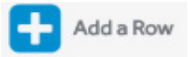
Add/Configure Widget

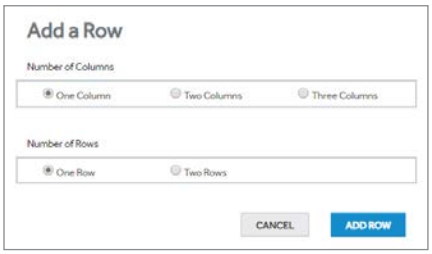
1. First select the **Edit Dashboard** button to enable editing.

2. If space is available in an existing row, select the **Add Widget** button.

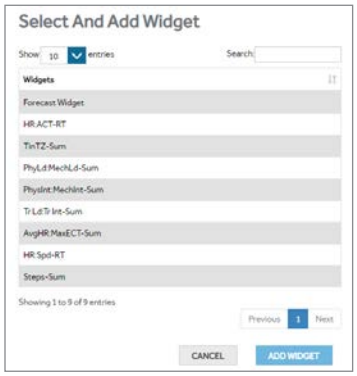
3. If no space is available, select the **Add Row** button at the foot of the dashboard.



4. An **Add a Row** dialog will display. Select the preferred number of rows and columns. They can easily be deleted at any time.



5. After selecting **Add Widget**, a **Select and Add Widget** dialog will display.



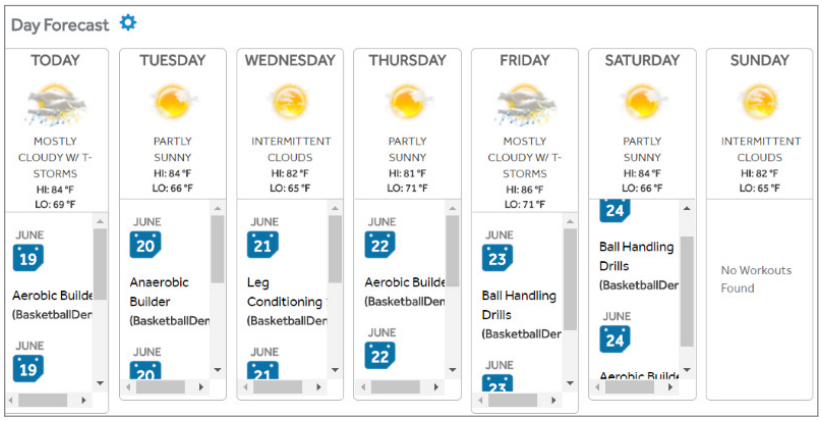
Select the preferred widget (described in the next section), and **Add Widget**.

6. A widget will be selected, but it may need configuration before anything displays. Click on the **Settings** cogwheel beside the widget name.

Note

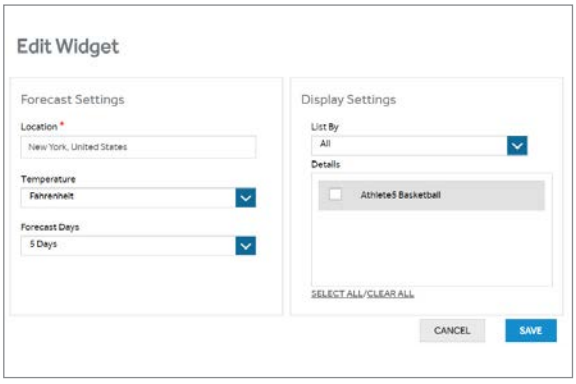
Some widgets e.g. **Forecast**, may only be available if the **Number of Columns** is 1.

Forecast



- Weather for chosen location.
- Assigned workouts, if any.
- Only available in a single-column row.

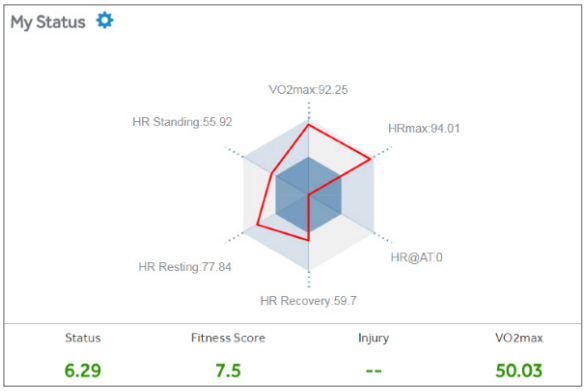
Edit Widget



Component	Description
Location	Select from list.
Temperature	Fahrenheit or Celsius.
Forecast Days	3, 5 or 7 days ahead.
List By	All, Teams, No Team Assigned, Myself.
Details	Check the athletes whose workouts should be displayed.
SAVE	When saved, the filter settings will be retained, and the data updated each time you log in again. Re-edit the widget to update the settings at any time.

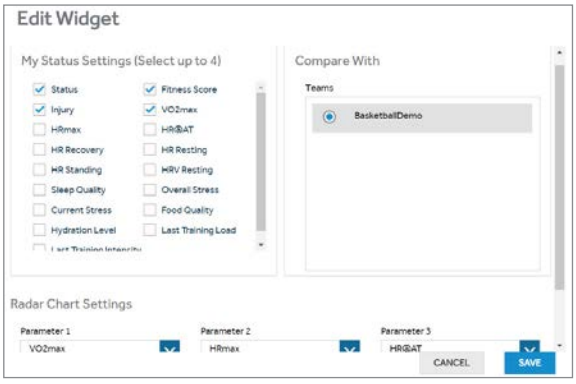
Default Widgets (2/5)

My Status



- A radar chart showing your own (or selected athlete, if coach) choice of 6 performance parameters (red line) versus a selected team (dark & light polygons).
- Team data polygons - the boundary between inner dark and outer light polygons is the team average.
- Axes are scaled per parameter, with the outer edge of the polygon representing the 'best' value captured for that parameter, e.g. a low Standing HR is deemed better than high. Thus a red line which is always outside the inner dark polygon reflects performance above team average in all parameters.
- Four selectable parameters display performance measures below the radar chart.

Edit Widget



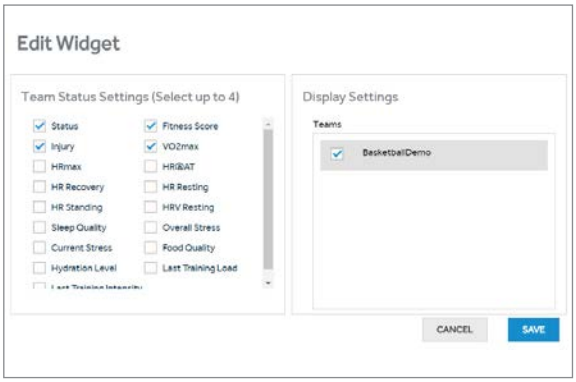
Component	Description
My Status Settings	Select up to 4. They will display below the radar chart
Compare With	Select a Team from those available for comparison (the solid polygons in the radar chart)
Radar Chart Settings	Select the parameters to display on the radar chart
SAVE	When saved, the filter settings will be retained, and the data updated each time you log in again. Re-edit the widget to update the settings at any time.

Dashboard Widgets (3/5)

Team Status

- Four selectable parameters display team performance measures.
- Only available to those with appropriate permissions.

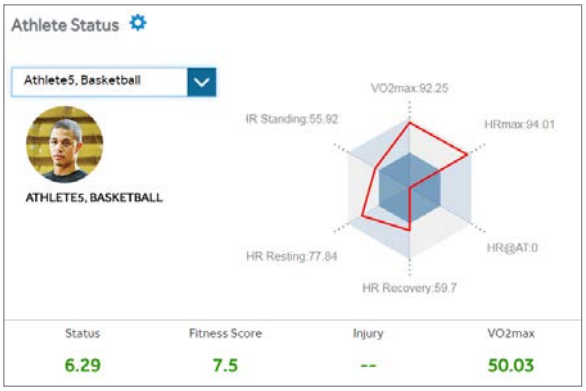
Edit Widget



Component	Description
Team Status Settings	Display up to four parameters from the list (default selections are shown).
Status	Average of most recent Readiness Assessment and most recent Fitness Assessment for all team members.
Fitness Score	Most recent Fitness Assessment score average for all team members.
Injury	Most recent input from Readiness Survey submission average for all team members.
VO_2max	Most recent result saved from Fitness Assessment analysis for all team members.
Display Settings	Select a team from those available.
SAVE	When saved, the filter settings will be retained, and the data updated each time you log in again. Re-edit the widget to update the settings at any time.

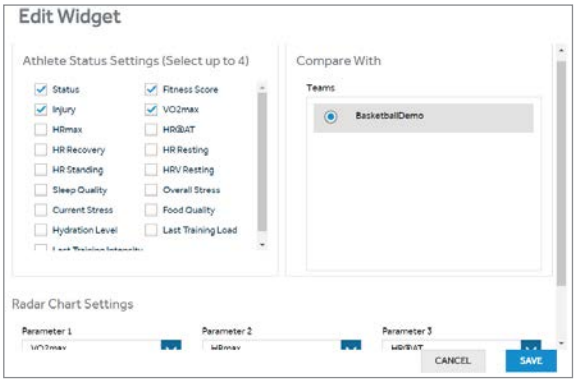
Default Widgets (4/5)

Athlete Status



- A radar chart showing performance parameters (red line) versus a selected team (dark /light polygons) of selected athlete.
- Team data polygons - inner dark section is below mean value, outer light polygon shows above mean to maximum value.
- Axes are scaled per parameter, with the outer edge of the polygon representing the 'best' value captured for that parameter, e.g. a low **Standing HR** is deemed better than high.
- Four selectable parameters display performance measures below the radar chart.

Edit Widget



Component	Description
My Status Settings	Select up to 4. They will display below the radar chart.
Compare With	Select a Team from those available for comparison (the solid polygons in the radar chart). Only available if you have permission to access other team's data.
Radar Chart Settings	Select the parameters to display on the radar chart.
SAVE	When saved, the filter settings will be retained, and the data updated each time you log in again. Re-edit the widget to update the settings at any time.

Note

The **Athlete Settings 'Status'** is the average of the most recent **Readiness Assessment** and the most recent **Fitness Assessment**.

Default Widgets (5/5)

Notes

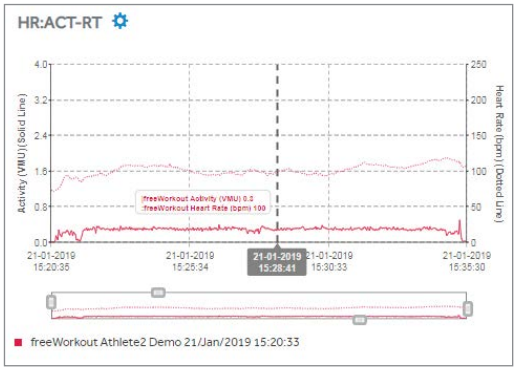
Not yet implemented.

Custom Widgets (1/6)

Time Graph Widget Example

- Created from the Analysis screen - two parameters from a Time or Summary graph
- Some accounts may already contain custom widgets when they are initiated.
- Naming Convention is 'First Parameter:Second Parameter - RT/ET/Summ'

HR:ACT - RT (Real Time)



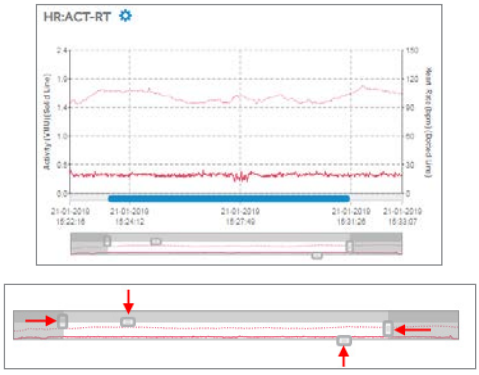
- **Heart Rate** & **Activity Level**, Real Time (not Elapsed Time).
- Sessions and athlete/team filters are fixed, editable in **Edit Widget**.
- Will automatically populate with data for a fixed period to the current date. Default is previous 24 hours.
- Float the mouse cursor over the graph for exact data values.

Note

Time graphs are less suited to use on the dashboard, unless the data is highly filtered, by athlete and activity. This is due to the small screen area available. Time graphs with multiple subjects and activities rapidly become difficult to interpret as traces are added.

Graph Zoom

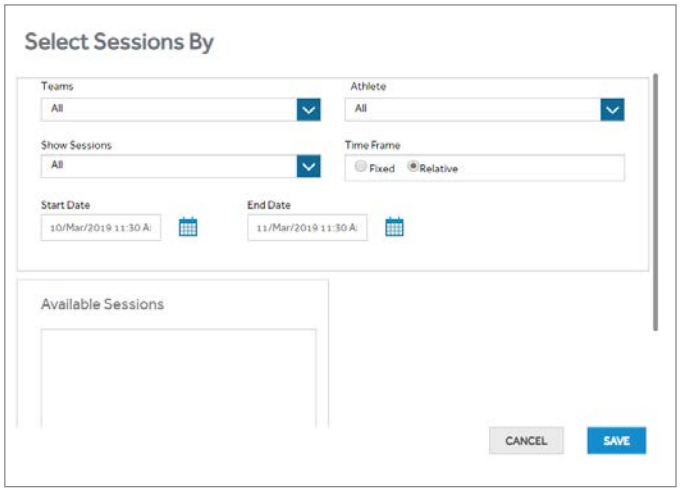
The feature below the graph uses drag-able handles to allow horizontal and vertical zooming.



- Drag the handles inwards to zoom in.
- Use the scroll bar to pan the graph left and right.

Custom Widgets (2/6)

Select Sessions



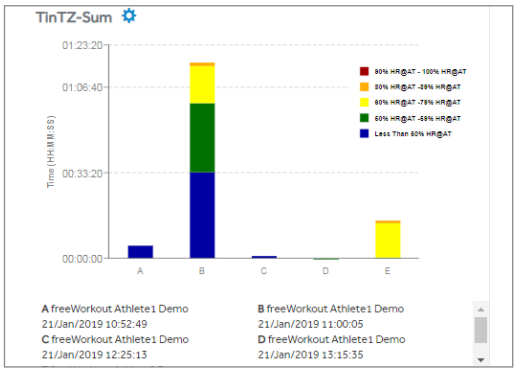
Component	Description
Teams	Select team
Athlete	Select athlete
Show Sessions	Select sessions by name from the **Available Sessions** list.
Time Frame	Fixed - Real Time Relative - Elapsed Time (starts at 00:00:00)
Start Date	Click the Calendar icon to select a date.
End Date	Click the Calendar icon to select a date.
Available Sessions	Shows all available sessions in the date range selected. They can be selected by name from the **Show Sessions** field.
SAVE	When saved, the filter settings will be retained, and the data updated each time you log in again. Re-edit the widget to update the settings at any time. **Cancel** to exit without saving.

Note

The **Show Sessions** filter only becomes useful if some discipline is exercised in naming sessions, so that they may be easily located.

Summary Graph Widget Example

TinTZ-SUM

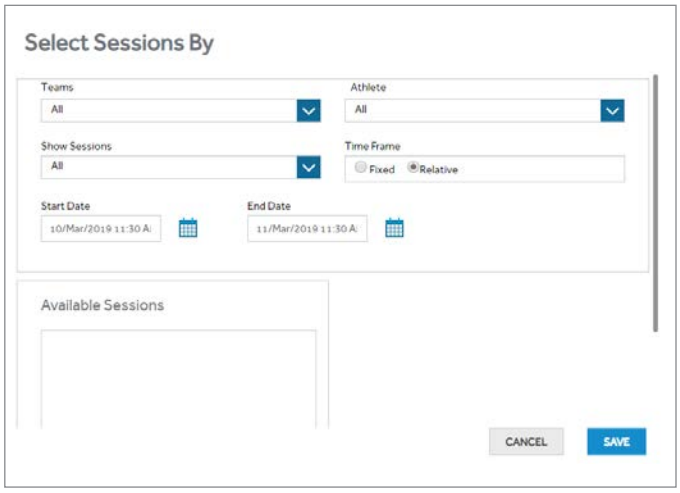


- This example shows a single parameter, **Time in Training Zone**, with a legend.
- Sessions and athlete/team filters are fixed, editable in **Edit Widget**.
- Will automatically populate with data for a fixed period prior to the current date. Default is previous 24 hours.
- Training Zone Thresholds - and all other thresholds, can be configured in the **Threshold Settings** screen of the portal, accessed from the navigation panel. It is only visible to those with appropriate permissions. If the same thresholds are updated from a PC, then the new thresholds will be synchronized in the portal when the PC session is connected online (and vice versa).

Note

Summary graphs are more suitable as dashboard widgets, as the columns do not obscure each other, and are designed for at-a-glance comparisons between athletes or sessions.

Edit Widget

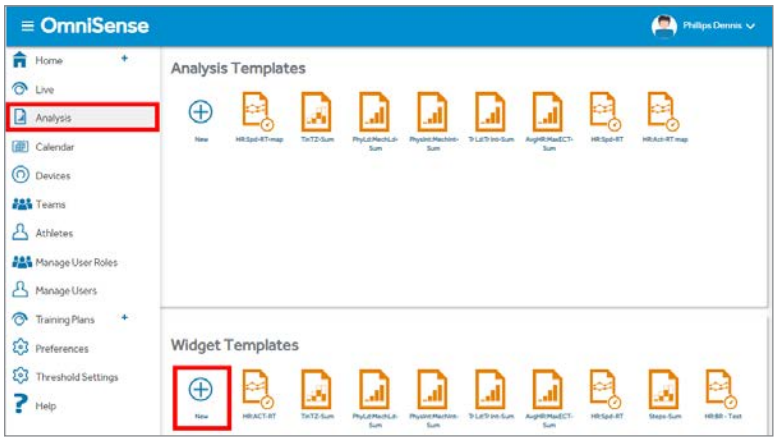


- All editing functionality and fields are as described in the previous example.

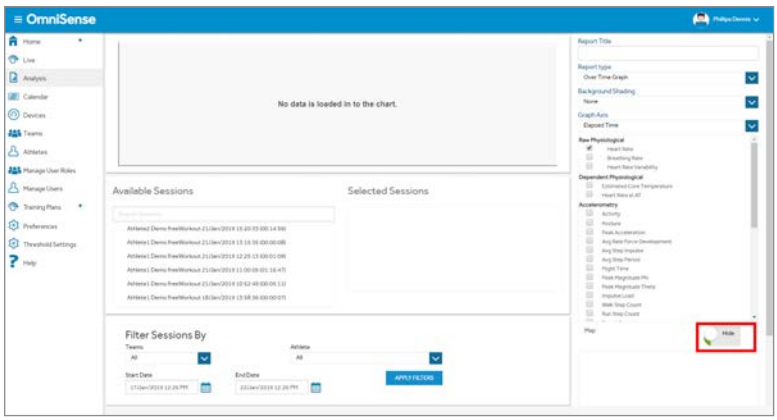
Create a Custom Widget

Custom widgets are created in the **Analysis** screen of the portal.

1. Access **Analysis** from the navigation panel, and select the '**+**' **Add** button in the **Widget Templates** panel.



2. The screen presented is identical to that for creating a new graph to save in Analysis as a template. The process for populating it is identical, but it will be saved as a widget, available for adding to the **Home** screen dashboard.



3. A map panel will be included - not shown above. Switch the map from **Show** to **Hide** using the button on the right. Maps do not display on the dashboard because of the space restrictions. This makes more screen area available for setup of the widget.

Custom Widgets (5/6)

4. Enter the **Report Title** as preferred. The format Parameter1:Parameter2 - RT/ET/SUM is recommended.

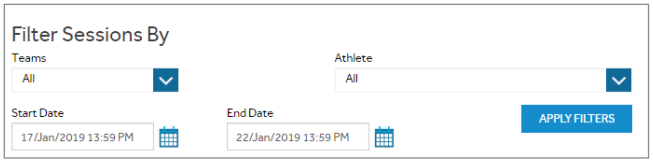
5. Select **Report Type** as **OverTime Graph**, **Summary Graph** or **Readiness Graph**. The list of parameters displayed below will adjust to match.

6. Select **Background Shading** from **None/ROG/Training Zone/Speed Zone** and **Graph Axis** as **Elapsed Time** (ET) or **Real Time** (RT). These options are available for **Over Time Graphs** only.

7. Selected the desired parameters from the list displayed below.

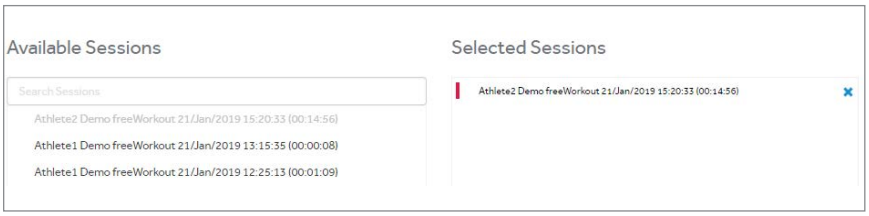
Over Time Parameters **Summary Parameters** **Readiness Parameters**

8. Choice of **Selected Sessions**, and **Filter Sessions By** are optional - these can be selected when editing the widget once it is on your dashboard.



Use the **Filter Sessions By** fields to narrow down the **Available Sessions** list.

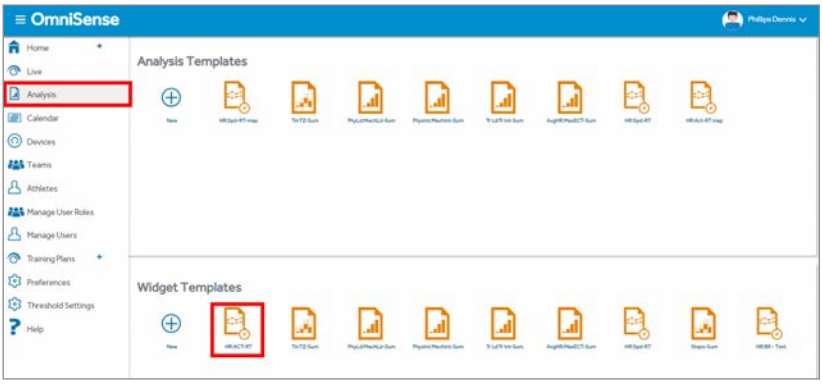
9. Double-click on a session in the **Available Sessions** list to move it to **Selected Sessions**. Use the blue **X** in the selected session to remove if needed.



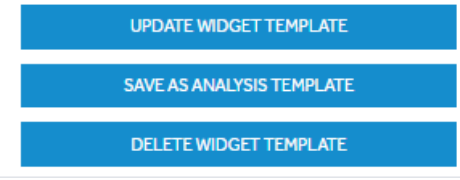
10. Use the **Save As** button to save as a widget. It then becomes available when adding widgets to the **Home** screen dashboard.

Update/Delete Custom Widget

1. In the Analysis screen, click on any existing widget to reopen it.

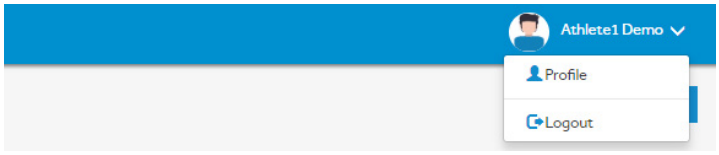


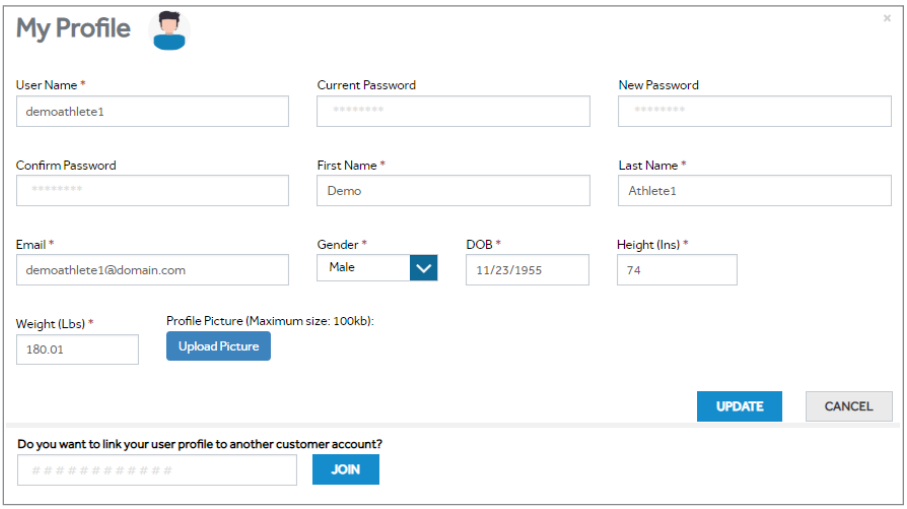
2. When the widget opens, make any necessary changes, and use one of the available buttons to update, make a copy of, or delete the widget.



My Profile

- Access your profile via the pull-down list at top right in the screen header.

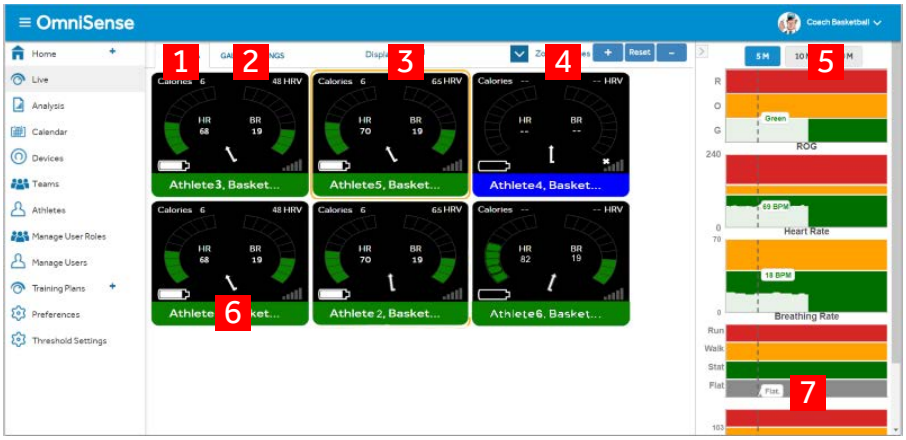




Item	Description
User Name	The name you use to log in to the portal using the PC version or OmniSense™ Mobile.
Current/New/Confirm Password	Use to change your password.
First/Last Name	Your name as it will appear on screens.
Email	Initially, the email address to which your account validation message was sent to. Forgotten Password links will be sent here.
Gender	Gender.
DOB	Date of Birth.
Height	Height. Units can be set in Preferences screen.
Weight	Weight. Units can be set in Preferences screen.
Profile Picture	Upload a profile picture.
Other Customer Account	Enter a second customer account number here. When logging in, a dialog will display to allow you to choose which account to log into.

Live Screen

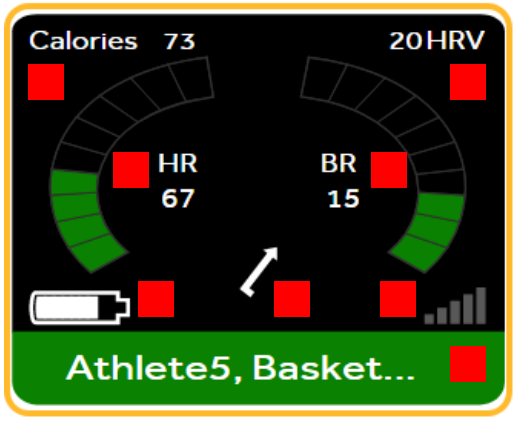
- The Live screen in the portal resembles OmniSense™ Live on a PC.
- It can be used to remotely view a connected LoRa session on a PC (PC user is logged in to portal), or a remote user using the OmniSense™ Mobile app, or a combination of the two.
- Portal users must have permission to see other's data. Athletes can only see their own data.



#	Description
1	LIVE DATA - Display BioGauges with streaming data for all those connected to the portal using either the mobile application, or with a LoRa system also connected to the portal.
2	GAUGE SETTINGS - Configure the appearance of the subject BioGauge.
3	Display by - Filter which athletes to show (coaches).
4	Zoom Gauges - Change subject BioGauge size to fit more or fewer on the screen.
5	5M/10M/60M -Set the time range of the trend graphs in minutes.
6	Subject BioGauges
7	Trend graphs for the selected BioGauge. Float cursor over for specific data value. ROG Status / Heart Rate / Breathing Rate / Activity Level / Estimated Core Temperature.

Subject BioGauge

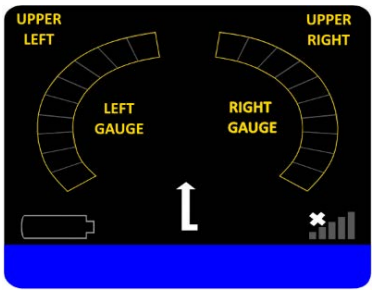
- The BioGauge in the portal is designed to match the BioGauge in PC OmniSense™ in form & function.



#	Description
1	Configurable fields. See next section.
2	Configurable sweep scales. See next section.
3	Device battery level.
4	Subject posture and activity level indicator.
5	Device signal strength indication.
6	(Color). Subject ROG status.

BioGauge Settings

- Select parameters from the lists on the right of the screen.



Parameter	Description
Heart Rate	Heart Rate
Breathing Rate	Breathing Rate
HRV	Heart Rate Variability
EstCoreTemp	Estimated Core Temperature
Impact	Peak g of impact event
Activity	Peak activity VMU (g)
Calories	Calories Burned since power-on
HRMaxPercent	Heart Rate as a % of HRmax
HRatAtPrecent	Heart Rate as a % of HR at Anaerobic Threshold
PhysIntensity	Physiological Intensity
MechIntensity	Mechanical Intensity
TrainIntensity	Training Intensity (Avg of Phys + Mech Intensity)
PhysLoad	Physiological Load
MhLoad	Mechanical Load
TrainLoad	Training Load
Jump	Peak g during a jump event
Stress	Stress Level
Speed_HWReq	Speed (GPS or mobile device required)
Distance_HWReq	Distance Traveled (GPS or mobile device required)
Elevation_HWReq	Elevation (GPS or mobile device required)
ImpulseLoad	Impulse Load
WalkStepCount	Number of walking steps
RunStepCount	Number of running steps
BoundCount	Number of bounding steps
JumpCount	Number of jumps
MinorImpacts	Number of minor impacts
MajorImpacts	Number of major impacts
AvgForceDev	Average Force Development rate of impulses
AvgStepImpulse	Average Step Impulse
AvgStepPeriod	Average Step Period
FlightTime	Flight Time
PeakMagniPhi	Peak Magnitude Phi angle of impulses
PeakMagniTheta	Peak Magnitude Theta angle of impulses

OMNISENSE™ WEB PORTAL
Analysis (1/2)

Overview

The Analysis landing screen in the portal shows sets of pre-configured Reports:

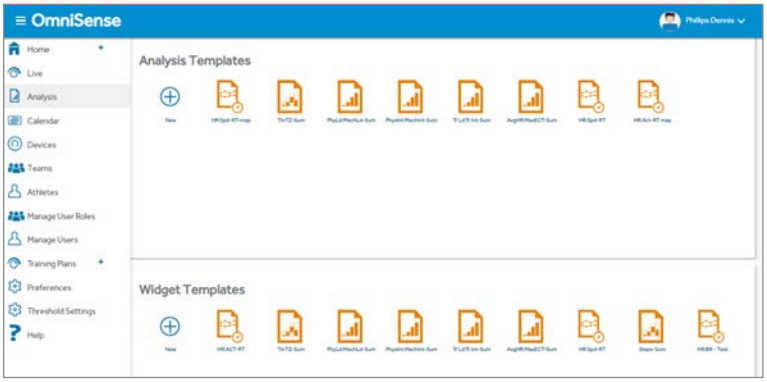
- **Analysis Templates** to create reports to review directly in **Analysis**.
- **Widget Templates** for components of the **Home** screen dashboard.

This is to streamline use; if the parameters are being viewed regularly, then select graph type, parameters, background color, real/elapsed time etc. and save the desired Report,

- Portal accounts may contain a set of pre-existing templates.

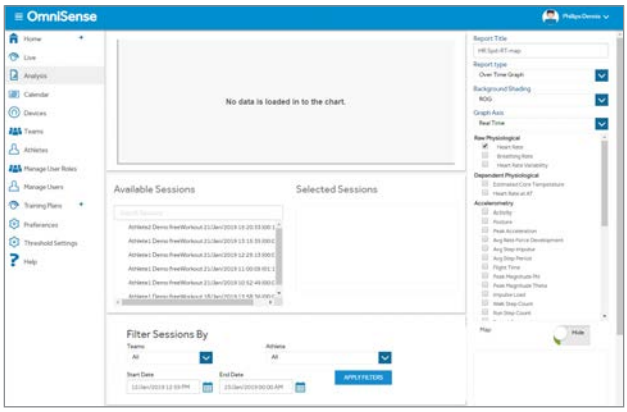
Using a pre-existing template

1. The only task is to select the sessions from which to populate the report.



The template icon will show whether the graph is **Over Time**, **Summary** (bar or stacked bar chart), a **Table** or a **Periodization** report.

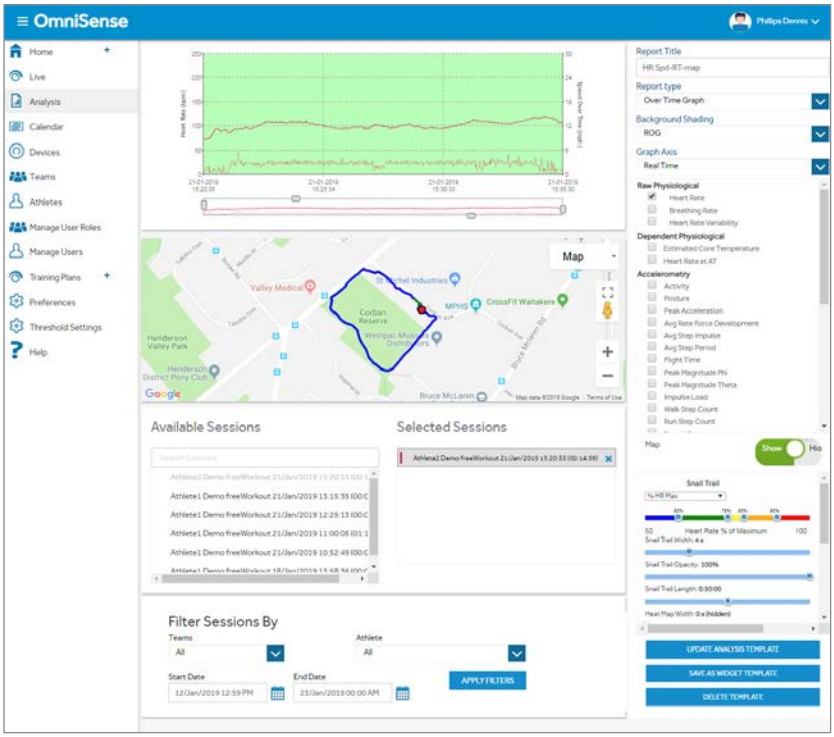
2. Select the template.



3. The **Filter Sessions By** panel will be configured to the **Start Date** and **End Date** values at last update. Set these and use the **Apply Filters** button to populate the **Available Sessions** panel.
4. Click on sessions in the **Available Sessions** panel to add to the **Selected Sessions** panel. The graph will then show the selected data.

Analysis (2/2)

5. If the **Map** setting is set to **Show**, and GPS data is available for the session, a map with snail trail will display.



6. At any time, **Report Title**, **Report Type**, **Background Shading**, **Graph Axis**, selected parameters and **Snail Trail** settings may be changed.

7. Use the **Update Analysis Template** button to save these changes permanently.

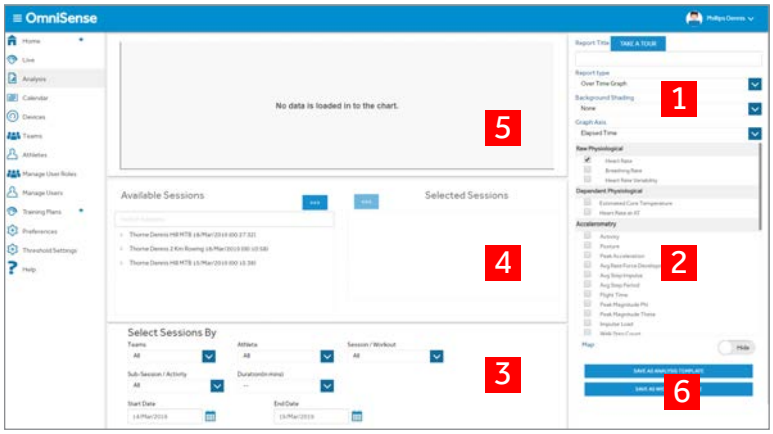
Create a Report

This section describes the general workflow for creating a report, or graphical data representation in Analysis. Once created, the report can be saved as a template for re-use.

There are five types of report. The common tasks will be described here - where each report type differs in its settings is described in the following sections.

1. Navigate to the **Analysis** screen and select the **New** icon in the **Analysis Templates** section.

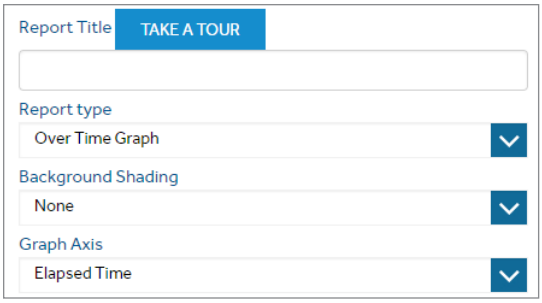
2. The initial new report screen defaults to an **Over Time Graph** report. Screen details vary for different report types, but the overall layout remains the same.



#	Description
1	Report title, report type & related settings.
2	List of parameters to select for graph.
3	Select Sessions filters.
4	Available/selected sessions, once filters are set.
5	Graph area, initially unpopulated.
6	Save/update report as a template or dashboard widget.

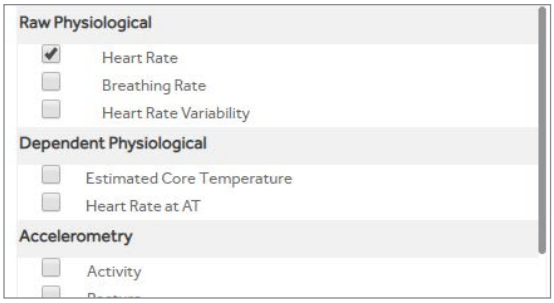
Workflow

1. Enter a **Report Title** - this will be used if the report is saved as an Analysis Template or Dashboard Widget.

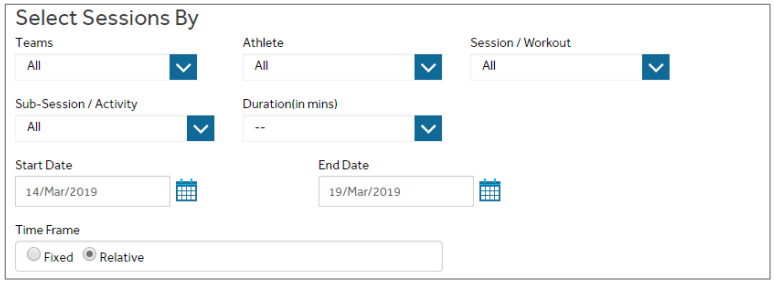


2. Select **Report Type** from the pull down list:
   - Over Time Graph
   - Summary Graph
   - Readiness Graph
   - Periodization
   - Table Style Report

3. The **Background Shading** and **Graph Axis** items shown refer to **Over Time** graphs. These items will vary according to the **Report Type** selected. See the following sections.



4. Select the parameters to be displayed. As a rule the first parameter selected will refer to the left vertical axis, and the second to the right. Available parameters will depend on **Report Type**.

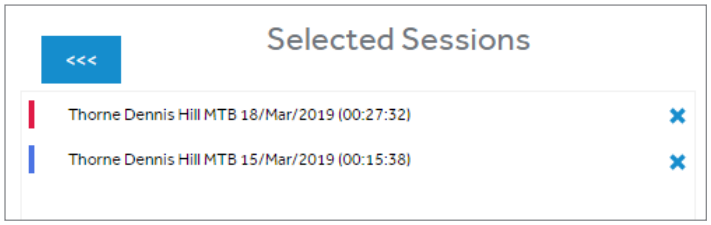


5. Use the **Select Sessions By** pane to populate the **Available Sessions** pane. The details of this pane will vary according to Report Type. See the following sections.

6. As the fields in the **Select Sessions By** pane are configured, the **Available Sessions** pane will populate with sessions.

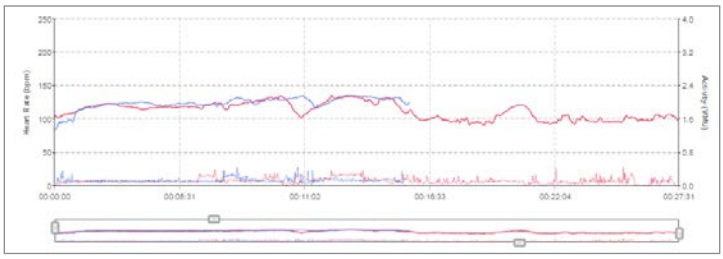
- Double-click an Available session to make it a Selected Session
- Use the >>> and <<< buttons to move all sessions.

7. As sessions are selected, they will display with a color indication which refers to the color trace or in-fill on the graph (over time or summary graph type).

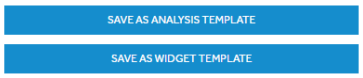


- Each selected session has an **X** button to remove it.

8. The graph will display the sessions as they are selected.



9. Save the report as an analysis template or widget template as needed.

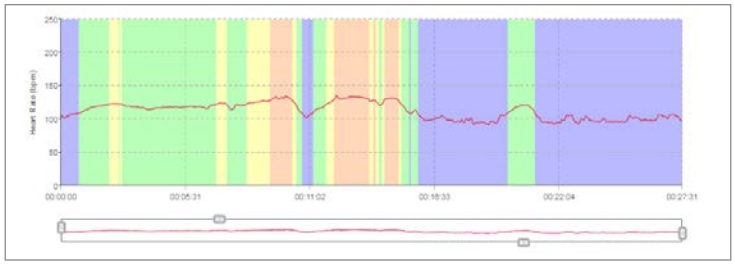


If the template is pre-existing, then an **Update** button will also display.

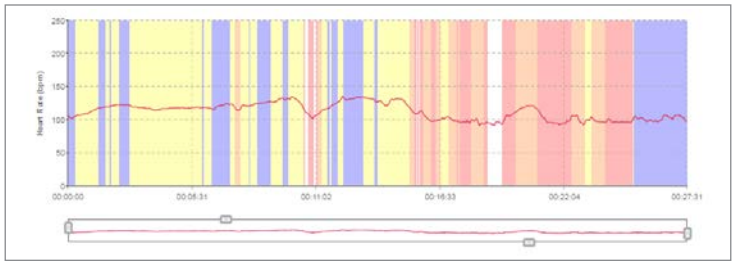
Over Time Graph

1. Select **Report Type** as **Over Time Graph**.
2. Select **Background Shading** as preferred. Default is no shading.

ROG



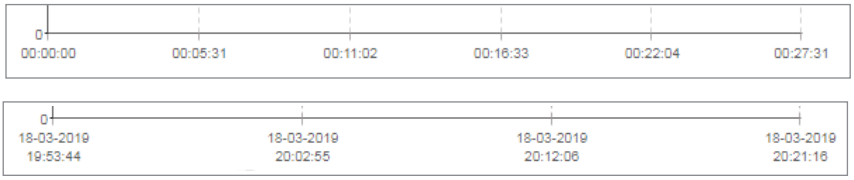
Training Zones



Speed Zones (GPS data required)

- Set ROG thresholds in **Threshold Settings > Safety Thresholds**.
- Set Training Zone in **Threshold Settings > Training Zones**.
- Set Speed Zone thresholds in **Threshold Settings > Speed Zones**.

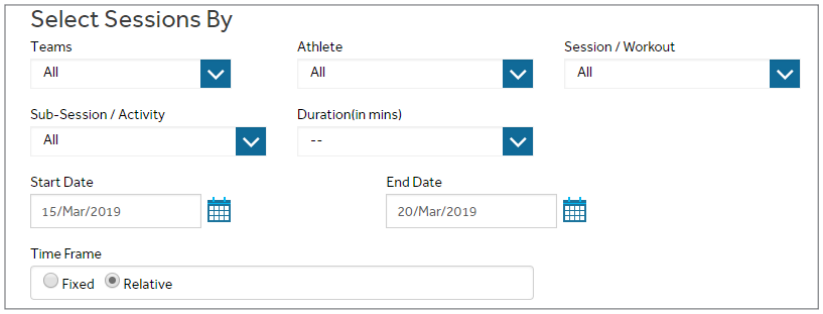
3. Select Elapsed Time or Real Time.



Elapsed (top) vs. Real Time

- Elapsed time starts every session at **00:00:00** and is necessary when comparing sessions not recorded simultaneously.

4. Filter the sessions from the **Select Sessions By** pane.



Item	Description
Teams	Select from '**No Team Assigned**' or available teams.
Athlete	Select individual athlete.
Session/Workout	Only sessions recorded within the displayed start/end date periods will be available.
Subsession/ Activity	Only subsessions recorded within the displayed start/end date periods will be available.
Duration	Select the minimum session duration in minutes.
Start/End Date	Set start and end date of time period.
Time Frame	Fixed: the **Start Date** and **End Date** will remain fixed calendar values when the template is saved and reopened. Relative: the **Start Date** and **End Date** are dynamic, and will increment by 1 day every 24 hours.

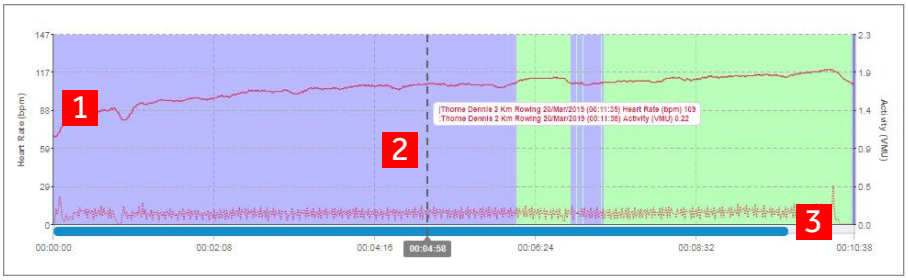
Note

Recommended practice is to set the **From Date** and **To Date** values first - this will limit the options available in the other fields and make final selections easier.

5. The **Available Sessions** pane will populated as selections are made in **Select Sessions By**.

   Double-click any session in Available Sessions to move it to Selected Sessions, or use the >>> button to move all.

- The <<< button can be used to de-select all sessions, or the individual '**X**' button for each.
- The color bar preceding each selected session corresponds to the color of its graph trace.
- The graph or table will populate automatically as soon as graph parameters and selected sessions are available.



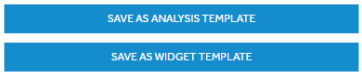
Over Time graph showing two parameters and Training Zone background coloring.

#	Description
1	First selected parameter - solid trace, left vertical axis.
2	Float cursor over graph for call out of exact data values.
3	Second selected parameter, dotted trace, right vertical axis

6. Use the 4 grab handles on the scaling bar below the graph to zoom in vertically or horizontally.

7. Any of the above settings can be changed at any time to refine or adjust the graph display.

8. Save the report as an **Analysis Template** or **Widget Template** if re-use is anticipated.

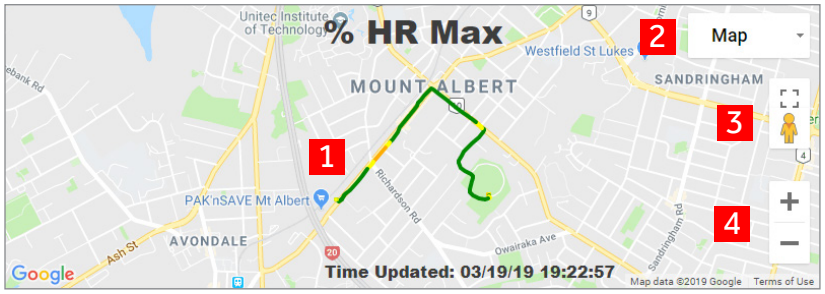


Google™* Map Display

If GPS data is available for a session, then data can be displayed on a map or satellite view.

- Click on the map button below the parameter list to set to Show.

- A map panel will display below the graph, with a Snail Trail panel below the parameters.



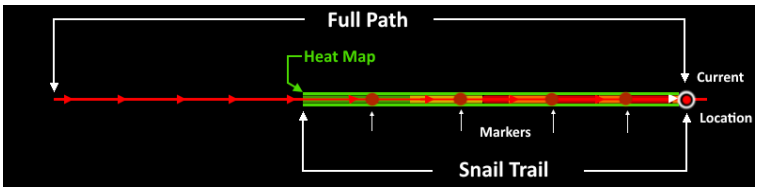
Map display, no terrain, partial path

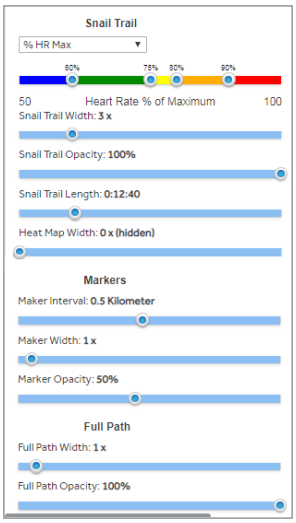
#	Description
1	Subject path snail trail (defaults to last 10 min of data)
2	Set map/terrain or satellite/labels
3	View map full screen or Google Street View™*
4	Map zoom - also use Ctrl + Mouse scroll

Satellite display, no labels, full path

Map Snail Trail

A snail trail showing subject path and color indication of a selected parameter, plus a heat map, is displayed on the map.

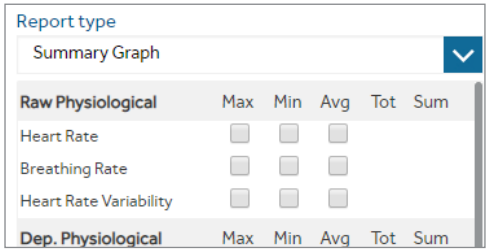




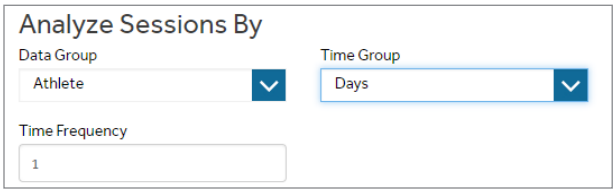
Item	Description
Parameter Pull down	Select from seven available parameters.
Color scale	Adjust according to parameter selected. Thresholds set at default. Adjust if needed.
Snail Trail Width	Width of snail trail.
Snail Trail Opacity	Opacity.
Snail Trail Length	Defaults to last 10 min of full path. Right-most setting full path.
Heat Map Width	Heat is an indication of persistence of location. A moving subject shows green, a stationary subject shows red. If a subject crosses the same location repeatedly, the heat map tends from green to red. For use with ball games. Heat map is displayed as a halo around the path.
Marker Interval	Set spacing of markers along path/snail trail.
Marker Width	Set size of markers.
Marker Opacity	Set opacity of markers.
Full Path Width	Set width of full path. Left-most setting hidden.
Full Path Opacity	Set full path opacity.

Summary Graph

1. Select **Report Type** as **Summary Graph**.
   - No background color or elapsed/real time selection is available for a summary graph.
2. Select parameters



   - Parameter type **Max/Min/Avg/Total/Summary** availability depends on the parameter e.g. Max Calories does not make sense; there is a single Calories Burned value per session.
   - A Summary parameter and some Total parameters cannot display alongside any other selection. If selected it will deselect any other active parameters. See the graph examples below.
3. Filter sessions and select sessions exactly as for Over Time graphs in the previous section.
4. Group the summary graph bars using the **Analyze Sessions By** pane.

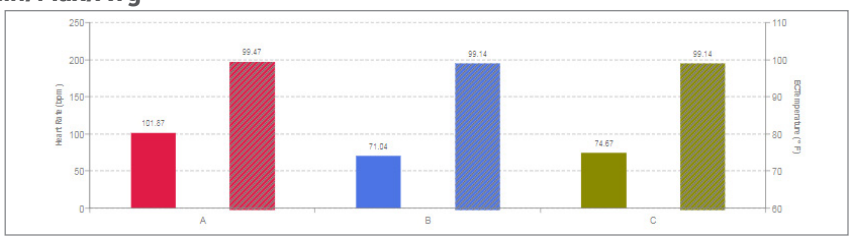


Item	Description
Data Group	Select from None, Team, Athlete, Session Name, Subsession Name.
Time Group	Select from None/Days.
Time Frequency	Select number of days.

   - Data will be organized according to the settings.

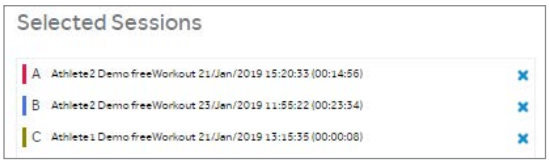
5. A summary graph will display, its type depending on the parameters selected.

Min/Max/Avg



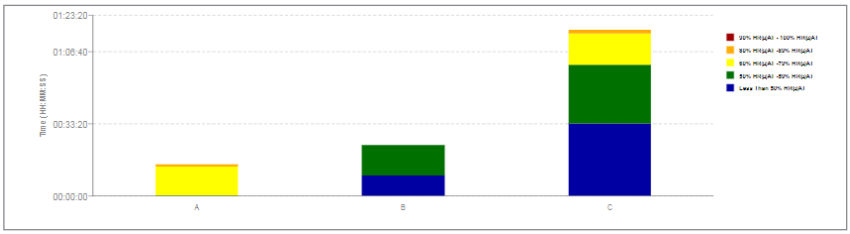
Min/Max/Avg graph

- Bar colors match indications in the Selected Sessions pane.



- Solid bar is first selected parameter, left vertical axis.
- Striped bar is second selected parameter, right vertical axis.
- Some **Total** parameters also display in this graph type.

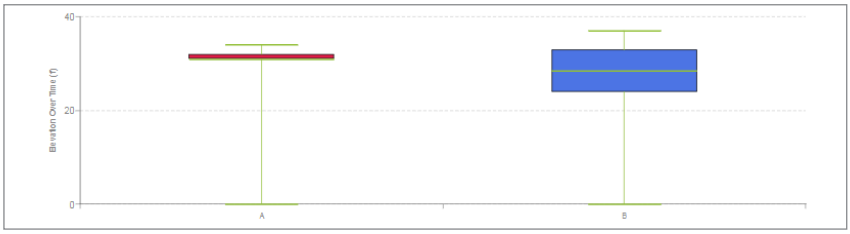
Total



Time in Training Zones stacked bar chart

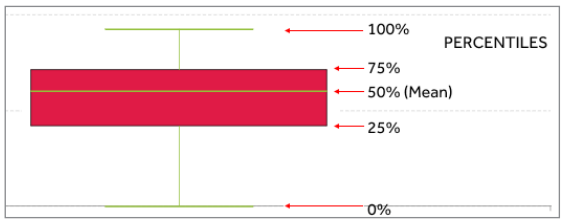
- Time in Zones graphs are 'stacked' bar charts with legend.
- These graphs can only show a single parameter

Summary



Summary 'Box & Whisker' chart

- Summary charts give a visual indication of the **distribution** of data within the session



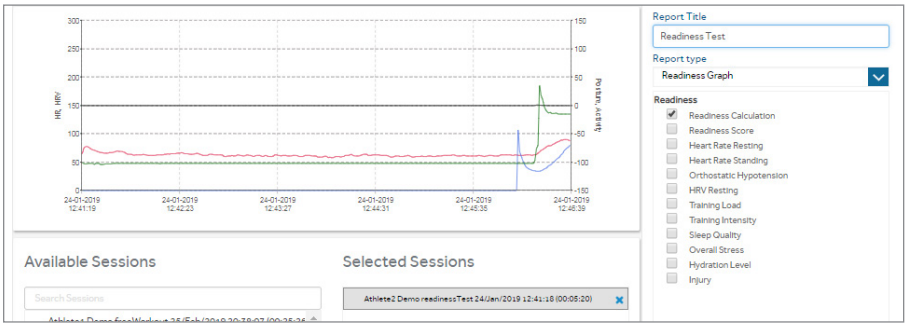
Readiness Graph

Readiness graphs have two types :

- Display the data from a Readiness (Orthostatic Hypotension) test.
- Display selected historical readiness parameters, including the data collected from readiness surveys.

Readiness Calculation

1. Select **Graph Type** as **Readiness Graph**.



2. The default selected parameter is **Readiness Calculation**. This displays **Heart Rate**, **Activity Level**, **Posture** and **HRV** which are acquired during a readiness test.
3. Use the **Select Sessions By** filters to select available readiness test sessions.
4. Readiness Calculation graph will only accommodate a single session.

Readiness Parameters

Readiness parameters are either calculated from analysis of orthostatic hypotension readiness test results (objective), or are subjective responses to the Readiness Survey conducted after each test.

Objective Readiness Parameters

- Readiness Score
- Heart Rate Standing
- HRV Resting
- Orthostatic Hypotension
- Heart Rate Resting

Subjective Readiness Parameters

- Training Load
- Sleep Quality
- Hydration Level
- Training Intensity
- Overall Stress
- Injury

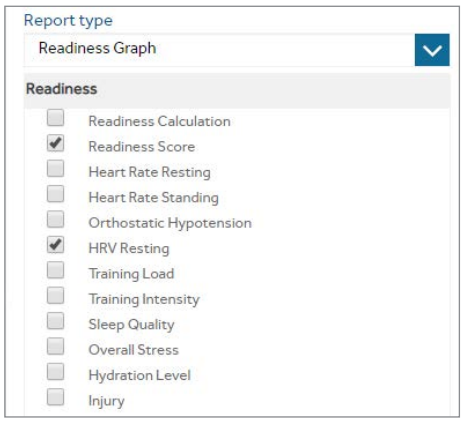
Note

The '**Training Load**' referred to in the Readiness Survey is not the same as the Train Load parameter calculated for a given workout. The latter value is the average of the Physiological and Mechanical Loads for a workout, which is an objective measurement.

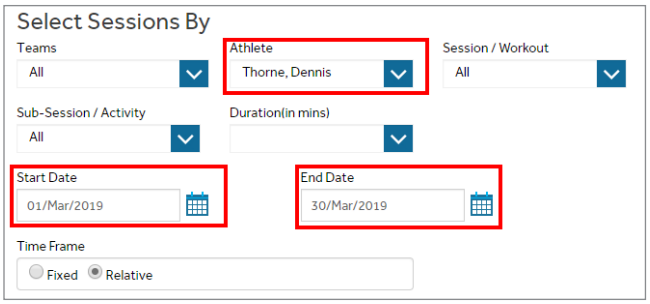
Similarly, '**Stress**' referred to in the Readiness Survey is not the same as the Stress parameter which can be displayed in a BioGauge in a Live session - that is an HRV-related parameter.

Reports (12/17)

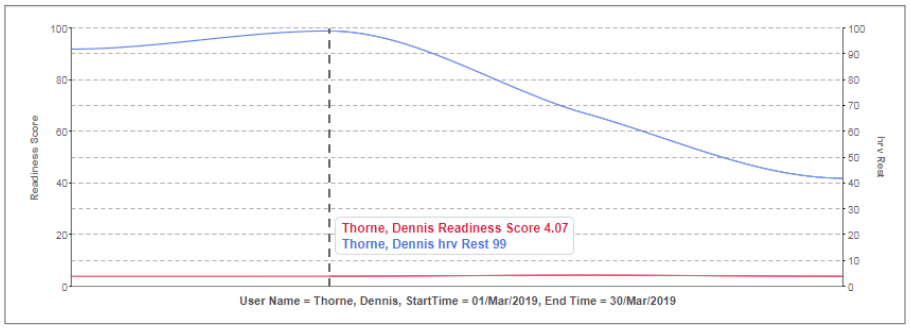
1. When Readiness Parameters are selected (other than Readiness Calculation), the graph will display historical values for the selected date range, for the selected athlete. A maximum of 2 parameters are allowed.



2. The only relevant **Select Sessions By** fields are **Athlete**, **Start Date** and **End Date**. Session/Workout need **not** be selected. Readiness Test sessions will automatically be retrieved from the database, ignoring the value set in the Session/Workout field.



3. The selected parameters will display on the graph. Float the mouse cursor over the graph to display data point values as a call out.



Periodization Report

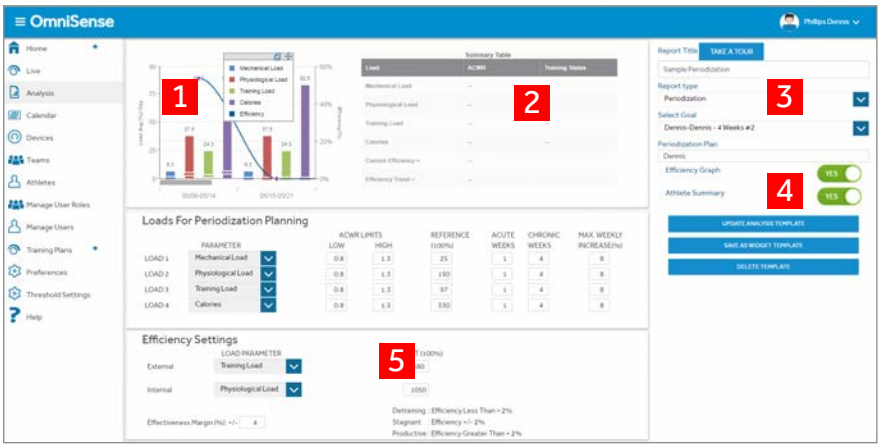
A Periodization Report provides a summary of an athlete or team's progress within a Periodization Plan, grouped into weekly periods.

The periodization report references a specific **Goal**.

In graphical and table formats, it presents summary parameters:

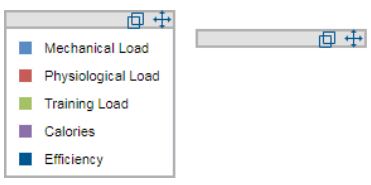
- Weekly physiological loads as selected in **Threshold Settings**
- Training Efficiency
- Acute: Chronic Workload Ratio (ACWR)

To create a periodization report, select **Report Type** as **Periodization**, and select Goal. The periodization report will populate automatically, using all assigned workout data for the individual or team assigned in the goal.



#	Description
1	Summary graph with legend
2	Summary table
3	Select **Goal**
4	Buttons to show/hide graph and table
5	**Loads for Periodization Planning** and **Efficiency Settings** are not editable here. They are for reference only. They can be edited in the **Threshold Settings** screen.

- The legend on the graph is active. Check or uncheck the color tiles beside each entry to show or hide the parameter on the graph. To minimize the legend, select the icon at the top.

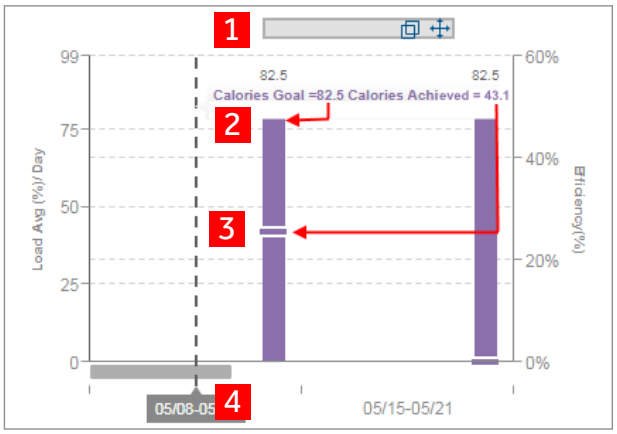


Graph legend maximized, and minimized

Reports (14/17)

Summary Graph

The Summary graph indicates relative progress towards daily average goals.

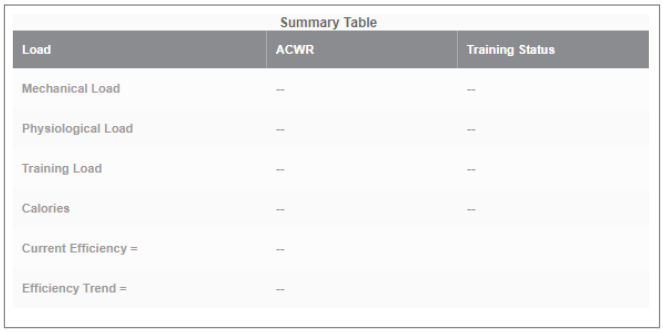


Periodization graph with legend minimized and single load parameter displayed

#	Description
1	Legend minimized - all parameters except calories de-selected.
2	Daily % Average parameter Load Goal - top of bar
3	Daily % Average parameter load Achieved - horizontal rectangle
4	Float mouse cursor over the graph to display the values as call-outs.

Summary Table

The summary table presents ACWR and Training Status statistics for the selected goal in the report.



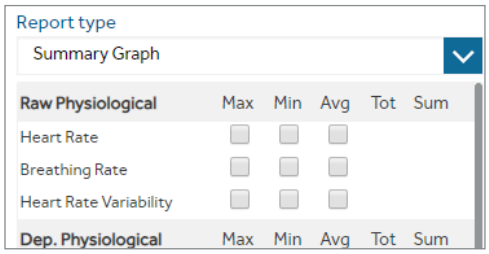
Summary Table

Load	ACWR	Training Status
Mechanical Load	--	--
Physiological Load	--	--
Training Load	--	--
Calories	--	--
Current Efficiency =	--	
Efficiency Trend =	--	

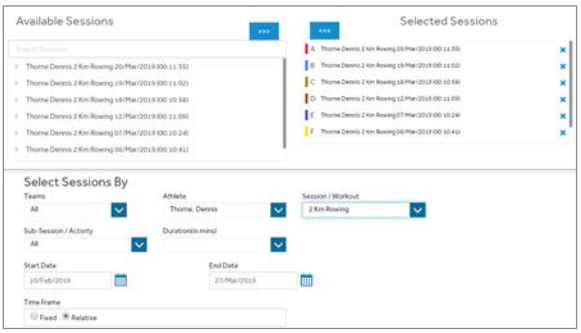
- This table will populate automatically when data is available.

Table Style Report

1. Select **Report Type** as **Table Style Report**.
   - The available parameters are the same as for a **Summary Report**.
2. Select all desired parameters. There is no limit on number selected. The report itself will expand and a scroll bar will appear if fields extend beyond screen area.



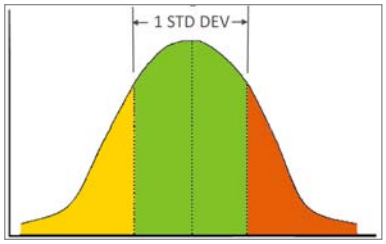
3. Filter sessions and select sessions exactly as for **Summary** reports.



4. The Report will display as a color-coded table.

Session Name	Subject Name	Start Date	Duration	Max Heart Rate	Average Heart Rate Variability	Physiological Load	Min Heart Rate
2 Km Rowing	Thorne Dennis	20/Mar/2019	00:11:35	120	29.28	57.42	68
2 Km Rowing	Thorne Dennis	19/Mar/2019	00:11:02	123	28.02	56.40	82
2 Km Rowing	Thorne Dennis	18/Mar/2019	00:10:58	118	24.16	56.46	82
2 Km Rowing	Thorne Dennis	12/Mar/2019	00:11:09	133	25.47	30.16	85
2 Km Rowing	Thorne Dennis	07/Mar/2019	00:10:24	134	23.57	31.72	87
2 Km Rowing	Thorne Dennis	06/Mar/2019	00:10:41	121	23.76	28.32	84
2 Km Rowing	Thorne Dennis	05/Mar/2019	00:10:24	132	24.62	30.95	79

5. The cells are color coded according to their distribution from the mean (average) value of all of the selected sessions.



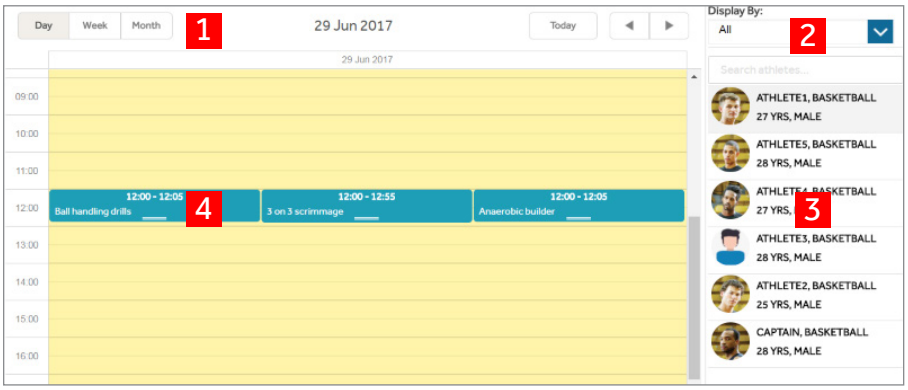
6. Below the table entries, the values which delineate the color boundaries are listed.

2 Km Rowing	Thorne Dennis	05/Mar/2019	00:10:24	132	24.623745819397993	30.953333998471 49	79
Average				125.86	25.23	41.28	81.00
Standard deviation				6.36	2.07	13.14	5.81
SIGNIFICANTLY HIGH				132.22	27.30	54.42	86.81
SIGNIFICANTLY LOW				119.50	23.16	28.14	75.19
Training Monotony (Mean/SDTV)				0	0	0	0

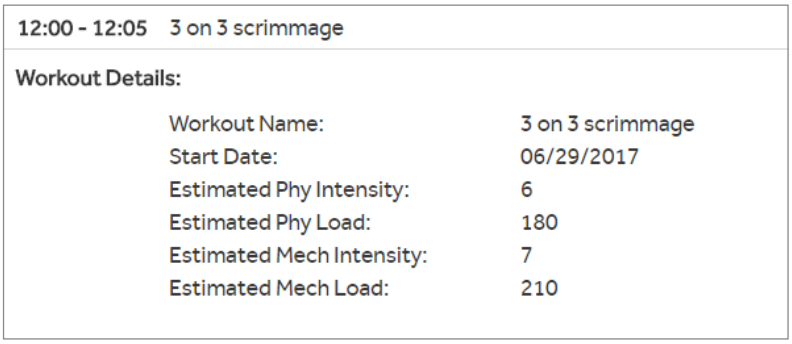
Item	Description
Significantly High	One standard deviation above the mean value. Values greater than this will be colored red.
Significantly Low	One standard deviation below the mean value. Values less than this will be colored yellow.

Calendar

- Display a calendar showing assigned workouts for an athlete by day, week or month.
- Available to coaches and managers.



#	Description
1	Display Calendar by Day/Week/month
2	Sort the athlete list.
3	Click on an athlete to display their workouts.
4	Click on an individual workout to display details.

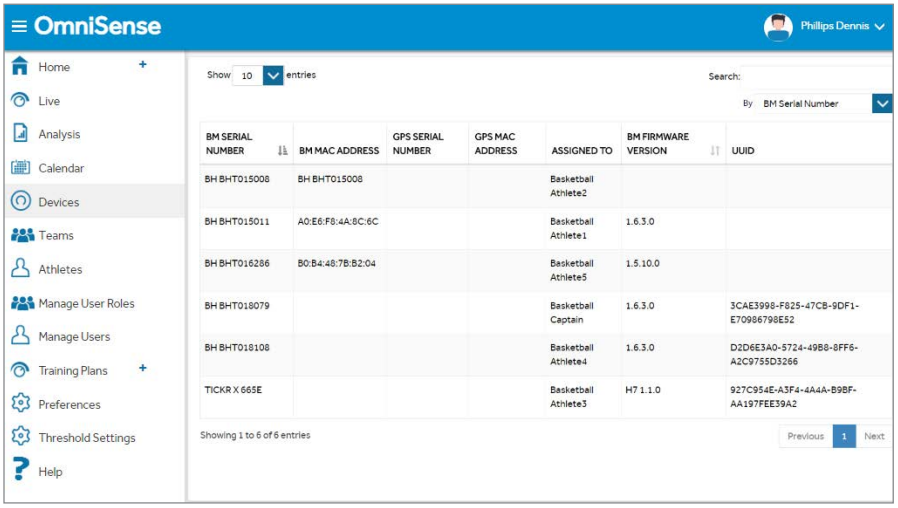


View Devices

Devices are not managed from the portal.

They are assigned to subjects from a PC installation of OmniSense™ Live, or subjects may associate and assign a device when using OmniSense™ Mobile.

The entries shown in the **Devices** screen of the portal are populated and updated automatically.



Item	Description
BM Serial Number	The serial # on the rear of the BioModule.
BM MAC Address	Bluetooth™* Address of the BioModule, needed for communication with mobile device or supported GPS.
GPS Serial Number	Serial # of supported QStarz GPS. If a mobile device is used, and GPS data obtained from the device internal GPS, this value will be blank.
GPS MAC Address	Serial # of supported QStarz GPS, if used with BioModule.
Assigned To:	Athlete the BioModule is currently assigned to. If the athlete uses a different BioModule, this will update automatically.
BM Firmware version	Version of internal firmware in the BioModule.
UUID	Universal Unique ID of a device, used to support iOS™*.

Note

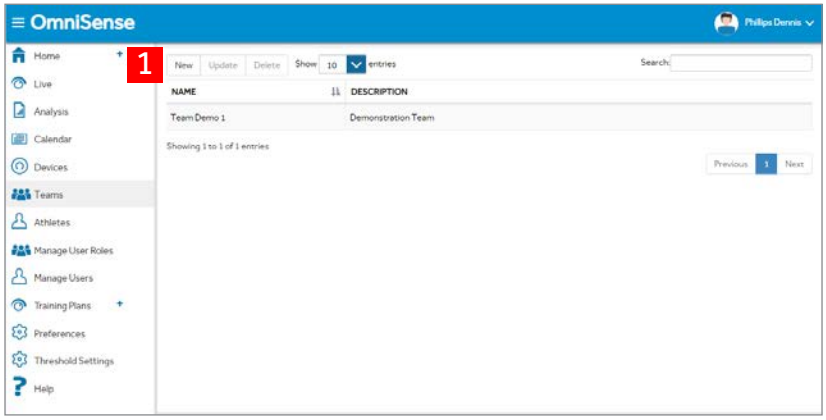
A new release of OmniSense™ may come with a new firmware version, which should be installed to support any additional functionality.

Manage Teams

Team entities exist in the portal in order to manage who has access to specific data. A team captain can generally view only his own team's data. Coaches and managers can view those teams they have been assigned.

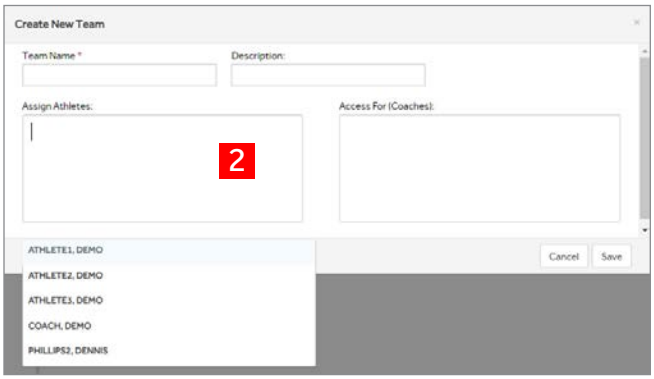
- Teams are synchronized between the Portal and a PC instance of OmniSense™, when the user is connected to the cloud.

The **Teams** screen displays those teams created within the portal.



Create Team

1. Click on the **New** button.

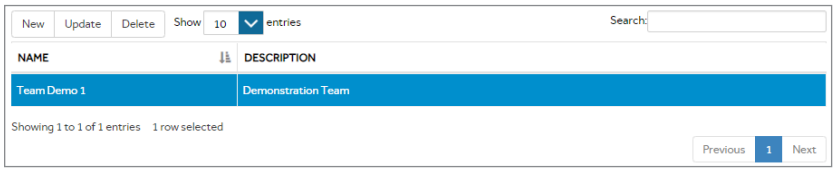


2. Enter **Team Name** and **Description**. When you click inside the **Assign Athletes** and **Access For (Coaches)** fields, a list will appear, from which you can select as needed.

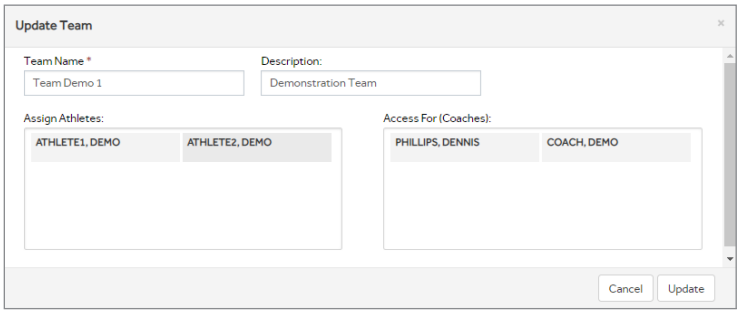
Teams (2/2)

Update Team

1. Click on a team to select it, and enable the **Update**/**Delete** buttons.



2. Select the **Update** button.



- Edit **Team Name** and **Description** as needed.
- To add more entries, click in the **Assign Athletes** or **Access For** panels, and select from the lists which appear.
- To delete an entry, click on it to select - it will turn a darker shade of grey. Delete with the **Delete** keyboard button.

OMNISENSE™ WEB PORTAL
Athletes (1/2)

Athlete Status

The Athletes screen in the portal gives an overview of an athlete's status, using all physiological metrics established during Readiness and Fitness tests. These are presented in table and radar plot format, allowing comparison with the athlete's team average values.

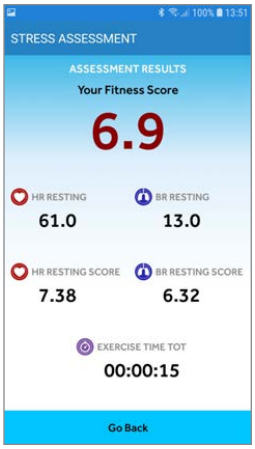
- You must have permission to view an athlete's data.

#	Description
1	Select Team from pull down list.
2	Select the Athlete from the list.
3	Summary of fitness metrics for selected athlete.
4	Select the team average to compare the selected athlete's statistics.
5	Athlete's metric compared to selection in 4, in table format.
6	Radar plot - see below.

Radar Plot

- Axes on radar plot are all scaled to give regular blue & gray polygons.
- Blue inner and gray outer polygons - the 50% and 100% levels for the team selected in **Compared With**.
- Axes are oriented so that outside the blue polygon indicates better than team average performance - for some values this is higher, such as VO_2max, and for others lower, such as resting HR.
- If the red value is inside the blue inner polygon, then the athlete's level is below average compared to the selected team.
- Float cursor over plot to get exact percentile values.

Radar Plot Parameter	Description
VO_2 MAX	Determined by analyzing results of a ramped maximal Fitness Test such a treadmill or beep test.
HR Max	Determined by analyzing results of a ramped maximal Fitness Test such a treadmill or beep test.
HR @ AT	Determined by analyzing results of a ramped maximal Fitness Test such a treadmill or beep test.
HR Recovery	Determined by analyzing results of a ramped maximal Fitness Test such a treadmill or beep test.
HR Standing	Determined by a Readiness Test
HR Resting	Determined by a Readiness Test
Fitness Score	Calculated automatically after most recent Fitness Assessment, as shown below.



Fitness Score displayed on post-assessment summary screen (Stress Test, OmniSense™ Mobile)

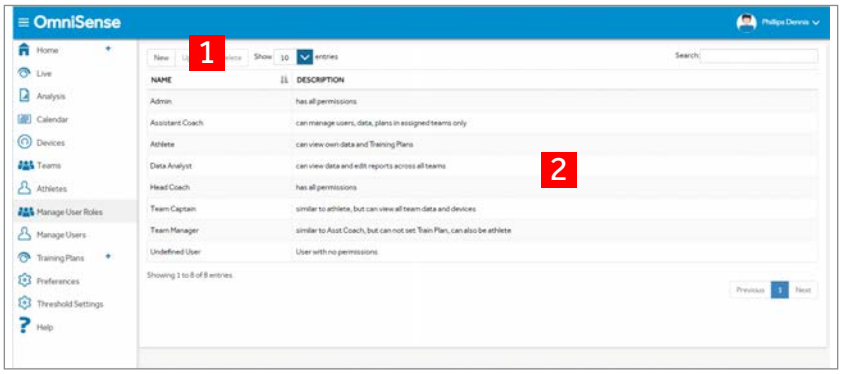
Refer to the **Baseline Fitness Testing** section for more information. (Instructions for the Stress Test and 1.5 Mile Run Test appear in the OmniSense™ Mobile application.)

Manage User Roles (1/2)

Manage User Roles

Managing user roles requires the appropriate permission to do so - normally reserved to customer account administrators and coaches.

Note that user **roles** are not the users themselves, but the category of user allocated to each new user. It provides a systematic way of allocating permissions to users.

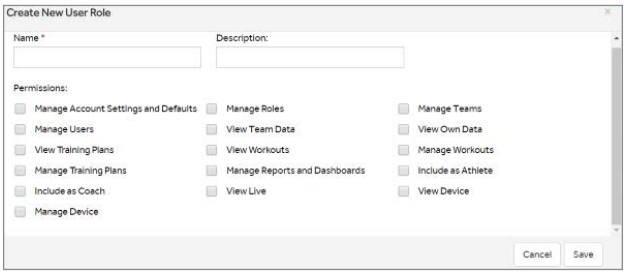


Note

An **Undefined User** role exists, with no permissions. This is the default role assigned to an existing user who registers with a second customer account. It forces the second account administrator to actively assign a new role to them, rather than transfer their existing role, which may not be appropriate.

#	Description
1	Select **New**/**Update**/**Delete** user role as needed
2	List of existing user roles with descriptions. Each new account will have a list of suggested roles. These can be deleted or updated as needed.

Permissions



Role	Recommended User
Manage Account Settings & Defaults	General Admin only
Manage Roles	Admin or Coach
Manage Teams	Coach
Manage Users	Coach
View Team Data	Coach & Team Captain
View Own Data	Athlete

Manage User Roles (2/2)

Role	Recommended User
View Training Plans	Coaches
View Workouts	Coaches
Manage Workouts	Coaches
Manage Training Plans	Coaches
Manage Reports & Dashboards	Coaches
Include as Athlete	Use as appropriate
Include as Coach	Use as appropriate
View Live	All users (athletes may be limited to their own data)
View Device	All users (athletes may be limited to their own device)
Manage Device	Coaches. Athletes may update their device when using with mobile application

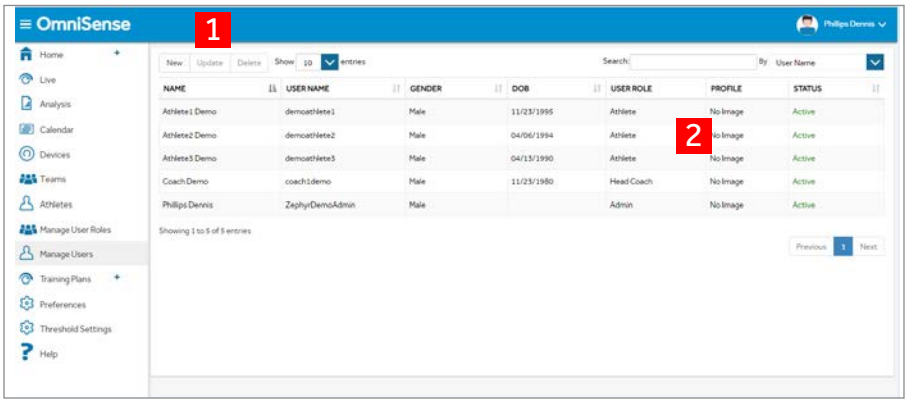
- If a user has restricted permissions, then they may have items missing from their navigation menu, or items which are disabled.
- Admin normally has all permissions, but does not exist as an athlete within the system.
- Permissions can also be managed from the **Manage Users** screen.

Manage Users (1/2)

Manage Users

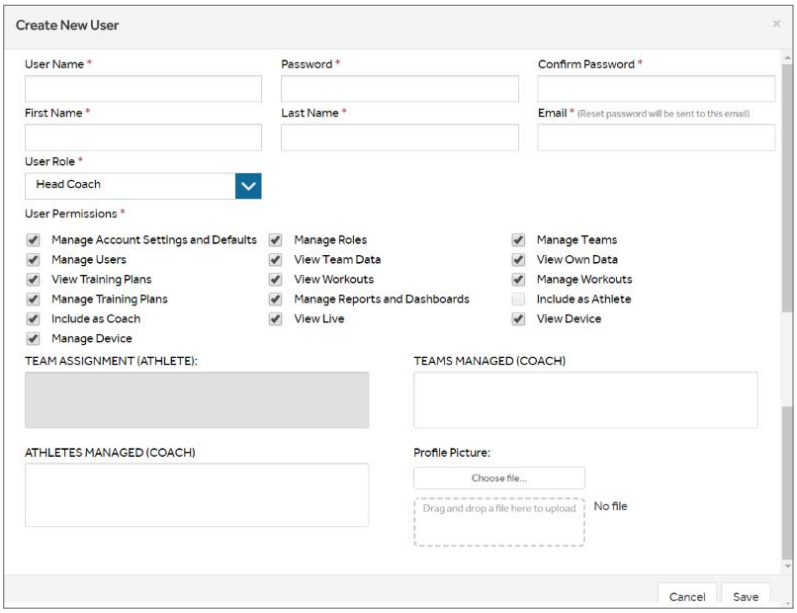
Managing users requires the appropriate permission to do so - normally reserved to customer account administrators and coaches.

User roles and permissions, and all personal and physiological details are managed from this screen.



#	Description
1	Select **New/Update/Delete** user role as needed
2	List of existing users.

Create New User



- Create a new user, assign a login and placeholder password. They will choose their own password when they validate their account.
- Allocate user role and/or permissions.
- Assign to **Teams** and **Coach** as appropriate (click any panel to display a list for selection).
- Permissions can also be managed from the **Manage Users** screen.
- Upload Profile picture if available.

OMNISENSE™ WEB PORTAL
Manage Users (2/2)

Physiological Parameters

Parameter	Description
HR Max	Saved automatically when the results of a ramped maximal fitness test are saved. It can be updated manually here.
Fitness Level	Most recent Fitness Level determined after a Fitness Test has been performed on the PC Application or OmniSense™ Mobile.
HR @ AT	Saved automatically when the results of a ramped maximal fitness test are saved. It can be updated manually here.
HR Rest / Stand	Saved automatically when the results of a Readiness test are saved. It can be updated manually here.
HRV Rest SDNN	Saved automatically when the results of a Readiness test are saved. It can be updated manually here.
VO_2 max	Saved automatically when the results of a ramped maximal fitness test are saved. It can be updated manually here.
HR High/Low Red/ Orange	Safety Threshold for determining Subject ROG Status, displayed on the subject BioGauge in OmniSense™ Live.
BR High/Low Red	Safety Threshold for determining Subject ROG Status, displayed on the subject BioGauge in OmniSense™ Live.
[Est.] Core Temp Red	Safety Threshold for determining Subject ROG Status, displayed on the subject BioGauge in OmniSense™ Live.
Idle Timeout	Time period in seconds before a subject status is set to red due to inactivity. This is for use with First Responders (e.g. Fire Crew) for whom inactivity may be an indication that they have become incapacitated. Default is disabled.
Set Thresholds To Default	Set to the thresholds saved in the **Threshold Settings** screen.

Note

No data is ever downloaded from the cloud database to a local PC database, but physiological/fitness parameters are, when the local PC users connect to the cloud account.

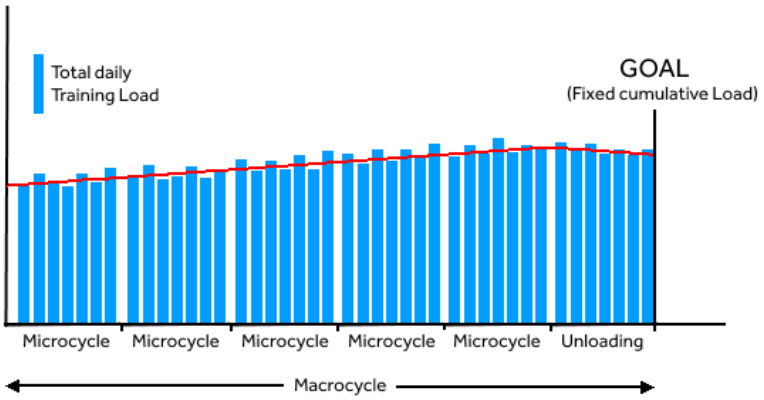
Overview

Training Plans & Periodization Plans

Training Plans and Periodization plans can be created independently of each other, but they are designed to be used in parallel.

Periodization Plan

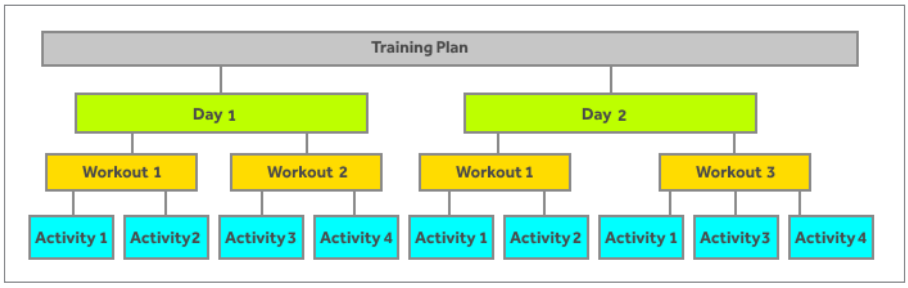
The Periodization plan is a long-term framework of weekly training load targets. These targets can be configured to increase the training load, within safe limits, towards a set of calendar goals within a training season.



A Periodization Plan does not detail individual workouts; it only serves as a set of targets to aim training towards, and measure progress against.

Training Plan

A Training Plan consists of a number of workouts, scheduled for a sequence of days. Each workout in turn consists of a number of specified activities.



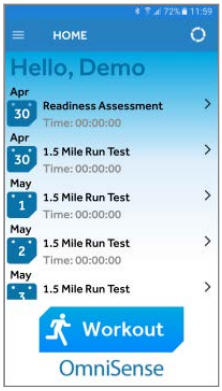
The training plan may be created to cover the period of an entire periodization plan, or may be a smaller repeated segment (say weekly) within a longer term periodization plan.

When creating a training plan, coaches assemble activities and workouts to achieve the weekly and daily training targets dictated by the periodization plan, or they can create separate training plans independent of any target setting.

Plans can be assigned to individuals or teams.

Training Plans (2/22)

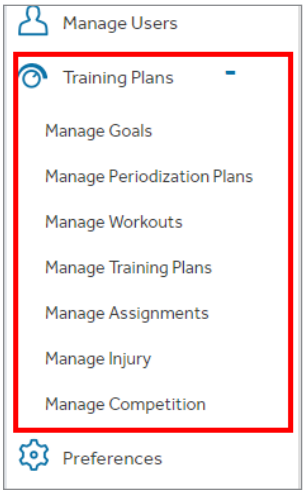
Coaches can use the portal to push the training plan (or individual workouts) out to athletes' mobile devices.



OmniSense mobile Home screen showing prescribed workouts

The workouts will appear on the athlete's **Home** screen when they log in to OmniSense Mobile.

Periodization plans, training plans and workouts are managed via the **Training Plans** node in the navigation menu, which expands (**+**) into individual components.



Only coaches and users with appropriate permissions will see this node in the navigation pane of the web portal.

Training Plans (3/22)

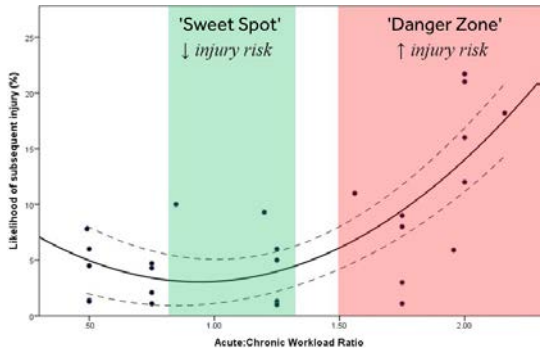
Goals

Training plans are intended to work towards a goal which is a calendar event.

A managed training plan will set overall targets for physiological, mechanical and training loads over the period leading up to the goal event.

ACWR

Planning toward a goal will take into account the **Acute to Chronic Workload Ratio** (ACWR), which is a measurement of relative increase of workout load during the course of a training program, or the ratio of short-term (Acute) load to long-term (Chronic) load.



A well-managed training program will set training load targets which keep athletes in the 'sweet spot' zone above, where loads increase towards the goal event, but at a rate which will minimize the likelihood of over-training injuries in the danger zone.

The training program will consist of recurring periodization microcycles - typically of one week duration. Training loads will gradually increase, leading to a prescribed unloading period immediately prior to the goal.

- Recurring periodization workout sequences are called **microcycles**.
- The entire training period up to the goal (including unloading) is called a **macrocycle**.

ACWR = (Current microcycle training load)/(Average of all previous microcycle training loads)

Note

The current widely-accepted range for ACWR is 0.8 to 1.3 for safe training.

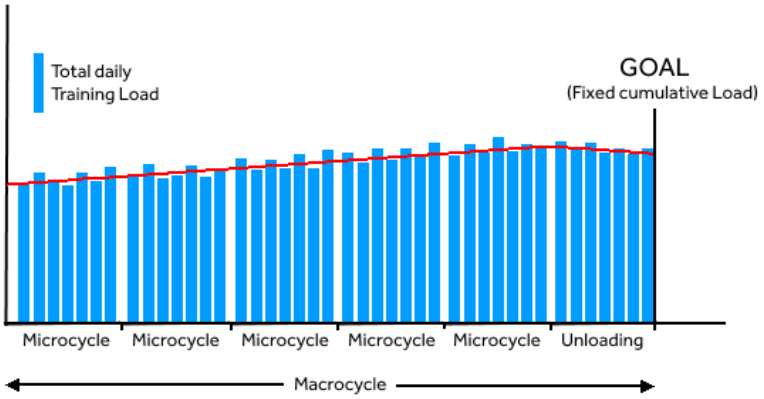
If the training load is the same for each microcycle, then ACWR = 1.0

Workflow

Periodization Plans and Training Plans operate in parallel.

Goals & Periodization Plans

For the periodization plan, a goal is created which sets cumulative target loads for the entire (multi-week/macrocycle) training cycle.

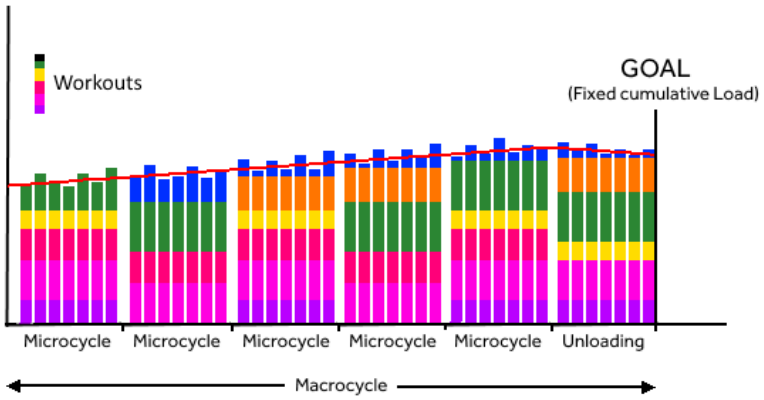


- When creating a **Goal**, **ACWR** and **Weekly Increase %** load values will be calculated for load parameters which are set globally in the **Threshold Settings > Loads For Periodization Planning** section of the portal.
- No detail of workouts or activities are contained in a Periodization Plan - only daily total load targets.
- The Periodization Plan serves as an envelope of target loads within which to construct a Training Plan.

Training Plans

A Training Plan uses a Periodization Plan as a template, but fills in the detail of daily activities and workouts. The total daily load parameters for all workouts should match the daily totals in the periodization plan.

This is dependent on baseline load parameter estimates for the activities in the workouts being known.



Workouts and Activities

A Training Plan consists of a sequence of Workouts. Workouts, in turn, consist of a sequence of activities, or a single activity.

An activity is the basic building block of all training plans.

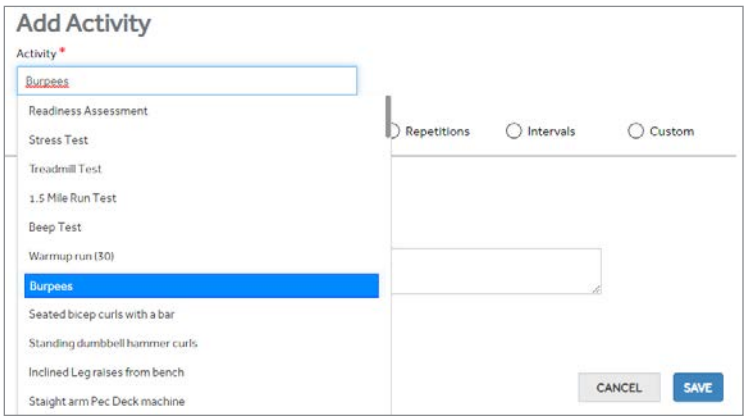
The hierarchy is:

Activity >> Workout >> Training Plan >> Periodization Plan

- Activities and Workouts typically describe a day of training.
- Training Plans typically describe a week or weeks of training.
- Periodization Plans describe a complete multi-week cycle of training towards a goal.

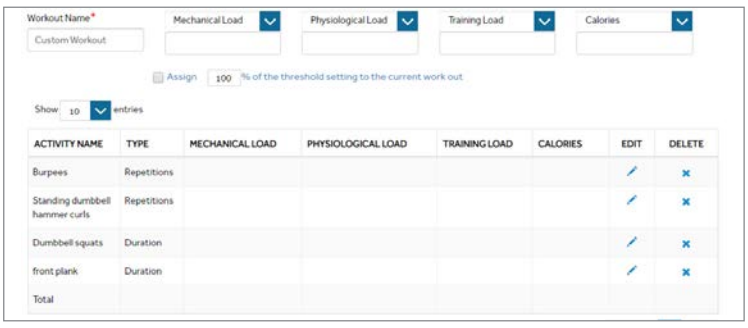
Create/ Add Activity

A number of pre-configured activities already exist in the portal database. These can be selected when creating a workout. New custom activities can be created as needed.



Create Workout

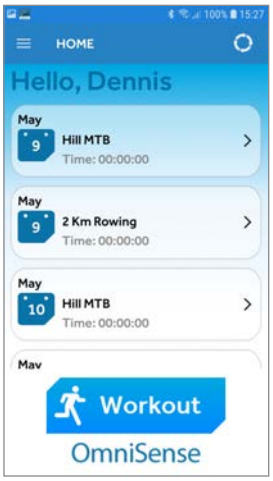
A workout is created by adding a sequence of activities.



These tasks are described in detail in the next sections.

Steps to Create a Periodization Plan

1. Create a **Goal**.
   - Select the team or individual.
   - Set Start and End dates, and any unloading period.
   - Set Starting & Peak Weekly loads for the selected parameters. ACWR will be calculated automatically.
2. Create a **Periodization Plan**.
   - Select the Goal - Start and End dates will populate automatically.
   - Define the duration in days, and number of microcycles.
   - Populate the array of individual days with load targets. Percentage progress towards daily and weekly load targets will be indicated.
3. Using the periodization plan as a template, create a **Training Plan**.
   - Add a sequence of Workouts from the list available, specifying which day of the training plan they are assigned to, and a starting time, if needed. A day can consist of one or more workouts.
4. Create **Workouts** by adding a series of **Activities**.
   - Select the activities from a list, or create a new activity.
   - Specify the activity type and any parameter (e.g. weight, duration, repetitions) applicable. Add a note which will be displayed on the athlete mobile device when they see the workout.
   - Estimated load parameters will display for the activity if an average value can be retrieved from the portal database.
   - Estimate the workout load parameter totals by summing the load totals for the individual activities.
5. **Assign** the Training Plan (or individual workouts) to the team or individual concerned. The workouts will display on the athletes' mobile devices.



Manage Goals

A goal is created as a set of target loads appended to a fixed calendar date. It's intended use is in the context of a **Periodization Plan**. When a periodization plan is created, an existing goal must be referenced. The goal specifies:

- A time interval (start and end dates).
- An unloading period at the end of the goal duration, if required.
- Intended **Starting** and **Peak** (final week of the cycle) loads for those parameters selected in the **Threshold Settings** screen of the portal.

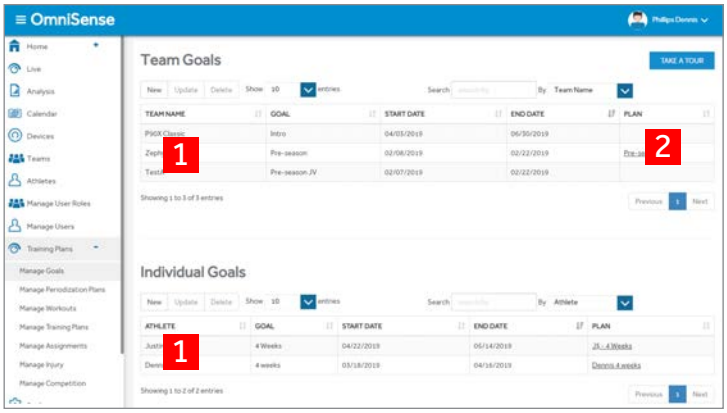
Note

Starting and **Peak** weekly load targets can only be set if there is prior knowledge of typical loads achieved for various activities and workouts.

Recommended practice is to create baseline workouts for athletes and assign them as part of a training plan that is not part of a periodization plan. Examining real athlete data will allow a coach to set target loads.

Once a coach has better knowledge of what are realistic daily and weekly targets, then a periodization plan can be planned and implemented. Only at this point can goal targets be set.

- Expand the **Training Plans** node in the Portal and select **Manage Goals**. Any existing goals will be displayed.

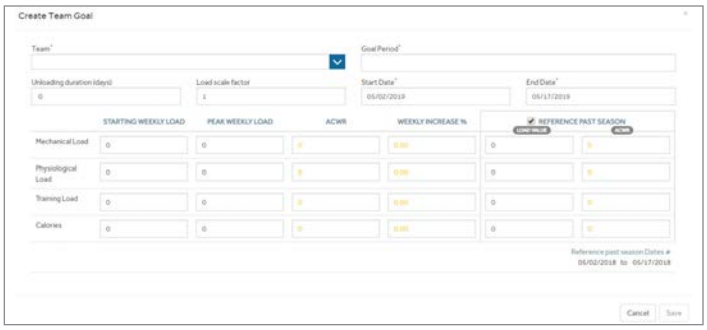


Manage Goals screen

#	Description
1	Select an existing **Team** or **Individual** goal and use the buttons to edit or delete it.
2	An entry in the **Plan** column indicates the goal has been referenced in a **Periodization Plan**.

Create a Goal

Select the **New** button in the **Team Goals** or **Individual Goals** section. The creation process is identical, other than selecting the Team or Individual concerned.

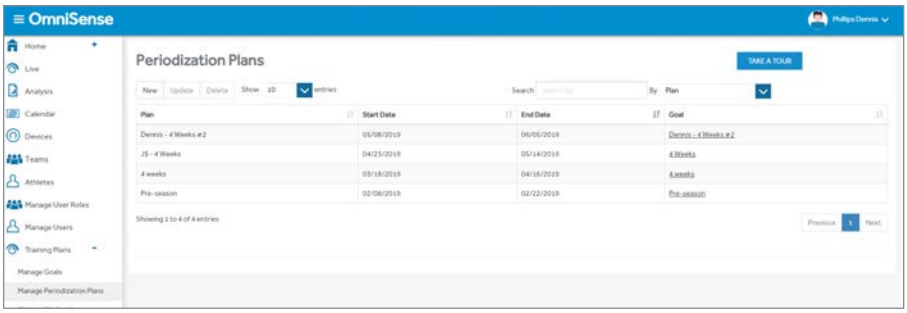


Item	Description
Team/Individual	Select the Team or Individual from the pull down list.
Goal Period	This is the name of the goal as it will be referenced in the **Periodization Plan** screen. It is helpful to include the duration e.g. " A Team 4 weeks".
Unloading Duration	Include any unloading duration in days, if applicable. This will cause the final week of the cycle to be truncated in the Periodization screen. As an alternative, simply reduce target loads during the final days of the periodization cycle, and leave the Unloading Duration as zero.
Load Scale Factor	When implemented, an existing goal may be loaded as a template, and all load values incremented by this factor to quickly generate a new goal without manually entering values. Save the new goal under a different name.
Start/End Date	Select from calendar pop-ups. The End Date must be later than 4 weeks after the Start Date for ACWR to be calculated.
Load Parameters x 4	Displayed parameters correspond to those selected in the Threshold Settings screen of the portal.
Starting Weekly Load	Baseline weekly load for the training cycle. These fields will pre-populate with data from the previous week, if available. Edit as needed.
Peak Weekly Load	Weekly load for the final week of the training cycle.
ACWR	Calculated automatically if the goal period is 4 weeks or more.
Weekly Increase %	Calculated automatically as Starting and Peak weekly loads are added.
Reference Past Season	When checked, the Peak weekly load and corresponding ACWR will be retrieved from the database from the same period in the previous year, if available. It is for reference only.

Manage Periodization Plans

A periodization plan creates a framework within which a training plan operates. It contains no daily workout or activity detail - it consists only of a set of daily load targets arrayed over the periodization plan macrocycle.

A periodization plan references a specific **Goal**.



Manage Periodization Plans screen

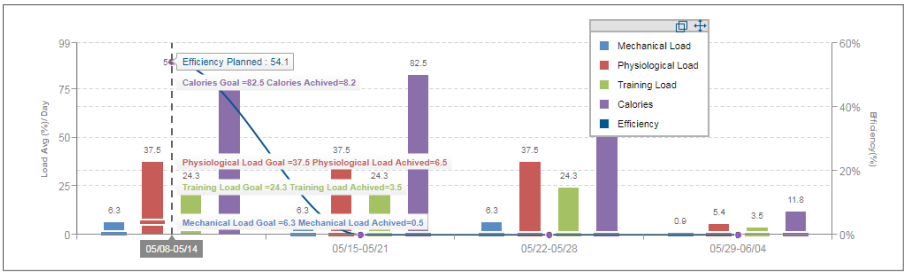
- Select an existing plan and use the buttons to update or delete it.

Note

The **Start** and **End** dates cannot be edited for an existing plan. A new plan must be created to change these values.

Periodization Report

The purpose of the Periodization Plan is to establish a sequence of daily training load limits, with oversight on the **ACWR** ratio, **Training Efficiency**, and **Training Effectiveness**. These can be displayed graphically as a **Periodization Report**.



Periodization Report

Loads for Periodization Planning

Periodization Plans reference daily load parameters and targets configured in the **Threshold Settings** screen.

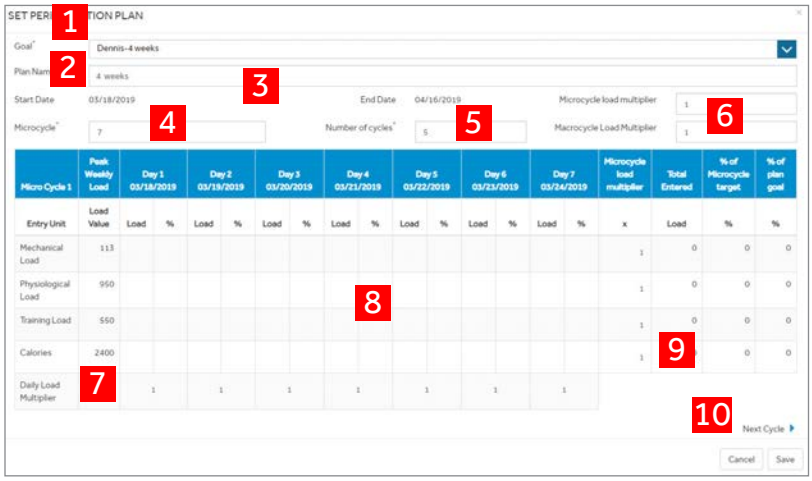
LOADS FOR PERIODIZATION PLANNING

	PARAMETER	ACWR LIMITS LOW	ACWR LIMITS HIGH	TARGET (100%)	ACUTE WEEKS	CHRONIC WEEKS	MAX. WEEKLY INCREASE(%)	
LOAD 1	Mechanical Load	0.8	1.3	25	1	4	8	RESET
LOAD 2	Physiological Load	0.8	1.3	150	1	4	8	RESET
LOAD 3	Training Load	0.8	1.3	87.5	1	4	8	RESET
LOAD 4	Calories	0.8	1.3	330	1	4	8	RESET

Loads in the Threshold Settings screen

Create Periodization Plan

- Select the **New** button in the **Manage Periodization Plans** screen.



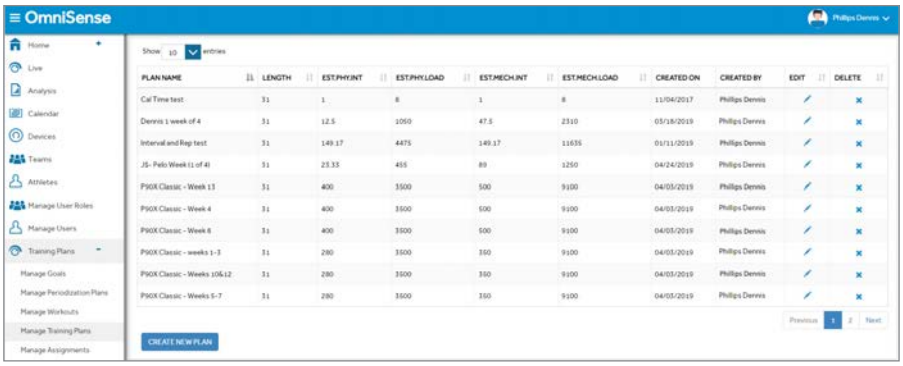
#	Description
1	Select Goal - a list of available goals will display.
2	Name the plan.
3	The Start and End Dates referred from the goal will display automatically. To change these, you must create a new goal.
4	Microcycle - typically 7 (days). Set as desired.
5	Macrocycle - number of microcycles. E.g. 4 = 4 x 7 days.
6	Load Multipliers - these allow an existing plan to be cloned and incremented by a percentage. Microcycle load multiplier applies to the currently displayed microcycle.
7	Peak Weekly load values referred from goal - used for reference.
8	One microcycle, laid out in days. Manually enter Load values for each day.
9	Percentage toward microcycle target, and macrocycle target, are populated automatically when load values entered.
10	Next and Previous (not shown) buttons to increment to next week/ microcycle. All microcycles must be populated to complete the periodization plan.

Manage Training Plans

A Training Plan is a collection of workouts, one or more per day. Each workout in turn is a collection of activities.

A Periodization Plan allows planning of daily load targets within which to assemble a training plan.

Once created, a Training Plan can be assigned to a team or individual, and the activities are pushed to their mobile devices for individual participation.



Manage Training Plans Screen

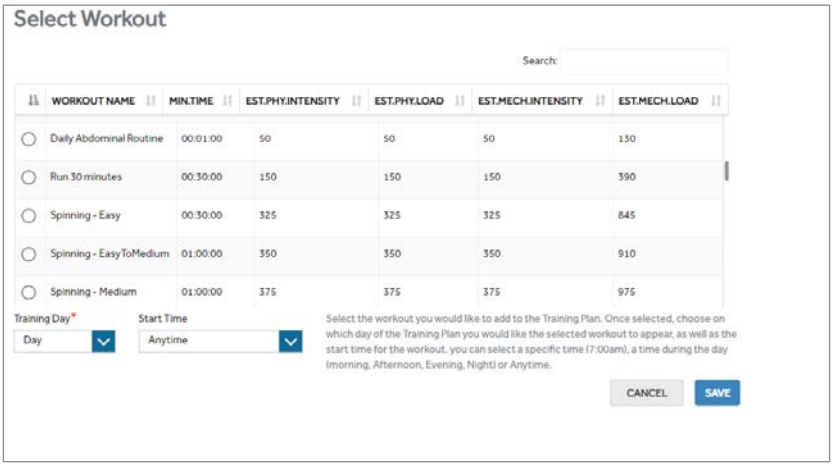
- Use the buttons to edit or delete existing plans, or create a new plan.
- Training Plans do not have a specified **Start Date**, only a number of days, shown in the **Length** column.
- These **Estimated Load** parameters are determined by summing the estimated loads of individual workouts within the plan.

Create a Training Plan

- Select the **Create New Plan** button.

Create Training Plan screen

1. Add a name for the plan.
2. Select **Add Workout**.



Select Workout Screen

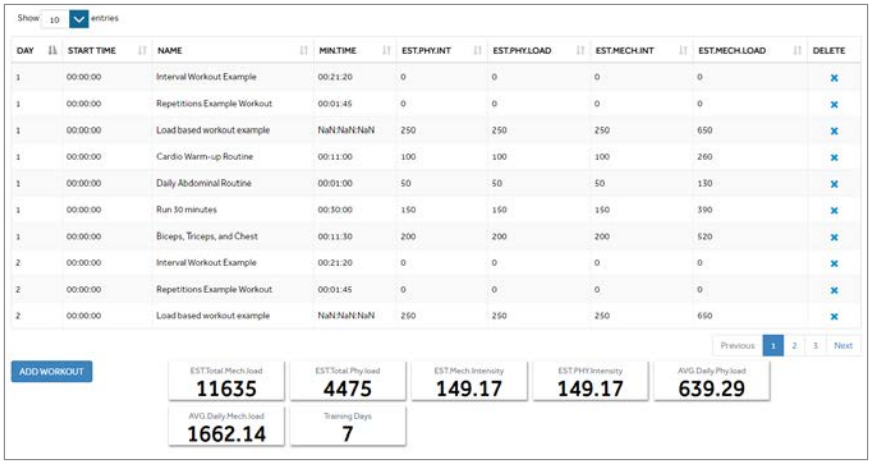
3. Browse the list and select a workout using the button in the first column.
4. Select the **Training Day** - the pull-down list corresponds to the Length of the training plan.
5. **Save** the workout to the training plan.

   If the desired workout is not available from the list, then it must be created from the **Manage Workouts** screen.

6. When saved, the estimated load totals will be added to the training plan.

7. Repeat the process as necessary to populate all the training program days with workouts. Specific days can be omitted if they are designated rest days.

8. A fully-completed training plan may occupy several screens - use the Previous/Next and page number buttons to view or delete workouts if necessary.



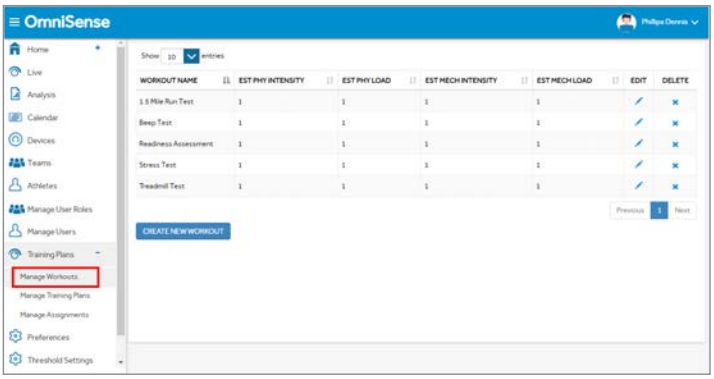
Completed Training Plan

9. When complete, a training plan can be assigned to a team or individual in the **Manage Assignments** screen.

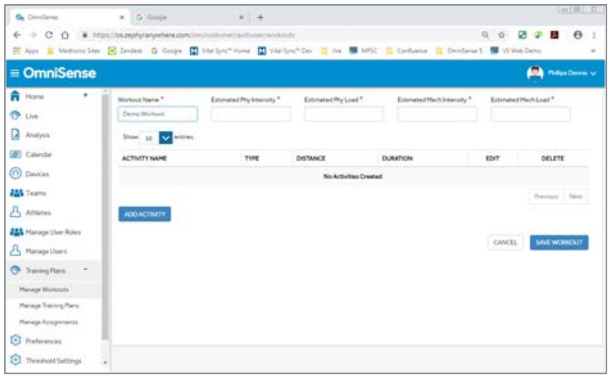
Manage Workouts

Before a Training Plan can be created, Workouts must be available. Workouts consist of a series of Activities. These in turn must also be created. Only Admins,Coaches and Managers can manage Training Plans.

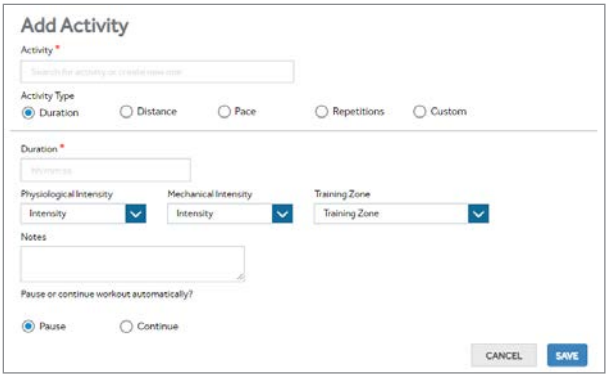
1. Expand the **Training Plans** node in the navigation panel, and select the **Manage Workouts** node.



2. A number of pre-configured workouts already exist, which correspond to fitness tests which can be analyzed specifically in OmniSense™ Analysis. These can be assigned at any time to suit.



3. Select the **Create New Workout** button. In the **Create New Workout** screen, name the workout, and select the **Add Activity** button.



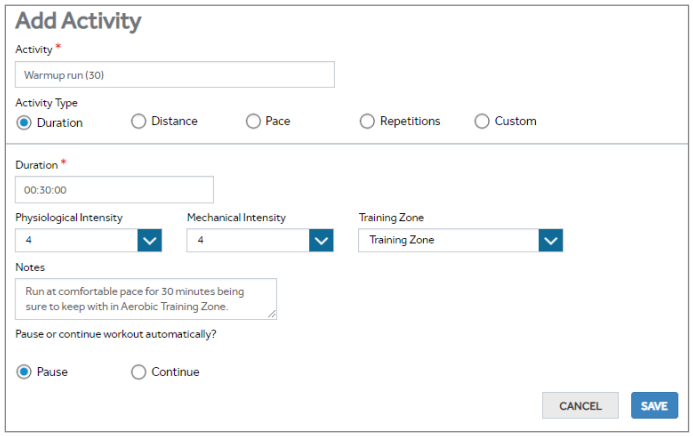
4. The **Add Activity** dialog contains a large number of individual activities which can be selected from the **Activity** field.

List of Available Activities

Over 60 activities can be selected from the pull down list in the **Activities** field.

- Warm up run (30)
- Burpees
- Seated biceps curls with bar
- Standing dumbbell hammer curls
- Inclined leg raises from bench
- Straight arm Pec Deck machine
- Bent arm Pec Deck Machine
- Seated single arm biceps curls with dumbbell
- Inclined bench press with bar
- Inclined bench dumbbell straight arm extensions
- Standing back stretch
- Forearm stretch
- Overhead triceps stretch
- Bar squats
- Dumbbell squats
- Inverted 45 degree leg press
- Seated knee extensions
- Lunges with bar
- Dead lifts with bar
- Reverse single leg knee extensions
- V leg hamstring stretch
- Seated back stretch
- Standing Quad Stretch
- Bent upright row with bar
- Wide arm lat pull down
- Wide arm pull ups
- Bent row on bench with dumbbell
- Seated triceps extensions behind head with bar
- Laying on bench triceps extensions with bar overhead
- Standing triceps extension with V handle on cable machine
- Standing single arm chest stretch
- Standing double arm chest stretch
- Straight arm front dumbbell raises
- Seated upright military shoulder press with dumbbells
- Bent over lateral raises with dumbbells
- Abdominal flexor crunches
- Hip flexor leg raises from stand
- Vertical inclined leg raises from stand
- Back extensions
- Pushup inverted crunch combo
- Arm across chest shoulder stretch
- Laying back stretch
- Standing straight arm chest stretch
- Burpees jumping jacks pull ups combo
- Spinning Easy/ Medium/Hard
- Spinning EasyToMedium
- Body Combat
- 3x Hill Easy/Medium/ Hard
- Hamstring Stretch
- Inclined upright row with bar
- Pike Sit ups
- Horizontal leg raise stretch
- Sit ups

5. Depending on the activity selected, other fields in the dialog may populate automatically.



in the above example, **Warm up Run (30)** is selected, and **Activity Type**, **Duration**, **Physiological Intensity**, **Mechanical Intensity**, **Training Zone** and **Notes** will be automatically set. Training Zone can be selected as a field in OmniSense™ Mobile.

Select **Pause** or **Continue**. If Pause is selected, the athlete will need to select the **Resume** button on their mobile device when they wish to continue the workout.

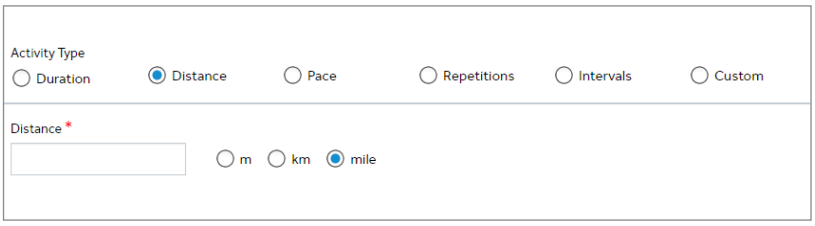
Activity Type

Required parameters will vary according to the Activity Type.

Duration

Item	Description
Duration	Duration of activity in **hh:mm:ss** format
Notes	Add as appropriate for all activities.

Distance



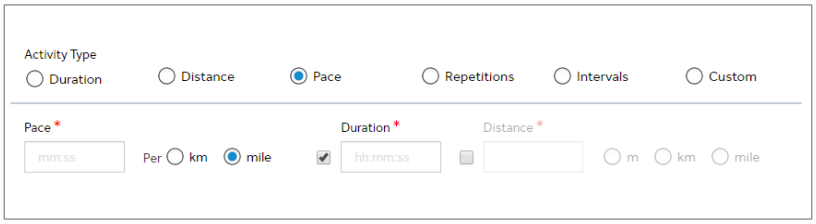
Item	Description
Distance	Distance, in the selected unit.

Note

Notes will be enunciated from the mobile application, if enabled in the app.

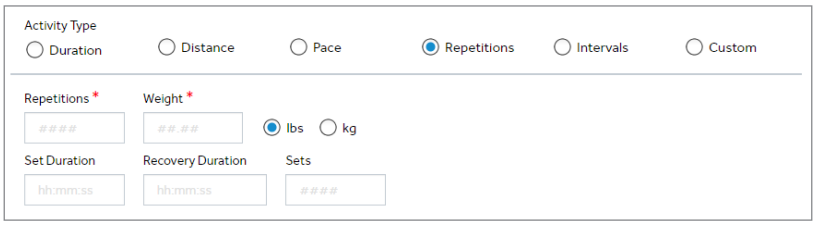
Training Plans (17/22)

Pace



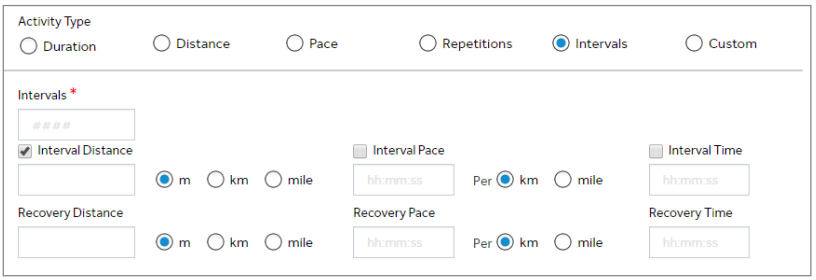
Item	Description
Pace	**hh:mm** for the selected unit.
Duration/Distance	Select one. Sets an upper limit for the activity.

Repetitions



Item	Description
Repetitions	Number of repetitions.
Weight	Weight used in selected unit.
Set Duration	Time duration of set.
Recovery Duration	Allocated time delay before start of following set.
Sets	Number of sets.

Intervals



Item	Description
Intervals	Total number of intervals for distance work.
Interval Distance/ Pace/Time	Select one, with appropriate units.
Recovery Distance/ Pace/Time	Select values for recovery/cool down at the end of the activity.

Custom

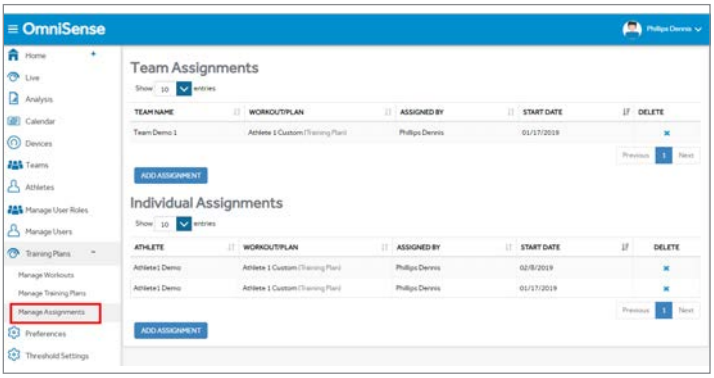
No custom parameters to enter. Add **Notes** as appropriate.

Manage Assignments

The **Manage Assignments** screen allows coaches to assign entire training plans, or single workouts, to a team or individual subject.

- Training plans and workouts must already exist.
- Once assigned, the assignments will be pushed out to athlete's mobile devices, and can be viewed on their - and the coaches, - dashboards in the portal.

1. Expand the **Training Plans** node in the navigation panel, and select the **Manage Assignment** node.

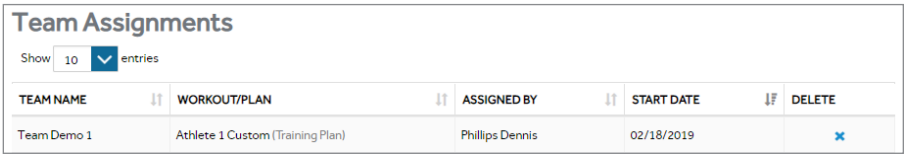


Existing assignments can be deleted, but not updated.

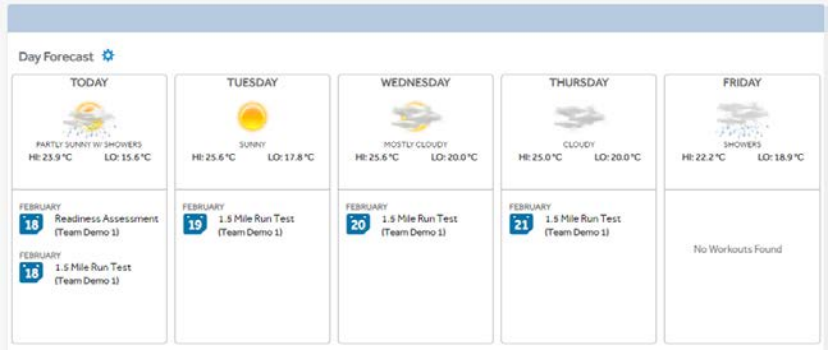
2. Select the **Add Assignment** button in the **Team Assignments** or **Individual Assignments** section as appropriate..

Shown is the **New Team Assignment** dialog. The **New Athlete Assignment** dialog has the same layout. Select the **Team/Athlete** and training plan or workout and **Start Date** as needed, and **Save**.

3. A new entry will appear in the relevant assignments section.



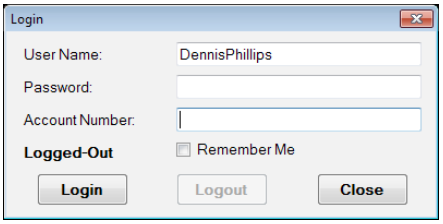
4. The newly-assigned training plan/workout will appear in the coach's dashboard calendar **Forecast** widget.



When athletes next log in to OmniSense™ Mobile, the assignments will be displayed on their home screen.

Send Team Assignments to PC Application

Team assignments are available on the OmniSense Live PC application when it is connected to the web portal on the date of the assignment.



1. Connect the PC OmniSense Live application to the web portal.

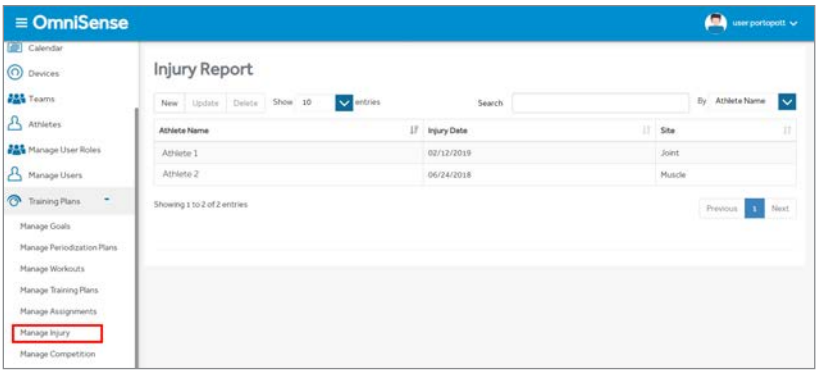
2. Select the assigned activity from the **Session Names** pull down list, and enable using the **Select Session Name** button.

3. Configure the BioGauge (standard or training) to show one or more of the target load parameters displayed at the top of the workout side panel.

4. **Start** and **Stop** the activity using the button at the top of the Workout side tab.

   - Activity information is displayed in the panels in the workout side tab.

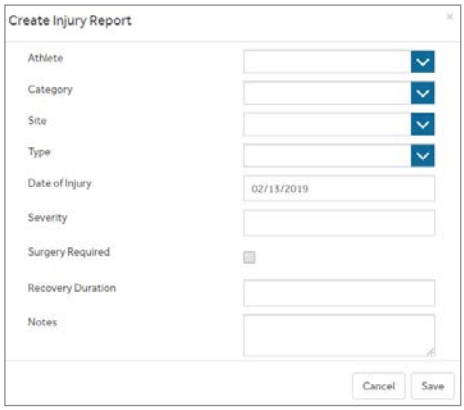
Manage Injury



- Access the **Manage Injury** screen from the navigation panel.
- The screen displays a historical summary of athletes and injuries.

Create Injury Report

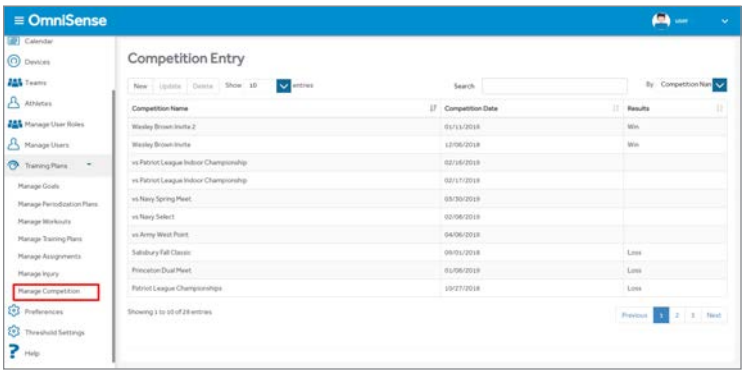
1. Select the **New** button.



Item	Description
Athlete	Select from pull down list.
Category	Select from pull down list.
Site	Select from pull down list.
Type	Select from pull down list.
Date	Click in field to display calendar
Severity	0-10 scale
Surgery Required	Check if necessary
Recovery Duration	Enter duration
Notes	Add as appropriate

2. **Save** the Report.

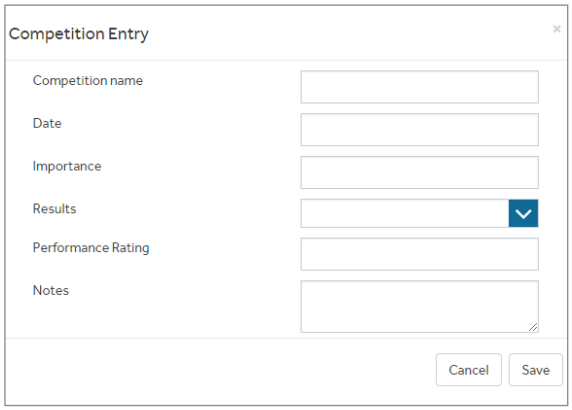
Manage Competition



- Access the **Manage Competition** screen from the navigation panel.
- Use the competition dates to set long term Training Goals.

Create Competition Entry

1. Select the **New** button.

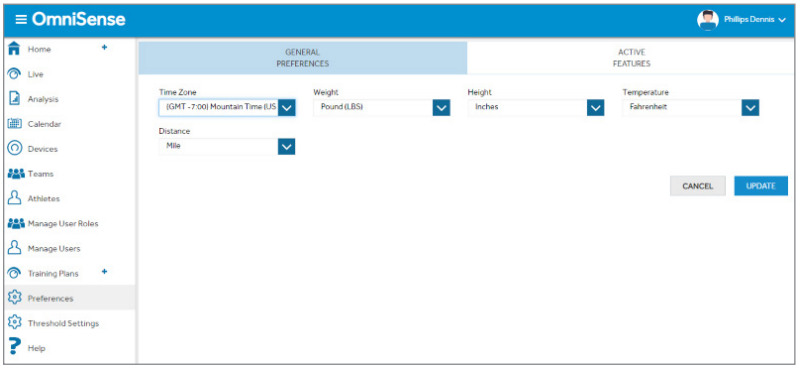


Item	Description
Competition Name	Add name
Date	Click in field to display calendar
Importance	0-10 scale
Results	Select Win/Lose from pull down
Performance Rating	0-10 scale
Notes	Add as appropriate

2. **Save** the Entry.

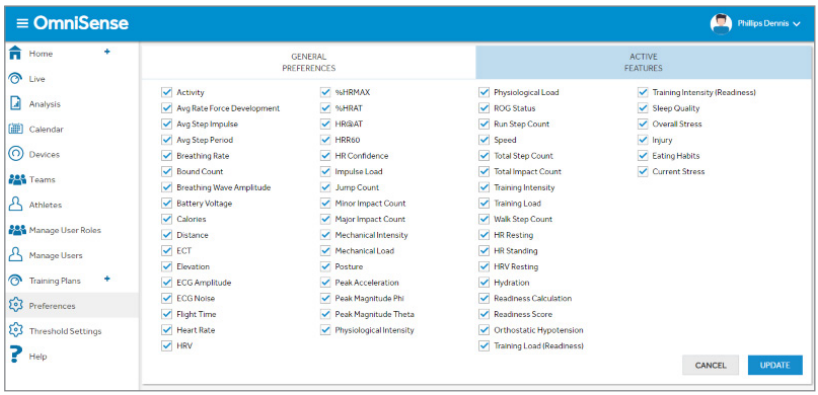
General Preferences

Access portal **Preferences** from the navigation pane. Only Admins and Coaches can see this option.



Item	Description
Time Zone	Select from list.
Weight	Select metric or imperial units.
Height	Select metric or imperial units.
Temperature	Select metric or imperial units.
Distance	Select metric or imperial units.

Active Features

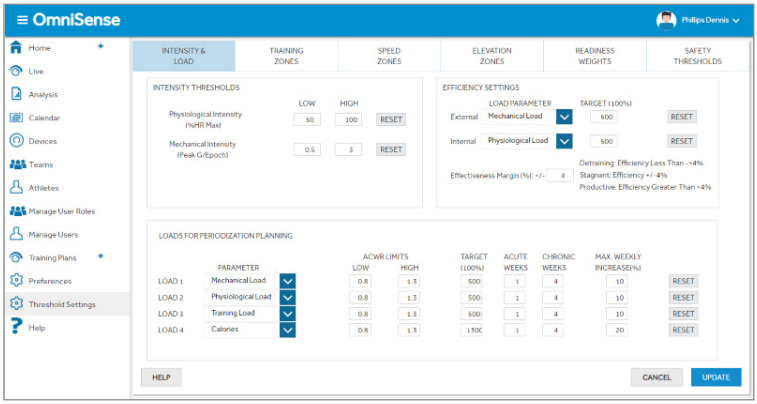


- Check those parameters which are to be viewable on the portal. Parameters not selected will not be available for **Reports** or **Dashboard** items.

Threshold Settings (1/8)

Intensity & Load

For all Threshold Settings, access from the navigation pane, and then select the tab from the top of the screen.



Intensity Thresholds

Item	Description
Physiological Intensity LOW/HIGH % HRmax	The intensity scale 1 - 10 is divided equally into 10 zones between the Low and Max thresholds. Below the lower limit e.g. below 50% of maximum heart rate, Intensity has no (null) value for calculations. Defaults are: Low: 50% HRmax Max: 100% HR max
Mechanical Intensity LOW/HIGH Peak g/Epoch	The intensity scale 1 - 10 is divided equally into 10 zones between the Low and Max thresholds. Below the lower limit, e.g. below 0.5g, Intensity has no (null) value for calculations. Defaults are: Low : 0.5g Max: 3.0g

- Any value above the max limit has an intensity of 10. This is the maximum value.
- Actual values are evaluated geometrically within the zone lower and upper limits, so decimal values for Intensity are displayed.
- The **Reset** buttons reset values to their defaults.
- Physiological & Mechanical Load values are the cumulative totals of the corresponding Intensities. See **Fitness Parameters** section.

Note

All Threshold Settings in the portal and local PC are synchronized whenever a PC instance of OmniSense™ is connected to the cloud. The most recent settings are considered valid.

Efficiency Settings

Training Efficiency is defined as the ratio of an External Load to an Internal Load expressed as a percentage for any given workout. If the trend of this value is monitored over time, it can give an indication as to whether the training is effective or not.

External Load

An External Load could be described as the 'effect' of training. The load parameter chosen is at the discretion of the coach, but it must measure some external parameter (i.e. not an athlete internal physiological parameter), such as:

- Exercise Time
- Impulse Load
- Major Impact Count
- Total Step Count
- Distance
- Mechanical Load
- Training Load

Internal Load

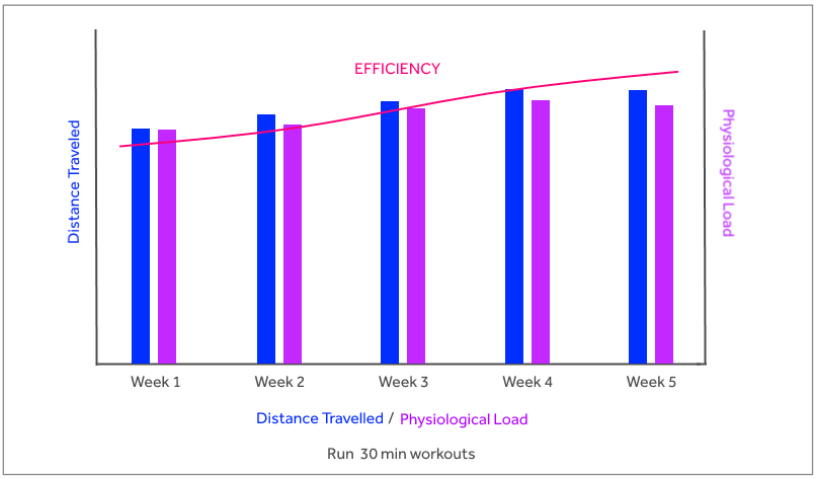
An Internal Load could be described as the 'cost' of training. It must measure some internal physiological parameter, such as:

- Physiological Load
- Calories burned
- Training Load

Training Efficiency

As an athlete's condition improves, then a fixed external load (such as distance covered running for 30 min) should steadily increase for a given internal load, or if the distance stays the same, it should require less effort.

The **ratio** of (Distance / Physiological Load) will vary each time the workout is measured.



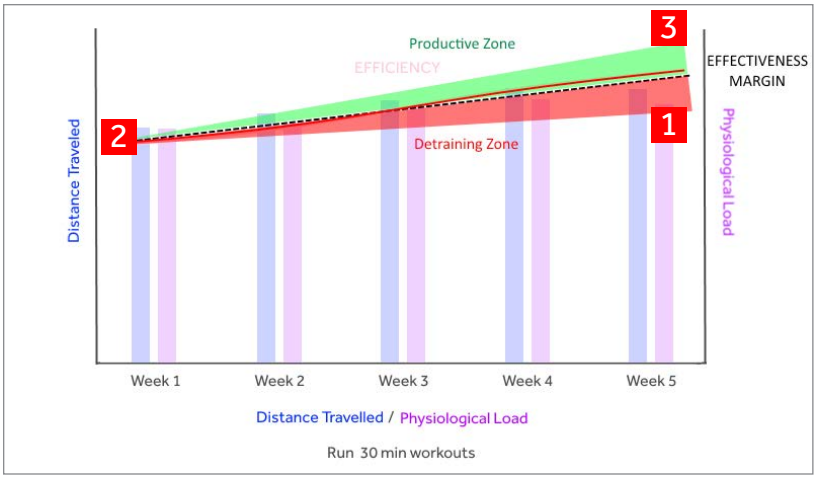
Indicative graph showing Efficiency as Ratio of an External to Internal Load parameter.

Threshold Settings (3/8)

Training Effect

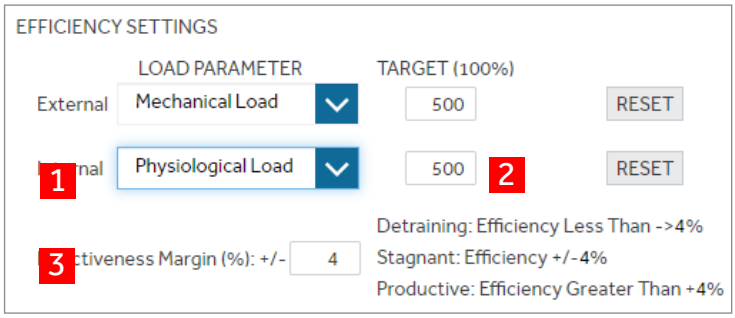
If Efficiency increases gradually over time, then the training is said to be **Productive** if above a configurable value. If it decreases, then **Detraining** is taking place.

The **Effectiveness Margin** setting allows a coach to determine what magnitude of percent increase is deemed to be productive.



#	Graph	Training Effect
1	Red Zone	Detraining - Efficiency less than Effectiveness Margin.
2	Black dash line	Stagnant - Efficiency equals Effectiveness Margin.
3	Green Zone	Productive - Efficiency greater than Effectiveness Margin.

- Coach experience will allow them to set an Effectiveness Margin which meets their training expectations. The default is 4%.

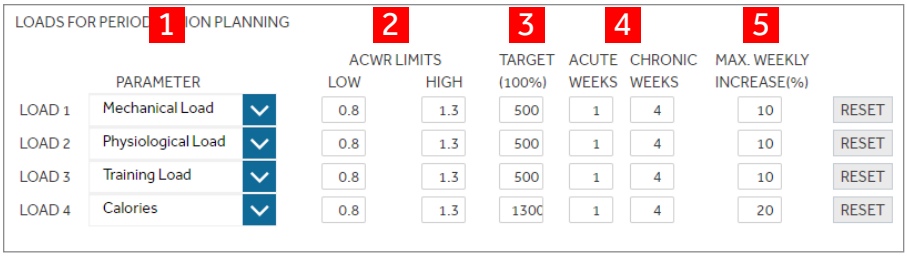


#	Training Effect
1	Select internal & external parameters for efficiency calculation.
2	Set the daily target for each.
3	Set the Effectiveness Margin.

Threshold Settings (4/8)

Loads for Periodization Planning

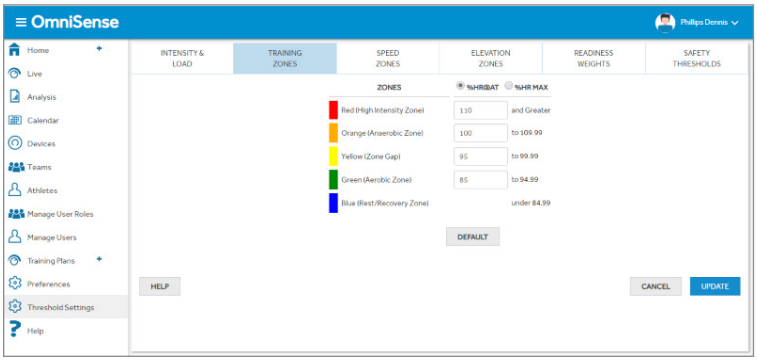
The loads for Periodization planning will be referred when creating a goal for a **Periodization Plan**.



#	Description
1	Select the parameters which be used as target-setting criteria when creating a goal for a Periodization Plan. The defaults are shown.
2	Set ACWR limits. Values which are outside these limits will be flagged by color when displayed in Periodization reports.
3	Set the daily target levels intended for athletes. These targets will be pushed to athlete mobile devices, where they can monitor their progress towards daily targets in the Thresholds screen of the app.
4	Specify the Acute/Chronic week values over which ACWR calculations will be made.
5	Set an upper limit for percentage weekly increase in load. Values above this level will be flagged in color when creating periodization plans.

Training Zones

Training Zones are used in the Workout side tab of OmniSense™ Live local version. The Workout tile background color shows the target training zone. Athlete Training BioGauges will display, and athletes should attempt to match the color of their Training BioGauge with that of the Workout tile.

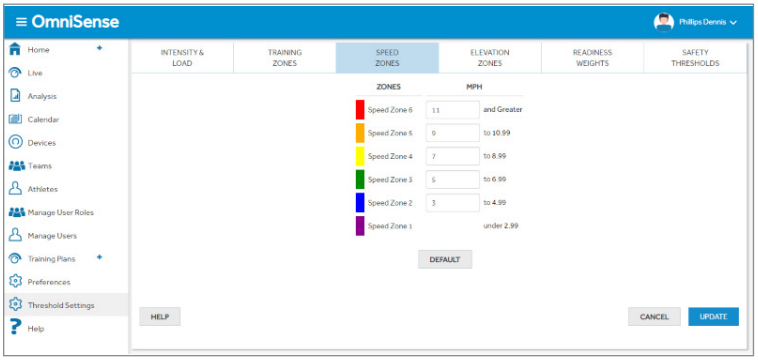


Item	Description
Zones	Set the lower limits for the zones. Adjacent upper limits will adjust accordingly.
%HR@AT / %HRmax	Choose the preferred Reference parameter for calculating zone limits.
Default	Button returns thresholds to default.

OmniSense™ Live showing the Green Zone on the Training BioGauges, and on the Workout tiles in the Workout tab on the right.

Speed Zones

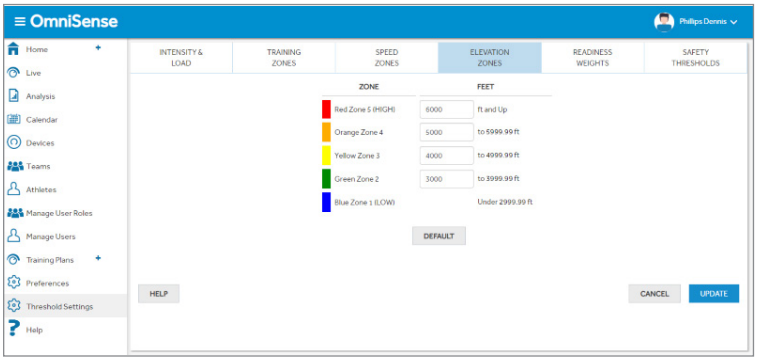
Speed Zones can be displayed as background color on any Over Time graph in Analysis on the portal, or local PC instance. They refer to speed as measured by GPS, so the subject must use a GPS device if data is gathered over LoRa, logged directly into the BioModule, or optionally the GPS on their mobile device if using the OmniSense™ Mobile application.



Item	Description
Zones	Set the lower limits for the zones. Adjacent upper limits will adjust accordingly.
Default	Button returns thresholds to default.

Elevation Zones

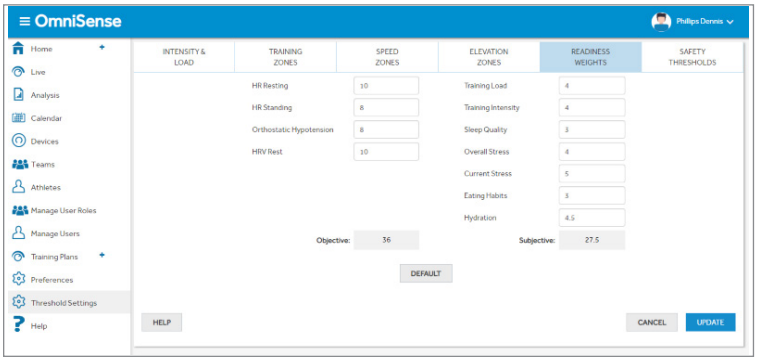
Elevation Zones can be displayed as background color on any Over Time graph in Analysis on the portal, or local PC instance. They refer to speed as measured by GPS, so the subject must use a GPS device if data is gathered over LoRa, logged directly into the BioModule, or optionally the GPS on their mobile device if using the OmniSense Mobile application.



Item	Description
Zones	Set the lower limits for the zones. Adjacent upper limits will adjust accordingly.
Default	Button returns thresholds to default.

Readiness Weights

Readiness Weights are applied when a subject completes the survey following an orthostatic hypotension readiness test.

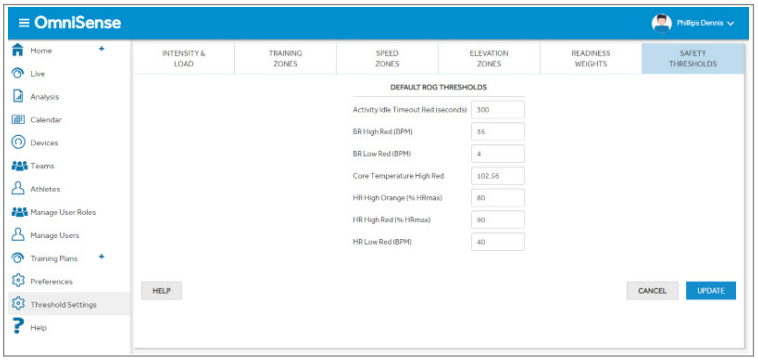


Item	Description
Objective Parameters	The four objective parameters are established from the test data.
Subjective Parameters	The seven subjective values are evaluated from the responses to the survey. Athletes score all responses on a 1 - 10 scale for user friendliness, but the weighting values can be used to prioritize the importance of one response against another.
Objective/Subjective Total Values	It is recommended that the objective value total should always exceed the subjective value total.
Default button	Button returns weightings to default.

Threshold Settings (8/8)

Safety Thresholds

Safety Thresholds determine the athlete's ROG status as displayed on their subject BioGauge. It can also be applied as a background color on Over Time graphs in Analysis.



Item	Description
Activity Idle Timeout Red	Normally disabled by de-selecting this parameter in OmniSense Local Live **Subject > Settings**, so it does not apply. If enabled, and the subject remains inactive for longer than this number of seconds, their status will report Red. This was intended for use with First Responders - specifically fire crew - where a prolonged period of inactivity might indicate they were incapacitated.
BR High Red	High breathing rate threshold.
BR Low Red	Low breathing threshold.
Core Temperature High Red	Estimated Core Temperature high threshold.
HR High Orange	High heart rate first threshold.
HR High Red	High heart rate second threshold.
HR Low Red	Low heart rate threshold.

Note

Any single parameter crossing a threshold will cause the athlete's ROG status to elevate to whichever is the highest state (red is highest).

Overview

The OmniSense™ Mobile application has both Android™* and iOS™* versions. Its use is limited to users who are registered with an OmniSense™ Cloud customer account.

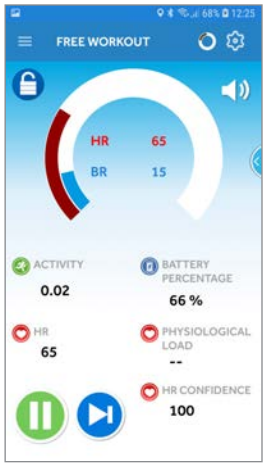
The app supports both the BioModule and the Zephyr™ HxM Smart device.

Both devices use **Bluetooth™* Low Energy** (BLE) to communicate with the mobile device.

Note

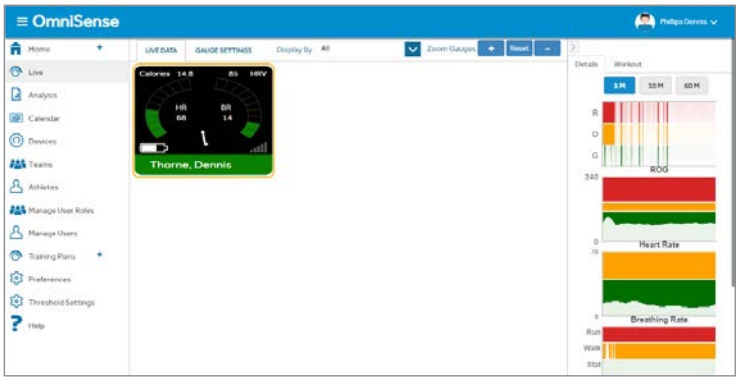
The BioModule has more parameters available than the HxM Smart - when configuring Workout screens, only those parameters the device can supply will be available.

- The user login for the app will be the same as that used for the web portal.
- Users register using the portal when they receive their user name, account number and an email requesting they validate their account. See the **OmniSense™ Web Portal** section.



- All workouts assigned via training plans are pushed to the mobile device automatically. The user will see them on their **Home** and **Calendar** screens.
- When used during a workout, the screen shows a BioGauge and a number of configurable fields.
- The app supports fitness and readiness tests, so that they can be performed remotely.
- Audio prompting and notifications (time, distance etc) can be enabled.

- While a session is active, a user with appropriate permissions can view the subject remotely using the web portal.



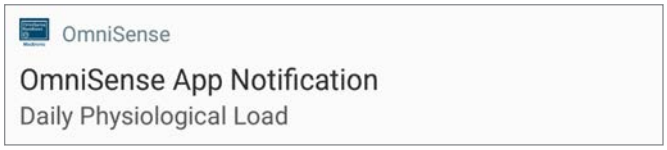
Notifications

Notification icons may appear on screen while the app is running, either next to the app icon, or at the top of the mobile device desktop.

Android™* desktop showing an active notification (left), and that OmniSense™ Mobile is running (right)

Notification at App icon

- A notification may inform that a daily load threshold has been met, or that an individual workout threshold or duration has been reached.

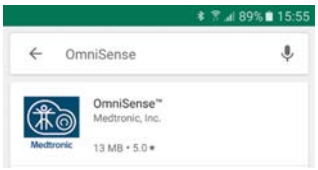


Install

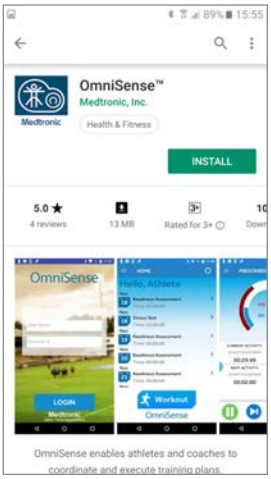
The Android™* app is available from Google Play™* Store; the iOS™* version from the Apple™* App Store™*

iOS™* App Store™* Android™* Play Store

1. Go to the appropriate app store and search for '**OmniSense™**'.



2. Install the application from the store as you would for any other application. The app will request access to location data.



3. A shortcut will be placed on the mobile device apps page.

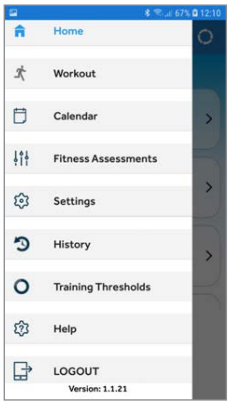
Note

Screen captures throughout these sections are taken from an Android™* mobile device unless otherwise stated. The screens are very similar when using an iOS™* device.

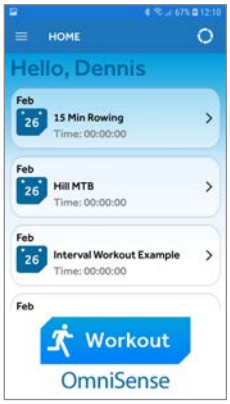
Overview (4/9)

Screens

These screen captures provide a brief overview of the application. Their operation is described in detail in the sections following.

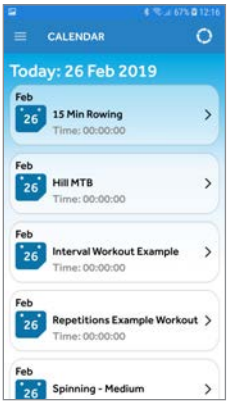


Menu

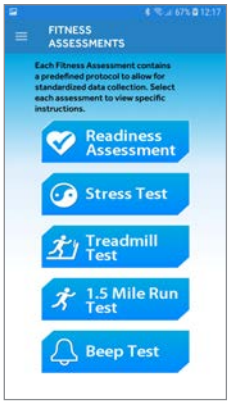


Home

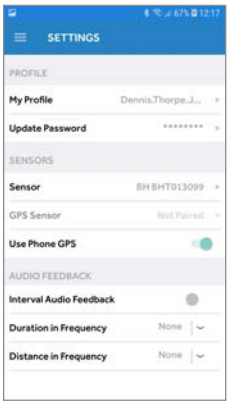
Workout



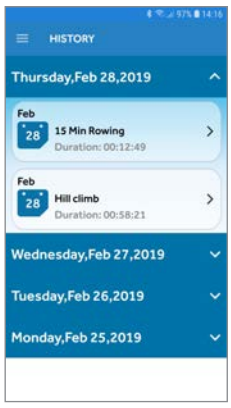
Calendar



Fitness Assessments



Settings

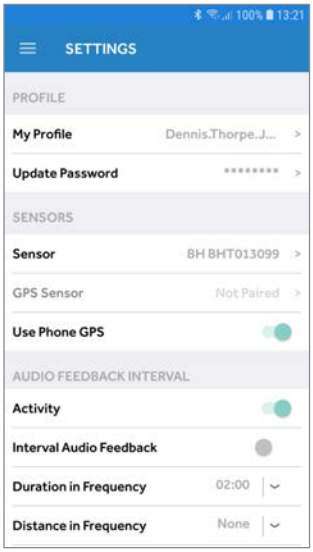


History

Training Thresholds

Settings

Access the Settings screen from the application menu

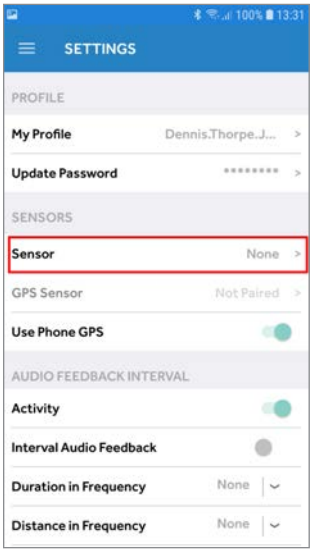


Item	Description
My Profile	Edit name/gender/date of birth/height/weight/ time zone/language
Update Password	Update password for application and portal
Sensor	Select BioModule/HxM Smart - see next section
GPS Sensor	Select GPS sensor
Use Phone GPS	Use phone, not external GPS. Default is On. If an external GPS is used, the BioModule must be configured to communicate with it. See OmniSense™ Tools > Zephyr™ Config Tool.
Activity	Receive audio notification of start/finish of activity
Interval Audio Feedback	Enable/disable audio interval feedback.
Duration in frequency	Set interval for audio announcements at regular time intervals. 15 seconds resolution.
Distance in frequency	Set interval for audio announcements at regular distance intervals. One eighth mile resolution.

Link Device

For both Android™* and iOS™* version of the application, devices are linked from within the application itself. No Bluetooth™* pairing process is necessary.

1. Power on your device. If an HxM Smart is not worn, it will power off automatically after ~ 30 seconds.
2. Access the **Sensor** screen from **Menu** > **Settings** > **Sensor**



3. The phone will automatically start scanning for and detect Zephyr™ devices. You can re-scan by tapping the circular arrow icon at top right.
4. Select a device by tapping it. A notification will display '**Updating sensor information in portal**'.

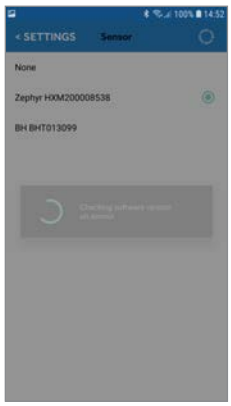
   When the sensor has been successfully linked and the portal updated, a second message ' **Sensor information updated in portal successfully**'. will display.
5. If your sensor is not detected initially, power cycle it and repeat the process.

   Once a sensor is linked, the process need not be repeated unless a different sensor is used.

HxM Firmware Upgrade

When the mobile application is used in conjunction with a Zephyr™ HxM Smart, it will check the device firmware version when it first connects.

If an update is available, you will be asked if you wish to upgrade. The process takes a few minutes. You will be notified if the HxM battery should be replaced before updating.



Automatic firmware check.

Available update notification.

Wear the sensor to keep it powered on.

Low battery notification. Change battery and restart the process.

Update in progress.

Update complete.

Note

Automatic firmware updates are available for the HxM Smart only, not the Zephyr™ BioModule.

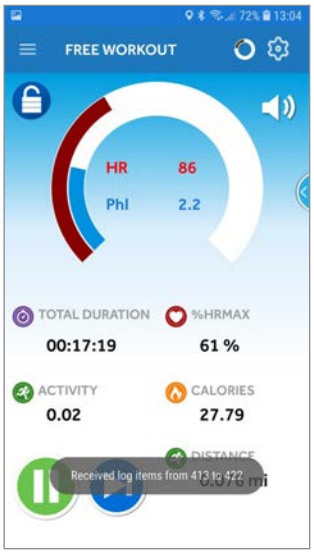
Caution

If a low battery notification is shown, replace the battery before updating the firmware. A battery failure during firmware update may break the device.

Store and Forward

The mobile applications store-and-forward HxM Smart data for user convenience. This is supported for the Zephyr™ HxM Smart, but not the BioModule.

- Open the mobile application and establish a connection with the HxM
- Start a Workout (Free, Scheduled or Fitness Assessment).
- Leave the application running on the mobile device, and complete the workout away from the device.
- On return to Bluetooth™* range with the HxM, the application will automatically download workout data.



- A series of messages will display as sections of the stored data are downloaded.
- The workout can continue within phone range if necessary.
- Terminate the workout when finished.

Parameters

The fields which display physiological parameters in Free & Prescribed Workouts and Fitness Assessments are all configurable. Just select and hold the field until a screen displays all parameters available.

A more restricted set of parameters is available from the HxM Smart.

Parameter	BM	HxM	Parameter	BM	HxM
% HR@AT	•	•	Jump Count	•	
% HR_{max}	•	•	Major Impact Count	•	
Activity	•	•	Mechanical Intensity	•	•
Avg Rate Force Development	•		Mechanical Load	•	•
Avg Step Impulse	•		Minor Impact Count	•	
Avg Step Period	•		Pace	•	•
Battery Percentage	•	•	Peak Acceleration	•	•
Bound Count	•		Peak Magnitude Phi	•	
Breathing Rate	•		Peak Magnitude Theta	•	
Breathing Wave Amplitude	•		Physiological Intensity	•	•
Cadence	•		Physiological Load	•	•
Calories	•	•	Posture	•	•
Distance	•	•	Run Step Count	•	
Distance Interval Distance	•	•	Speed	•	•
Distance Interval Time	•	•	Time Interval Distance	•	•
ECG Amplitude	•		Time Interval Time	•	•
ECG Noise	•		Time of Day	•	•
Est.Core. Temperature	•		Total Duration	•	•
Elevation	•		Total Impact Count	•	
Flight Time	•		Total Step Count	•	
Heart Rate	•	•	Training Intensity	•	•
HR Confidence	•		Training Load	•	•
HRV	•	•	Training Zone	•	•
Impulse Load	•		Walk Step Count	•	

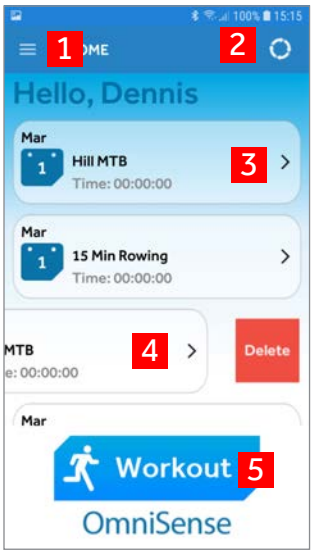
Note

The default configuration in the application is for all location and speed-related data to be calculated using location supplied from the mobile device's own internal GPS.

OMNISENSE™ MOBILE
Application Screens (1/12)

Home

The **Home** screen is the first screen displayed after logging in.

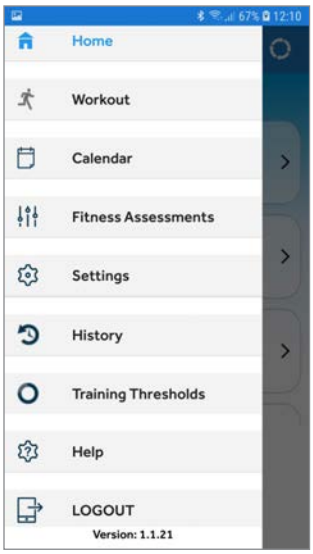


#	Description
1	The three-line 'hamburger' icon is present on most screens, and will display the application menu.
2	Refresh button - tap to update any new workouts sent from the portal.
3	Workouts assigned by a coach as part of a training plan. Tap on the notification to proceed to the workout. Swipe up or down to scroll through the complete list of workouts.
4	Swipe left on any workout to display a **Delete** button.
5	Tap the **Workout** button to proceed to a **Free Workout** screen. You can rename the workout before starting.

Application Screens (2/12)

Menu

Access the menu from any screen showing the three-line 'hamburger' icon at top left.



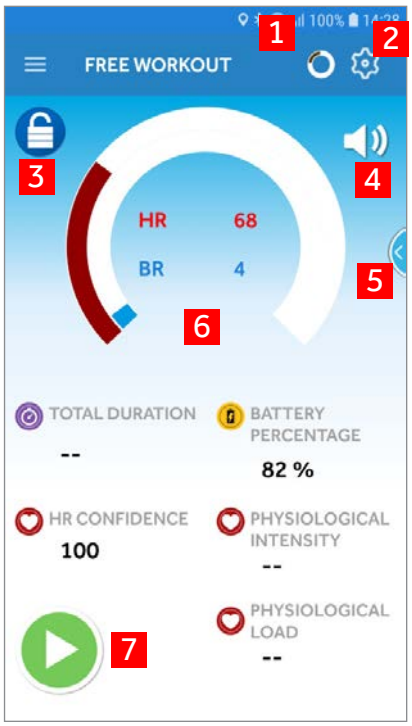
- Tap any menu item to proceed to the relevant screen.

Note

You may need to scroll the menu up to see the **LOGOUT** option, depending on mobile device screen size.

Free Workout

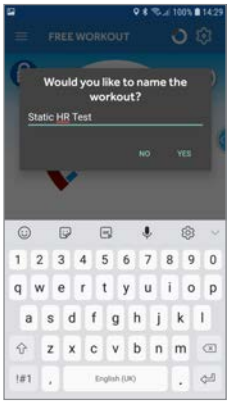
1. Tap the **Free Workout** icon on the **Home** screen to start a free workout.



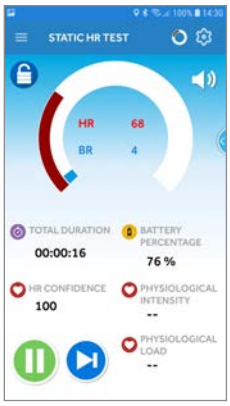
#	Description
1	Daily loads screen icon.
2	Settings screen icon.
3	Lock/unlock screen to prevent accidental input. A slider will appear at the bottom of the screen to unlock.
4	Turn on/off audio notifications.
5	Swipe the sweep scales left to show map screen.
6	All on-screen fields - including sweep scales - can be configured. Tap any to show a list of alternative parameters, before or during the workout.
7	Start/pause stop button.

Application Screens (4/12)

2. On starting a free workout, you are given the option of renaming it.



3. The start button will be replaced a pause button.



4. When the green pause button is used, it will be replaced by Restart/Stop buttons.

5. When the session is stopped, a summary data page will display.

Lock Screen

All active workout and fitness assessment screens have a lock screen option, to prevent accidental activation whilst carrying the device.

- Touch the lock icon at top left in the screen to activate.

- Slide the arrow from left to right as indicated, to unlock.

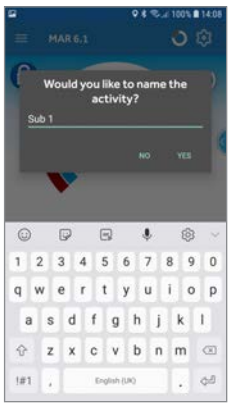
Markers & Subsessions

Markers and subsessions can be created during a free workout, so that if a subject changes activity, it can be noted.

No change will be visible in the mobile application, but the markers and subsessions will be visible when the data is displayed in the Analysis screen of the web portal.

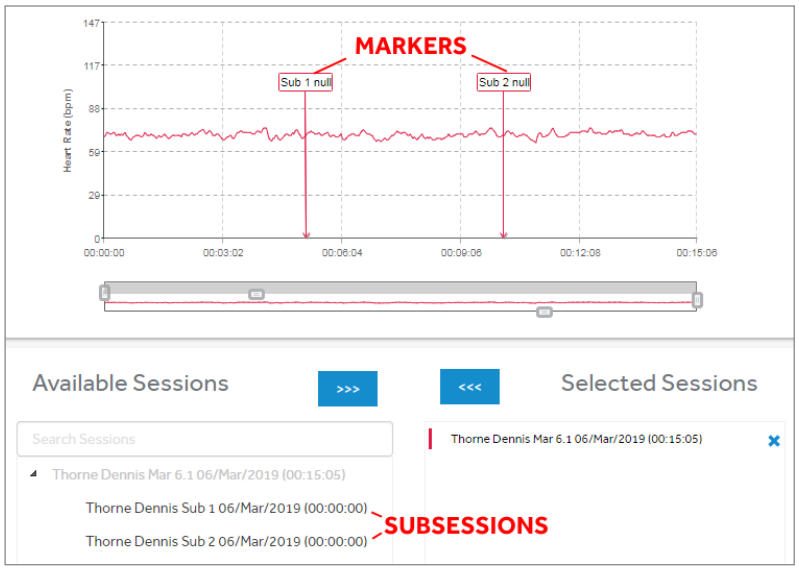
1. Tap the **Marker** button during the workout.

2. Label the marker and select **Yes** - this label can be viewed in Analysis in the portal, by any user with permission to view the data.



If **No** is selected, no marker or subsession is created. You can repeat the process within the same workout.

3. The Marker(s) and Subsession(s) will be visible in Analysis in the portal.

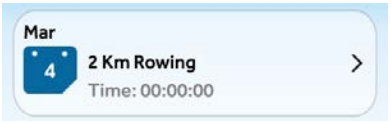


Prescribed Workout

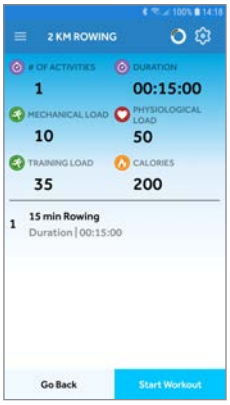
A prescribed work is one which has been created by a coach as part of a Training Plan and assigned to an individual or team.

It will appear on each athlete's **Home** screen when they log in to the mobile application, and also on their **Calendar** screen.

1. Tap on the workout tile to open it.

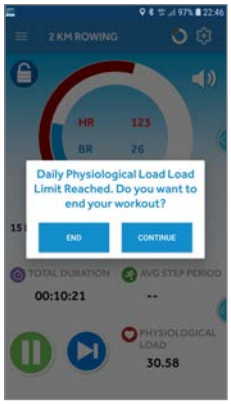


2. A summary screen of the workout will display. Select **Start Workout** to start.



3. All fields in the workout screen are configurable - see the previous Free Workout section.

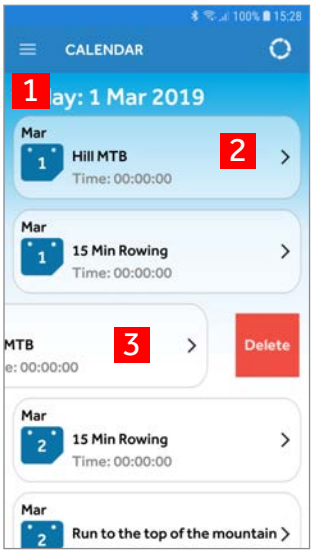
4. A notification may display to say that the workout, or daily, load limit has been reached. This need not be acknowledged - the workout continues by default. Select **End** to terminate the workout.



Application Screens (8/12)

Calendar

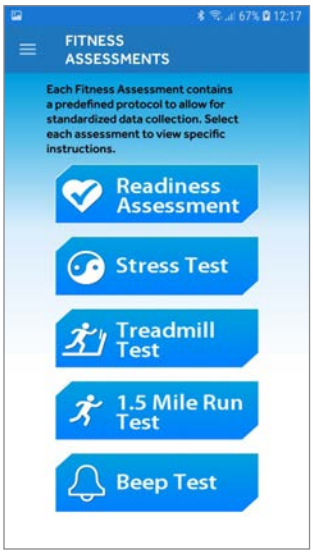
The **Calendar** screen is the first screen displayed after logging in.



#	Description
1	The three-line 'hamburger' icon is present on most screens, and will display the application menu.
2	If any workouts have been assigned by a coach as part of a training plan, they will appear here. Tap on the notification to proceed to the workout. Swipe up or down to scroll through the complete list of workouts.
3	Swipe a workout left to display the **Delete** button.

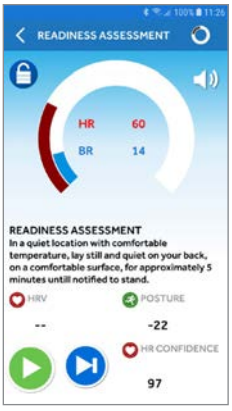
Fitness Assessments

Use this screen for a pre-configured Fitness Assessment.

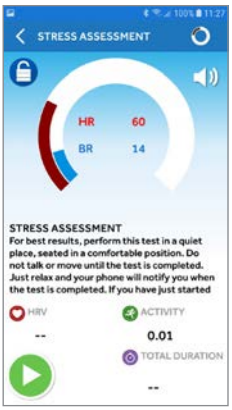


Tap any button to proceed to test instructions.

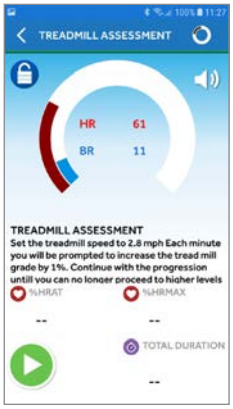
Assessment Screens



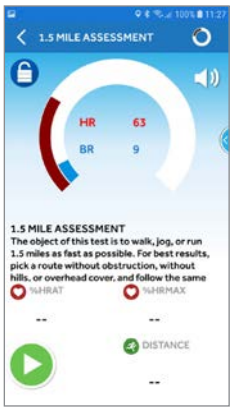
Readiness



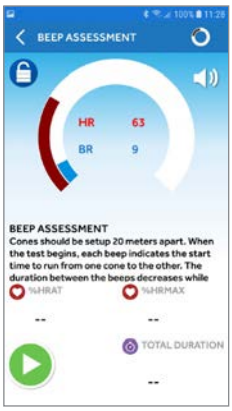
Stress



Treadmill



1.5 Mile Run

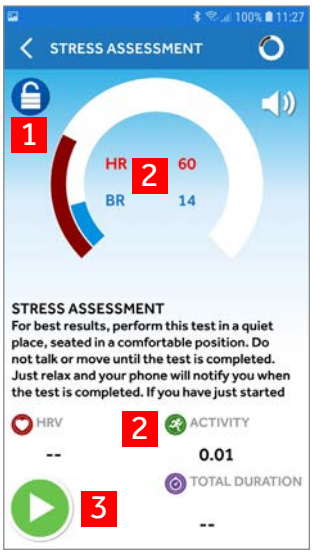


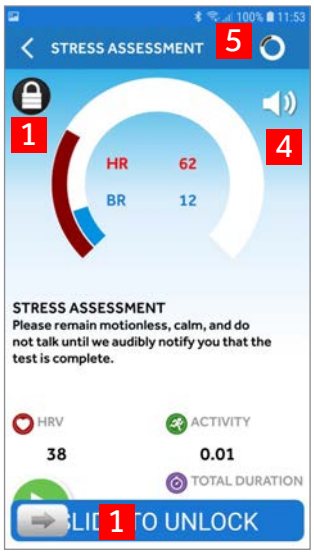
Beep

Application Screens (10/12)

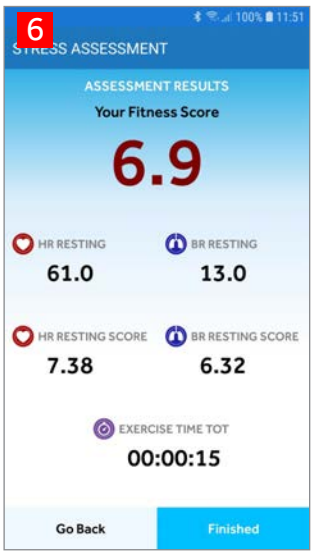
Perform Fitness Assessment

Operation of the assessment screens is similar for each test.





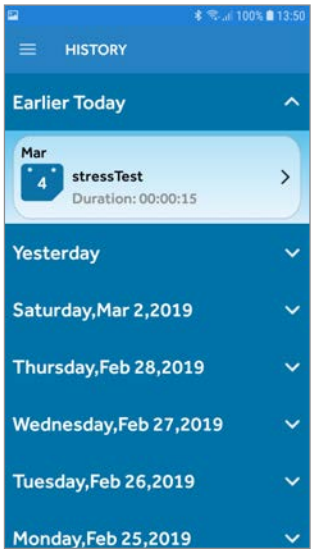
#	Description
1	Lock/unlock the screen to prevent accidental inputs. A slide will appear to unlock the screen, once locked.
2	Configurable fields (including sweep scales). Tap any to display a list of optional parameters.
3	Start/stop/pause button.
4	Turn audio off/on for audio instructions. In-test distance and time interval audio announcements can be enabled/disabled in the **Settings** screen.
5	Tap the circular progress icon to show current day's load threshold screens.
6	When the assessment is stopped, a screen of summary data for that test will display.

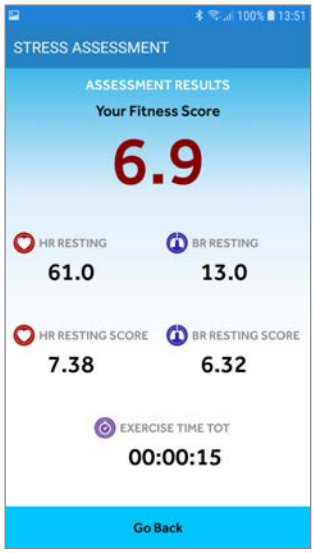


For more information, refer to the **Baseline Fitness Testing** section.

History

The history screen allows access to completed workout summaries.

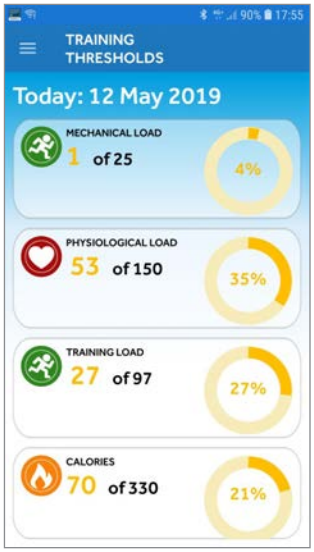




- Tap on any day to expand and show completed workouts for that day.
- Tap on any workout to display the **Assessment Results** or **Workout Summary** screen.

Training Thresholds

The Training Thresholds screen will show the percent achievement of load and calorie thresholds, if these have been prescribed by your coach when designing a **Training Plan**.



Thresholds screens showing loads achieved.

- Threshold target values and percent reached are reset at midnight.

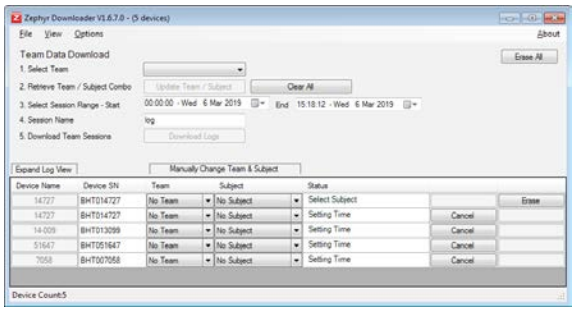
Overview

Zephyr™ Tools are available in two categories:

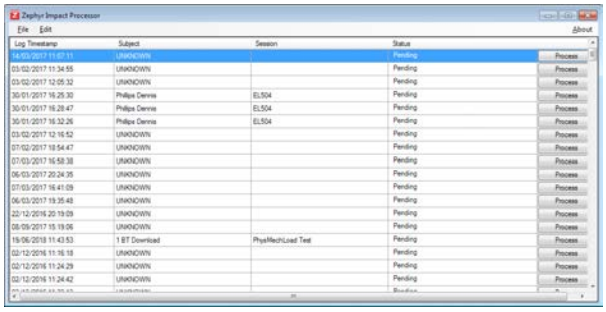
Embedded Tools

These tools are available as components of OmniSense™ Analysis. Their use is described in the appropriate section elsewhere in this manual.

- **Zephyr™ Downloader**, incorporating **Log Detail** download tool - see the Log Data Section.



- **Impact Processor Tool** - see Analysis Impact Processing section.



Overview (2/2)

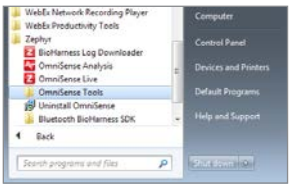
Standalone Tools

These tools are installed as part of an OmniSense™ Local PC installation, but they are not accessed from within OmniSense™ Live or OmniSense™ Analysis.

In a standard install, their default location is

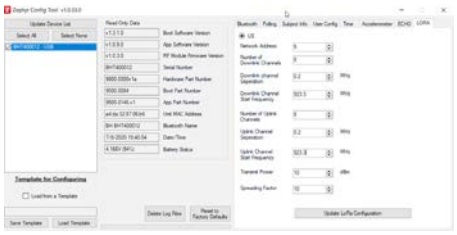
C:\Program Files (x86)\Zephyr\OmniSense\Tools

or they can be accessed from the Start Menu in the **All Programs** list, under the **Zephyr™** node.

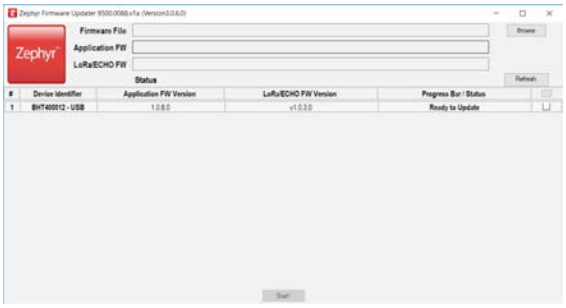


Either route will take you to the directory containing the tool .exe files. Double click on an .exe file to open the tool. The two relevant files are:

- Zephyr™ Config Tool - **Zephyr™ Config Tool.exe**



- BioModule Firmware Updater Tool - **ZUSBUpdater.exe**



Both of the embedded tools above are also located in this folder, but they are accessed from the OmniSense™ Analysis toolbar.

In addition, two additional tools are described. These can be downloaded for free from the Zephyr™ website.

Note

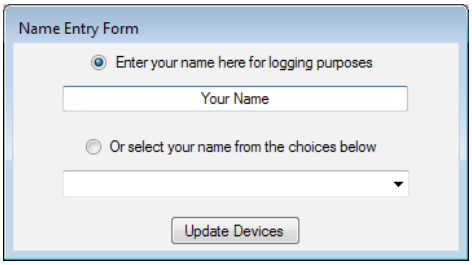
It may be helpful to add shortcuts to these tools to the computer desktop, if they are going to be used regularly.

Zephyr™ Config Tool (1/9)

Operation

1. Connect the BioModule(s) to a PC in a single or multi device cradle.

2. Double-click the **Zephyr™ Config Tool.exe** file to open. An initial **Name Entry Form** will display.



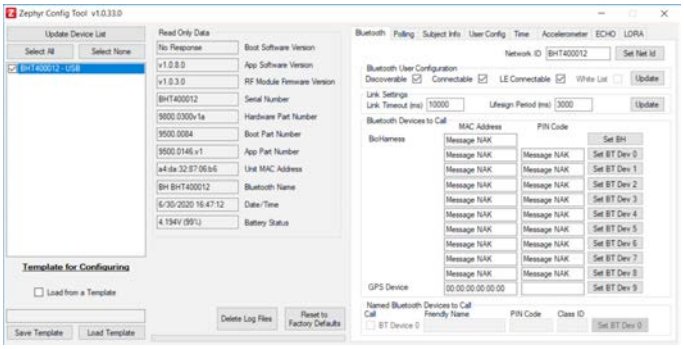
3. Enter your name, or retrieve it using the lower pull-down list. It is remembered once used. This is NOT a security check. The tool maintains a record of who has used it, and which BioModules have been configured. This is kept in a .csv file located at

C:\ProgramData\Zephyr\ZephyrDeviceUpdateLog.csv

14/06/2018 23:07	1	UserConfi	Denr	BHT01309	v1.3.1.0	v1.6.16.0	v3.208_05	9800.0189	9500.008	9500.0085	00:17:e9:c0:88:3	BH_BHT013099	4.2V_(100	BHT01309
29/07/2018 22:11	1	UserConfi	Denr	BHT01309	v1.3.1.0	v1.6.16.0	v3.208_05	9800.0189	9500.008	9500.0085	00:17:e9:c0:88:3	BH_BHT013099	4.2V_(100	BHT01309
29/07/2018 22:11	1	UserConfi	Denr	BHT01309	v1.3.1.0	v1.6.16.0	v3.208_05	9800.0189	9500.008	9500.0085	00:17:e9:c0:88:3	BH_BHT013099	4.2V_(100	BHT01309
05/09/2018 22:22	1	UserConfi	Denr	BHT01309	v1.3.1.0	v1.6.23.0	v3.208_05	9800.0189	9500.008	9500.0085	00:17:e9:c0:88:3	BH_BHT013099	4.2V_(100	BHT01309
16/10/2018 20:52	1	UserConfi	Denr	BHT01309	v1.3.1.0	v1.7.2.0	v3.208_05	9800.0189	9500.008	9500.0085	00:17:e9:c0:88:3	BH_BHT013099	4.185V_(9	BHT01309
16/10/2018 21:17	1	UserConfi	Denr	BHT01309	v1.3.1.0	v1.7.2.0	v3.208_05	9800.0189	9500.008	9500.0085	00:17:e9:c0:88:3	BH_BHT013099	4.199V_(9	BHT01309
23/10/2018 23:16	1	UserConfi	Denr	BHT01309	v1.3.1.0	v1.7.2.0	v3.208_05	9800.0189	9500.008	9500.0085	00:17:e9:c0:88:3	BH_BHT013099	4.2V_(100	BHT01309

This allows a basic audit of all device changes to be maintained.

4. Enter/select a name, click **Update Devices** and the tool will open.



If multiple devices are detected, they will display, but none are selected in the capture above, so no data shows in the tool.