

A photograph of two industrial workers in a factory setting. A man on the left wears an orange hard hat and safety glasses, looking towards the right. A woman on the right wears a white hard hat, safety glasses, and an orange high-visibility jacket with reflective stripes. She is holding a tablet and pointing at it with her right hand. The background is a blurred industrial environment with bright lights and sparks. The image is overlaid with a blue rectangular box containing the title text.

Manager Awareness Training Part 2

An overview of the system and
How it Works

R-Link watch and RASOR – how do they help?

A monitoring device that automates the calculation of HSE HAV points. Displays points or time remaining and alerts for high exposure



A communication hub to gather live data from multiple health risk sensors including R-Link. Useful for supervisors or remote workers needing LW support



R-Link and **RASOR** work with the Reactec Analytics to report exposure data and support optimisation of controls to reduce risk ALARP.



Using the System



1. Collect

Unclip any R-Link with a green LED, indicating it is ready for use



2. Assign

Follow the instructions on the screen and place an ID card against the screen to assign the watch to a worker



3. Protect

Insert R-Link watch into the wrist strap, snugly fit the strap around the wrist



4. Connect

Connect with each tool by pressing and releasing the R-Link RHS button once, before placing the R-Link watch over a tool tag until it beeps. Tool details will be shown on the R-Link



5. Assign

"Assign" a RASOR to an individual by removing the RASOR from the charger, press the RHS button on the RASOR place an ID card on top of the RASOR until a beep sounds.



6. Manage

Gather colleague real-time data from R-Link and other sensors within 30m or track their location for immediate intervention or remote supervisor alert monitoring.



7. Lone Workers

Remotely view employees exposure levels, location and be alerted to any alarms from man-down, lack of check-in or manually initiated panic.



8. Return

At the end of a shift, return the R-Link to a charging station to recharge. A Gateway within 30m collects and transmits data.



9. Reduce

View reports online or by email of individual and overall HAV exposure and the source of risk.

R-Link Watch Display



Using R-Link – Key Points

How it works

- The R-Link constantly senses vibration
- It determines if the nature of the vibration is from a tool to decide that a tool trigger has been pulled.
- If an operator forgets to tag a tool after sign out, the R-Link will display the SEP points as TEP points and store as TEP points with no tool identity. As soon as one tool tag is read in a shift TEP and SEP are created independently.
- The trigger time together with the last read Tag vibration is used to calculate TEP points.
- If an operator forgets to tag the next tool, the TEP points will be based on the last Tag read.
- If the operator will be subject to material vibrations OFF tool which are not a source of HAV, an OFF tag or the OFF button can be used to ensure TEP points are zero. This should be considered especially when moving OFF a high vibration tool.
- An OFF tag has an identity of OFF and a vibration level of **0.0m/s²**. It allows a controlled use of OFF.
- Setting the OFF button allows all operators an ability to switch off detection of TEP points.
- TEP is detected again as soon as another tag is read.
- SEP is not affected by an OFF tag or OFF button.

A company wide setting on the Analytics determines if the operator screen shows TEP or SEP and the data set presented to report users

DO YOU KNOW HOW COMPETENT YOUR WORKERS ARE?

01

HSE published business case

02

Untrained operator vibration levels
 9m/s^2

03

Trained operator vibration levels
 5.5m/s^2

04

Time to EAV increased from 35 to 100
minutes

05

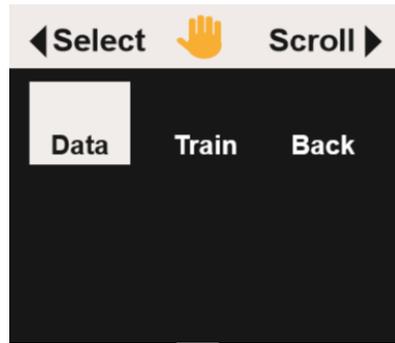
Improved efficiency led to 17 times
more output per day



LIVE Training Aid - RASOR



HAV main screen

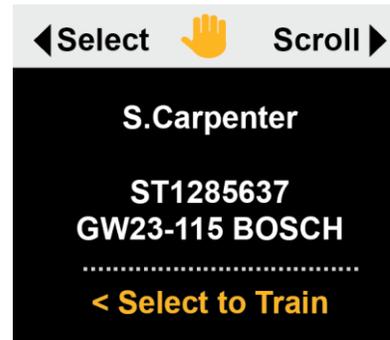


Select "Data"



Select "Data" - screen will display for individuals within range their current daily exposure and thresholds

Select "Train"

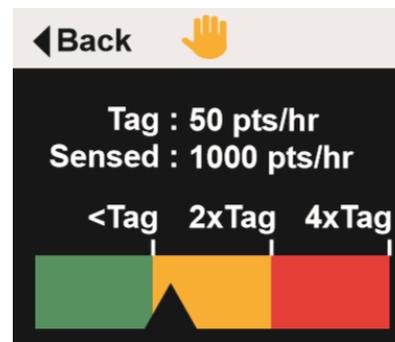


Select "Train" screen will display:

- Operator Name
- Tool Id
- Tool Name

Press "Select" to train the displayed operator

Press "Select"



- Tag vibration magnitude expressed in exposure points per hour
- Live sensed vibration in exposure points per hour
- Gauge graph showing the live sensed vibration relative to the tag vibration.



- Daily data backup.
- Secure data hosting and employee access.
- Internet enabled PC or tablet to access reports.
- Data and reports hosted by Reactec
- Automatic reports and alerts

Note Battery Life

R-Link

- If using the watch for HAV monitoring only, after a typical days use, the re-charge time is 1 hour. If fully discharged 3 hours is required to full charge.
- Max battery life is 16 hours

RASOR

- After a typical days use of a fully charged RASOR the time to re-charge is 1.5 hours.
- When fully discharged a RASOR requires 3 hours to recharge.
- Max battery life is 24 hours



Health and Safety Intelligence Reactec Analytics

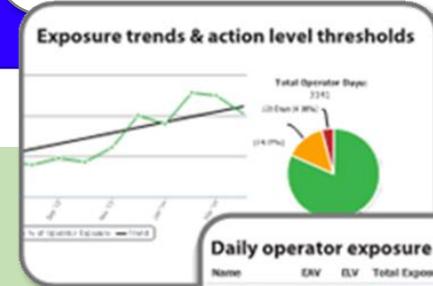
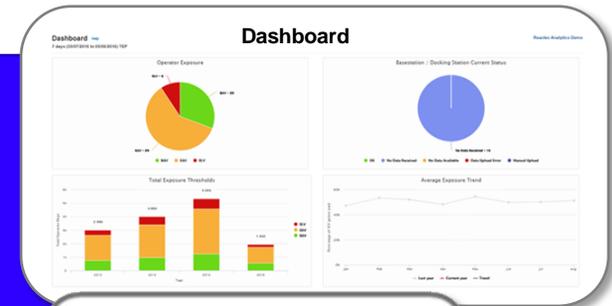
Automated online & email reports to drive risk reduction activity & identify hidden risks. With a clearer understanding of employees' risk profiles; the Reactec Analytics provides insight to enable employers to prioritise and implement control measures.

Easy to understand reports empower employers to;

- Prioritise risk management
- Design and record controls and interventions
- Review controls and assess effectiveness

The Reactec Analytics data can inform decisions on;

- Alternative work methods
- Equipment selection
- Maintenance & purchasing policy
- Work schedules
- Measure effectiveness of controls



Name	EAV	ELV	Total Exposure Points
Sean Moore	300	400	403.00
Frank Smith	300	400	395.31
Jan Manning	300	400	291.47
Simon Halls	300	300	212.64
Paid Flanagan	300	400	239.84

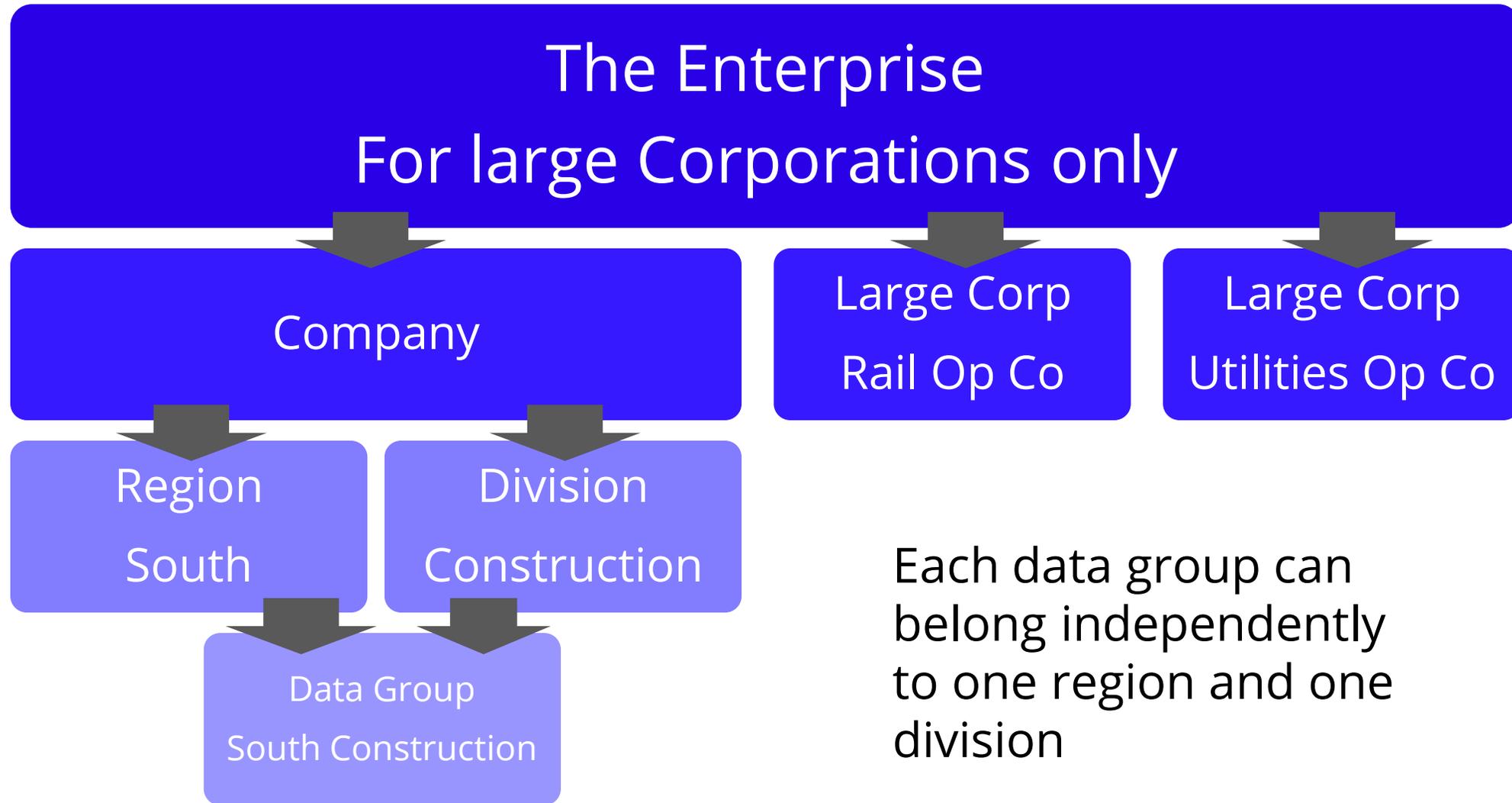
Current levels EAV	ELV	No. of days max. levels reached	Trend %	View tool use
100	400	100%	-3%	View
100	400	100%	-4%	View
75	300	100%	+2%	View
100	400			
100	400			

Tool Name	Vb m/s ³	Total Operators	Trigger Time (H:MM:SS)
WAKTA W4451C	12.53	13	2:28:23:28
WAKTA W4451C	7.53	18	2:12:58:54
HULTI TETONAGAR BREAKER	6.43	8	1:58:41:42
HAND TAPPER HANDLES	9.93	8	1:32:32:01
WAKTA W4451C	7.53	18	1:28:58:09
TETON AVE BREAKER	9.93	1	1:04:58:25
WAKTA W4451C	7.53	18	38:33:13
WAKTA W4451C	18.93	13	17:44:58
WAKTA AVE BREAKER	6.43	1	15:47

Getting Started

- Reactec will set up an initial administrator who will receive a welcome email containing a link to a web page to create your unique password.
- The first administrator then sets up a chain of creation of users.
User types
 - Enterprise Administrator
 - Administrator
 - Group Administrator
 - Report user
 - In addition, an Administrator can give any user, access to the SEP data. By default users access only TEP or SEP, which ever exposure calculation is chosen for the operators R-Link display

Data Structure Example





Automatically collect

A variety of gateways and charging stations available to build and scale your deployment. Seamlessly send data securely to the Reactec Analytics

LIVE Data

Send data live from the field to the Reactec Analytics. Allow supervisors to provide immediate intervention.

Inform & protect

Assign to individuals daily. Personalised alerts received of exposure levels.

Automatically share

Flexible scalable management of GDPR compliant personal data. Intuitive reports automatically distributed to appropriate duty holders.



Engineer Preventions

Identify from intuitive reports interventions and control measures to prevent future occurrence. Track effectiveness and evidence activities.

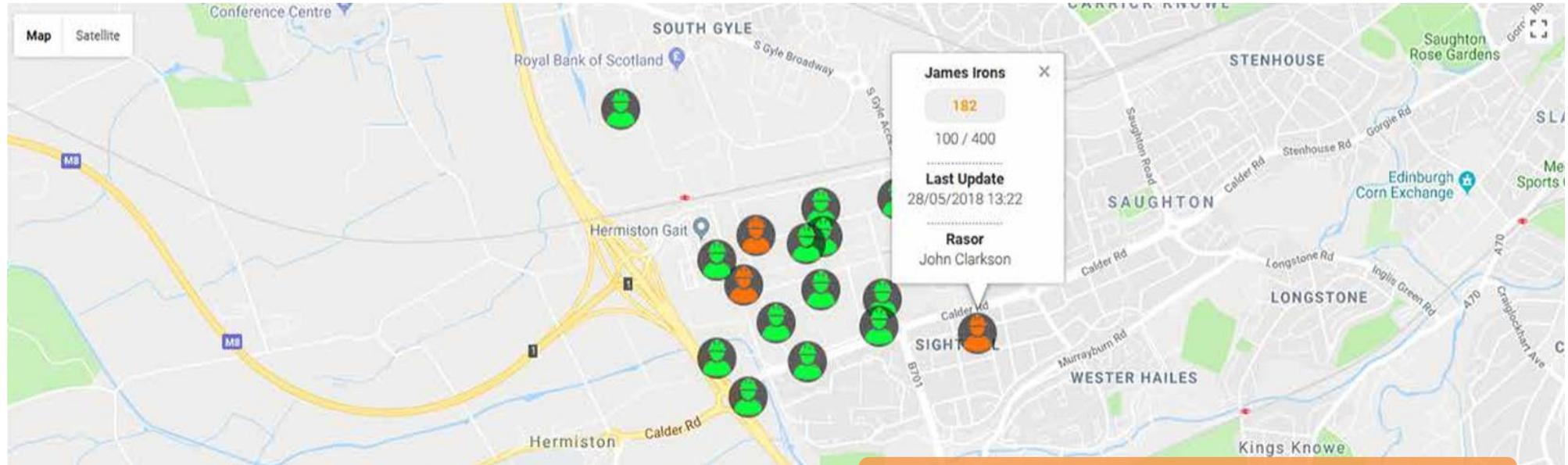
Live Analytics Data

The screenshot displays the Reactec Live Analytics Data dashboard. At the top, there is a navigation bar with the Reactec logo and several menu items: Dashboards, HAVS, Tools, Resources, Location, Notifications, Noise, and Social Distancing. Below the navigation bar, there is a filter section with dropdown menus for Region, Division, and Group, all set to 'Any'. A 'View Results' button and a 'Help' link are also present. The main content area is titled 'Live Dashboard' and includes a 'Help' link and 'Customer 6' identifier. The dashboard is divided into four panels:

- Active Operators - HAV:** A table listing operators Alex Murphey and Steven Graves. Alex Murphey has 100 HAV, 400 BAV, and 99 EAV. Steven Graves has 100 HAV, 400 BAV, and 99 EAV. Summary statistics show 2 BAV, 0 EAV, and 0 ELV.
- Active Operators - Noise:** A table listing operator David Smith with 32 Noise, 100 BAV, and 0 EAV. Summary statistics show 1 BAV, 0 EAV, and 0 ELV.
- Active Alarms:** A table listing two active social distancing alarms for Daniel Jones at location 10005. Both are labeled 'Active'. Summary statistics show 7 Moderate and 2 Sustained.
- Active Operators - Social Distancing:** A table listing operators David Smith, Simon Johnson, and Alex Murphey. David Smith has 1 Social Distancing, 3 BAV, and 7 Moderate. Simon Johnson has 1 Social Distancing, 1 BAV, and 2 Sustained. Alex Murphey has 0 Social Distancing, 3 BAV, and 0 Sustained.

Monitor the situation
of live alerts and
alarms

Onsite & Remote Supervision



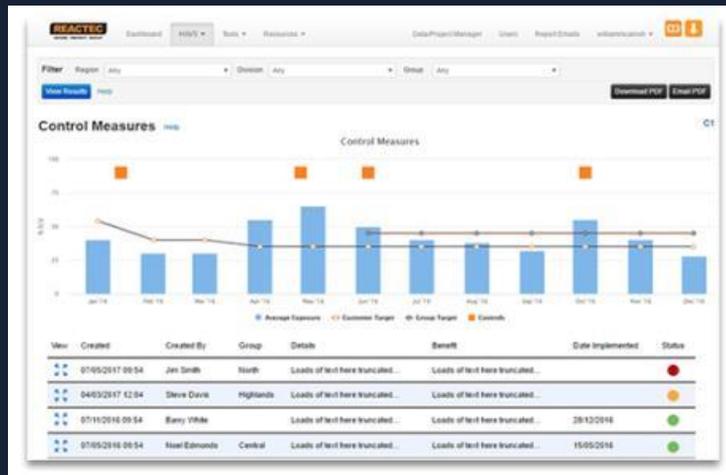
In field for over the shoulder or remote supervision of multiple worker to address:

- Exposure risk in real-time.
- Alerts for social distancing, threshold breaches, slips/trips, panic...

EVIDENCE YOUR PREVENTION ENGINEERING

Record & Monitor Control Measure Success

Log applied control measures and track their effectiveness in reducing risk by the impact on workforce average daily HAV exposure.



Log & Authenticate Interventions

Log intervention notes allocated to individual employees and electronically sign to acknowledge.

Date	Test ID	Test Name	Manufacturer	Trigger Time (mins)	Exposure Points	Daily Points	Signed Off	Signatures
20/03/2021				0.1	0	0	✓	
20/03/2021				0.1	0	0	✓	
20/03/2021				0.1	0	0	✓	
20/03/2021	TEST024	TEST024	Unlabeled	1.0	54	18	✗	
20/03/2021	TEST024	TEST024	Unlabeled	0.1	0	0	✗	
20/03/2021	TEST024	TEST024	Unlabeled	0.2	0	0	✗	
20/03/2021				0.1	0	0	✗	

SIGN OFF (E)
acknowledge the report of my HAV exposure for the period shown

SIGN OFF (O)
acknowledge the report of my HAV exposure for the period shown

THE REACTEC PREVENTION ENGINEERING APPROACH - WHY

Regulations & the HSE	Civil litigation	Employee care
Prioritise and verify the effectiveness of your controls	Robust and credible evidence to assist in defence of claims	Real life assessments of individual HAV exposure
Enhanced real-time HAV exposure risk assessments.	Reduce defence preparation costs	Personal instead of generic risk.
Design, prioritise and record controls based on data analytics.	Auditable and tamper proof	Ensure individuals are not at increased risk of developing HAVS
Evidence of control Effectiveness	GDPR compliant data management	Consolidate employee H&S monitored data