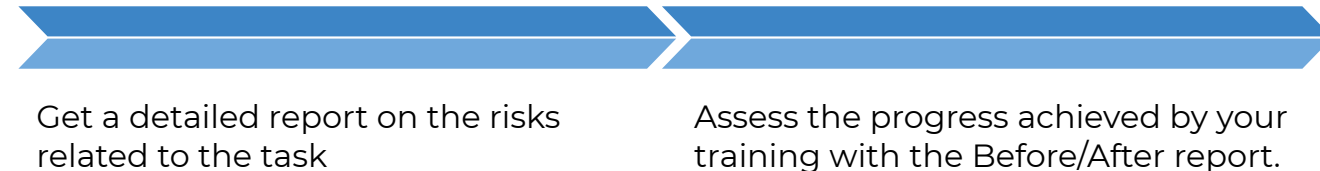
Use case 1: Coaching

New hire, rotation, worker at risk of injury

On the ground, with the app:



In the office, with the Dashboard:





SoterAnalytics Admin area Soter Analytics Alexey Pavlenko Administrator

[Wearables](#) [SoterTask](#) [Data Sandpit](#) [Job Dictionary](#)

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Lifting heavy boxes.mp4

26 Nov 2020 Name of creator Task name Job role Medium risk

[Export report](#) [Download video](#) [Approve](#) [Delete](#)

[Create new assessment](#)

	Lifting heavy boxes1.mp4	26 Nov 2020	Name Name	SOLA	15
	Lifting heavy boxes2.mp4	26 Nov 2020	Name Name	SOLA	15
	Lifting heavy boxes3.mp4	26 Nov 2020	Name Name	SOLA	15

[Rename](#)
[Delete](#)

1.0x

Back Neck Left arm **Right arm** Left leg Right leg

RIGHT ARM ANGLES SPLIT BY RISK CATEGORY

- High risk: above 60° 10%
- Medium risk: from 30° to 60° 20%
- Low risk: below 30° 70%

00:35
TOTAL TIME

Use case 2: Task assessment

Select task:

Record a video via the app or upload a pre-recorded video into the Dashboard

Insights in the Dashboard:

Time spent in a risky position for each body part

Overall task risk + breakdown into high/medium/low risks for every body part

The exact angles of every body part in every moment of the task

Create reports and export them:

Create your own assessments using RULA/REBA pre-filled worksheets

If you have other report templates (not RULA/REBA) you can use a custom description field. The thresholds can be adjusted to your standards.

Lifting heavy boxes.mp4

26 Nov 2020 Name of creator Task name Job role **Medium risk**

- Export report
- Download video
- Approve
- Delete



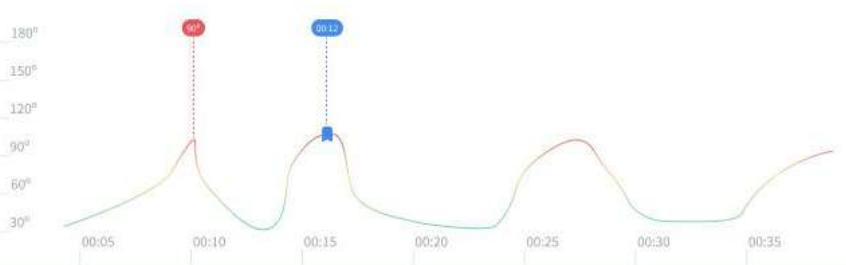
Create new assessment

Lifting heavy boxesL.mp4				
▶	26 Nov 2020	Name Name	RULA	15
Lifting heavy boxes2.mp4				
▶	26 Nov 2020	Name Name	RULA	15
Lifting heavy boxes3.mp4				
▶	26 Nov 2020	Name Name	RULA	15

Rename

Delete

Back Neck Left arm **Right arm** Left leg Right leg



RIGHT ARM ANGLES SPLIT BY RISK CATEGORY



SoterTask

Lifting heavy boxes.

Upload date: 26 Nov 2020

Created by: Name of creator

Task name: Task name

Job role: Job role

Risk group: **Medium**

Assessments

Name: RULA

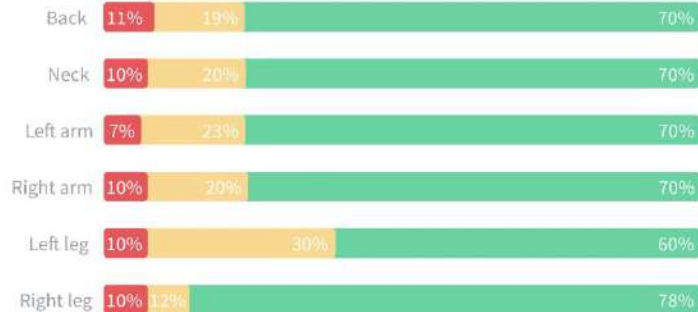
Created date: 26 Nov 2020

Created by: Name of creator

Type: RULA

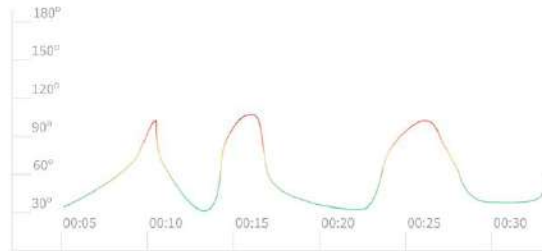
Score: 25

Overview

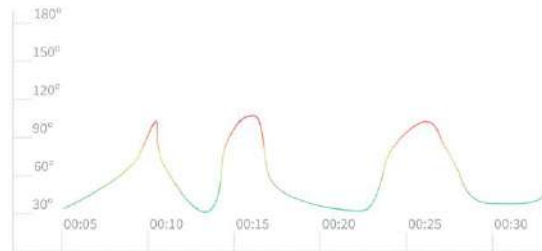


Lifting heavy boxes.

Back



Neck



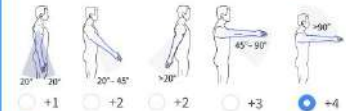
Previous step

Save

ARM AND WRIST ANALYSIS

1. Upper Arm Score

Score **4**



- Shoulder is raised +1
- Upper arm is abducted +1
- Arm is supported or person is leading -1
- None of the above +0

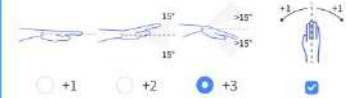
2. Lower Arm Score

Score **4**



3. Wrist Score

Score **3**



4. Wrist Twist Score

Score **1**

- +1 Wrist is twisted in mid-range
- +2 Wrist is at or end of range

5. Posture Score in table A

This score is automatically calculated using Table A

6. Muscle Use Score

Score **1**

- Posture mainly static or action repeated occur 4X per minute +1

7. Force/Load Score

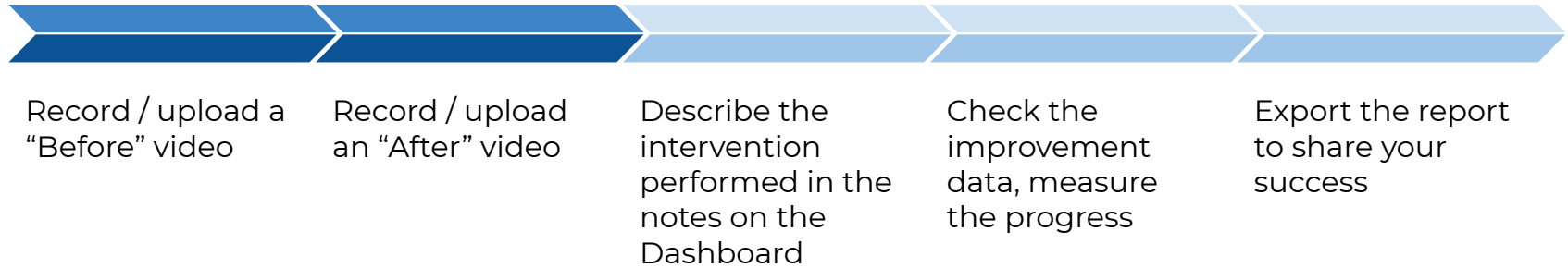
Score **0**

- +0 Load < 4.4 lbs. (intermittent)

Use case 3: Intervention evaluation

Evaluate the effect of the intervention

Training, introduction of a new tool, workplace redesign etc.



Techniques comparison

[Export report](#) [Delete](#)

26 Nov 2020 **Higher risk** → **Lower risk**



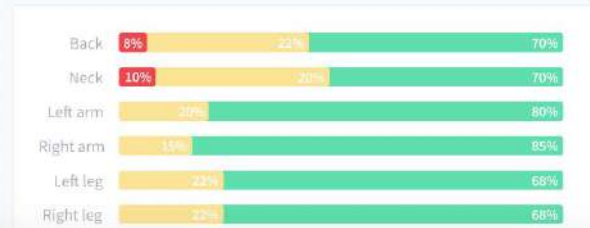
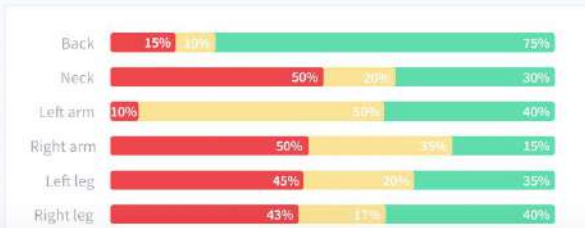
Before coaching.mp4 

26 Nov 2020



After coaching.mp4 

28 Nov 2020



BEFORE - AFTER COMPARISON TABLE



Implementation best practices

- **Gain insights by comparing the videos of the** same task performed:
 - by different employees
 - in different sites
 - by different job roles
 - before and after the intervention(s)
- **Delegate the video recording** to anyone in the team, and then access all the data in the Dashboard. This way you'll be able to assess the tasks performed in remote locations.
- **Engage your shift leaders** into the program and continuous task evaluation so they are aware of the riskiness of different tasks
 - ◆ To make the onboarding of the new employees more task-oriented
 - ◆ To build rapport between the workers and the H&S department

How SoterTask identifies risks

The angles for 4 body parts identified are assigned to 3 risk groups based on international HSE standards:

Body part	Higher risk	Medium risk	Lower risk
Back	More than 60°	25°-60°	Less than 25°
Neck	More than 35°	20°-35°	Less than 20°
Legs	More than 85°	50°-85°	Less than 50°
Hands	More than 85°	45°-85°	Less than 45°

1. Step-by-step app instruction

Register to SoterTask

Record video

Add details

Upload

Process

Register in the **app**
Download in Play Store or App Store

Or use [the link to register in browser](#)

Or if you are Soter **Wearable** solution customer use your Dashboard login and password

Record a video in the **app**

Or upload any video from your smartphone's **gallery**

Or upload the video onto the Dashboard from your **computer**

Optional:
Rename the video with task name / worker name

Wait until the video is uploaded to the cloud *(don't leave the screen until the uploading is complete).*

The video is processed in the background.

You'll receive a notification when it's complete.

Processing time is correlated to video length

2. Step-by-step Dashboard instruction



Access [your Dashboard](#) → [SoterTask] tab

Login and password are the same for the app and for the Dashboard.

Access the video you want to view in the Gallery tab and check the reports.

Approve or delete the processed videos.

Download the processed video if needed.

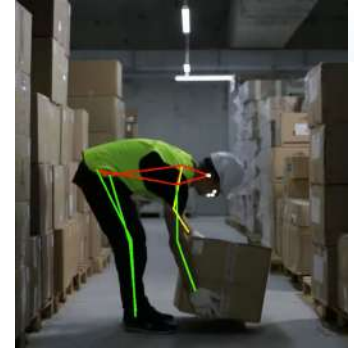
If you want to compare two videos access the [Comparison] tab and select two from the uploaded videos.

You can export the reports for a single task video or for the comparison of two videos.

Video Requirements

Video:

- 1 task per video i.e. not more than 1 worker in the frame
- No obstacles between the worker and your camera
- The worker should be fully in the frame at all times
- The closer - the better



Requirements to the smartphone:

- SoterTask mobile application should be downloaded onto a smartphone
- Access to the Internet is required when uploading/processing the video



Our users feedback:

Great using it to show the TM their film” (*Cleveland Browns weekly film watching to prep for the next game*). TM’s love to see themselves and how they did during the lift!

HSE manager,
Retail



Great feedback from the workers:
→ “That’s why my neck feels like I have a kink at the end of the day”
→ “This is great, makes me feel like you are really working”

EHS Specialist,
Retail



Creating a lot of buzz... Team members are asking me to come and film them next!

EHS Manager,
Retail



Soter Support

→ **Continuous Support:**

- ◆ We offer continuous support during all the stages of the partnership free of charge, including implementation and continuous progress monitoring, to make sure you get the most out of the solution.

→ **Service**

- ◆ Your personal Customer Success Manager
- ◆ Fast Technical Support Help@SoterAnalytics.com

→ **Soter / Project Managers meetings:**

- ◆ Optional: recurring check-in calls to make sure you use the tool to it's full capabilities