ONIRIC RECOVERY LAB WHITE PAPER — EXECUTIVE SUMMARY (V1.0.EN)

Recovery Profile & Recovery Tracking:

Methodology for integrating digital screening, sports context and longitudinal monitoring into the interpretation of recovery

Core documentation for partners, health professionals and sports practitioners
Authorship: Oniric Recovery Lab | Technical basis: scientific literature, operational methodology and ONIRIC-RP-0.1 product logic.

■ DOCUMENT PURPOSE

To summarise the methodological and operational basis of Oniric Recovery Lab's v1.0 White Paper. It explains how Recovery Profile and Recovery Tracking integrate self-reported information, habits, load context, available wearable data and progression over time to guide a proportionate next step in athlete recovery.

1. The Blind Spot: From Dispersed Data to a Structured Interpretation

Modern sport accumulates data on training load, sleep, HRV, heart rate, fatigue, pain and perceived signals. The challenge is not to add metrics, but to understand which ones matter, how they relate and when an isolated change becomes a pattern that deserves attention.

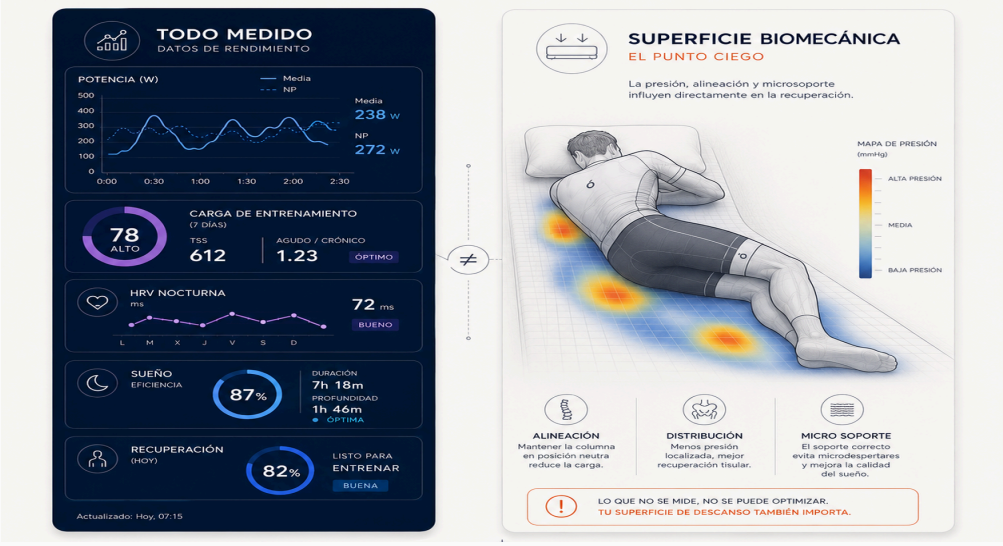


FIGURE 1: THE BLIND SPOT OF THE SLEEP SURFACE

Conceptual representation of the contrast between the sports variables commonly monitored and the mechanical body-surface interaction, which normally remains unmeasured.

Oniric Recovery Lab addresses this gap with two complementary layers: Recovery Profile, as a structured initial snapshot of perceived recovery and the athlete's context; and Recovery Tracking, as longitudinal monitoring of its progression.
One night can be noise. A recurring signal starts to become a pattern.

2. Recovery Profile: The Initial Snapshot of Recovery

Recovery Profile is a digital screening and contextualisation tool. In a few minutes, it organises relevant information about perceived rest, recovery, load, bodily response, habits and the perceived relationship with the sleep surface.
Its output is the Recovery Snapshot: a synthesis of strengths, opportunities and priorities that formulates an initial hypothesis, not an automatic product recommendation.
The five Snapshot dimensions are always interpreted together:

- Sleep opportunity — whether the amount and actual opportunity for rest appear compatible with the stated situation.
- Perceived recovery — how the athlete rates their recovery and readiness to face the day or training.
- Perceived sleep-surface adaptation — firmness, comfort, temperature and other signals that may justify reviewing the environment or investigating body-surface interaction more deeply.
- Waking bodily response — stiffness, discomfort and bodily sensations, interpreted in light of frequency, progression and history.
- Load–recovery balance — consistencies or mismatches between perceived recovery and the sports context.

The five dimensions do not compete with one another. Together, they build context.

3. From Data to a Working Hypothesis

The system flow is: data → signals → patterns → hypothesis → next step. The useful output is not an isolated number, but a decision proportionate to the available information.
The Recovery Score (0–100) and the scores for each dimension are internal operational indices that help organise and prioritise interpretation. They do not represent a percentage of physiological recovery, predict injury or amount to a diagnosis.
Artificial intelligence acts as a synthesis and explanation layer: it connects information already available within explicit rules and limits. It does not measure non-existent variables, diagnose, turn correlations into causation or force a commercial recommendation.
Depending on the pattern, the next step may be:

- Improve habits or the environment — when schedules, sleep opportunity, microclimate or other factors external to the surface carry more weight.
- Start or continue Tracking — when the initial snapshot needs confirmation before intervening.

- Activate Pressure Mapping — when the hypothesis about body-surface interaction is reasonable and consistent.
- Consult a professional — when symptoms or signals require specific assessment.

4. Recovery Tracking: From Snapshot to Progression

Recovery Tracking adds the time dimension to the Snapshot. It combines brief morning logs with training information and, where connectivity and comparability allow, physiological data from wearables.

Variables may include perceived recovery, readiness to train, sleep duration, fatigue, training load or the presence of a session, contextual comments, HRV and resting heart rate.

An essential methodological rule is not to automatically fill gaps: a day without a record remains missing data; a session awaiting confirmation is not artificially turned into zero load.

The first operational monitoring unit is a 7–day window. It is not a universal clinical threshold: it is a simple scale for recognising repetition, frequency and direction without reacting to a single morning.

Day → signal | 7 days → pattern | several windows → trend

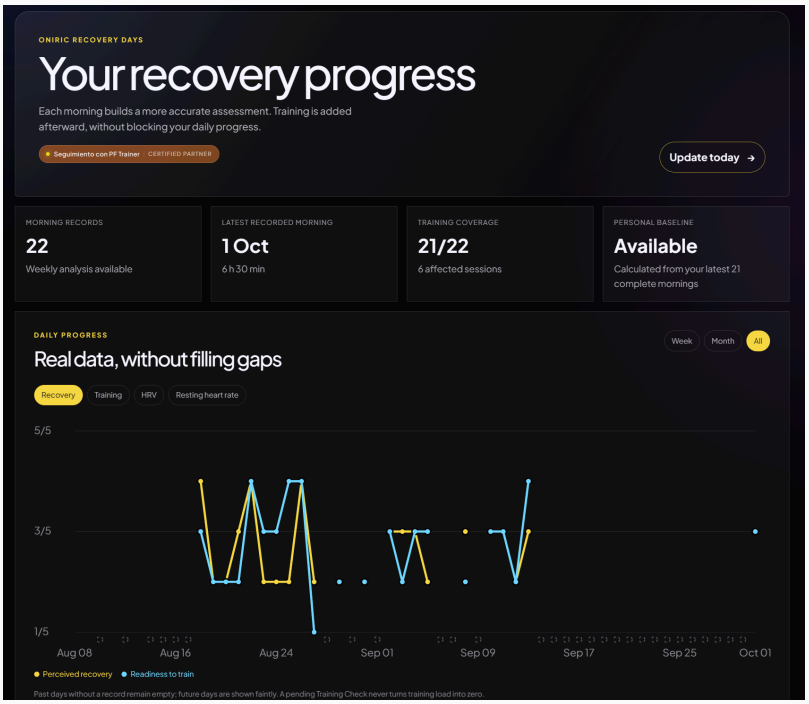


FIGURE 2. RECOVERY TRACKING: DAILY PROGRESSION OF PERCEIVED RECOVERY AND READINESS TO TRAIN.

Conceptual representation of the contrast between the sports variables commonly monitored and the mechanical body-surface interaction, which normally remains unmeasured.

5. Weekly Interpretation, Patterns and Personal Baselines

Weekly interpretation is not limited to calculating averages. It observes which signals persist, how often they occur, whether they improve, worsen or remain stable, and whether they coincide with changes in load, readiness to train or perceived recovery.

The value lies in relating persistence, frequency, direction, impact, consistency across sources and response after an intervention. None of these elements proves causation on its own; together, they help prioritise what deserves attention.

With continuity and comparable sources, the system can build personal references. A baseline is not a universal normal value: it is an individual reference. In the current implementation, certain physiological baselines activate after 28 mornings and at least 21 comparable readings from the same source and metric; this is an operational, versionable and non-clinical rule.

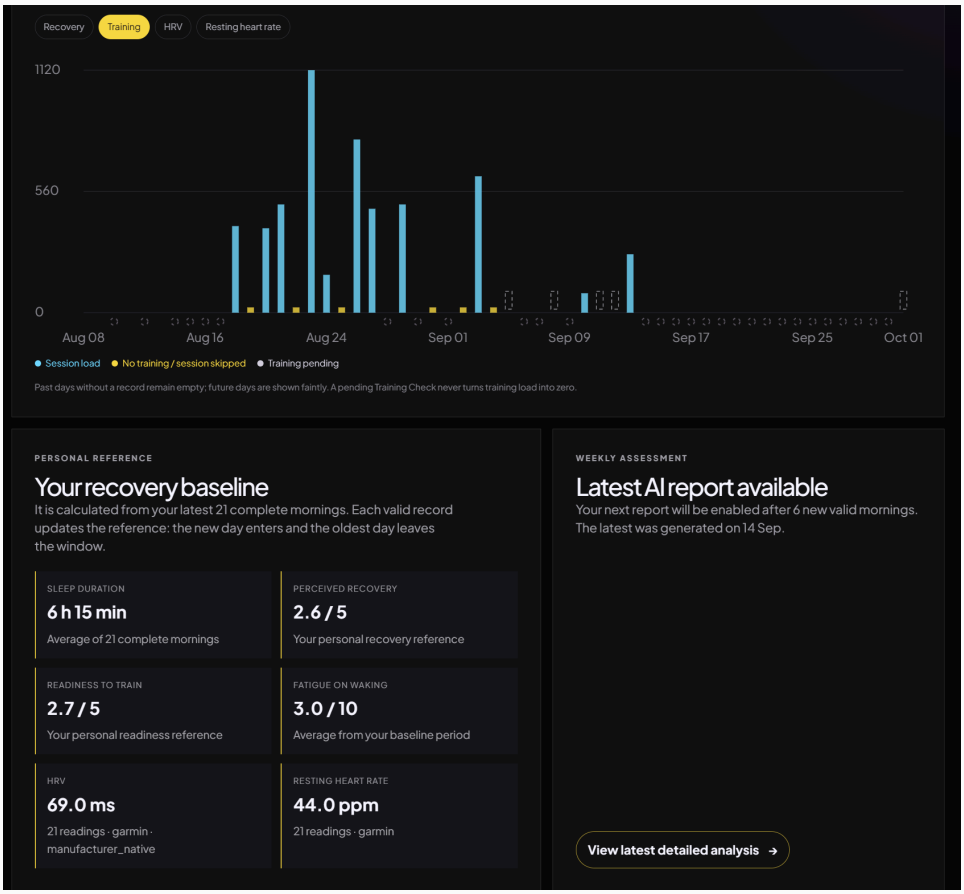


FIG 3. TRAINING LOAD, COVERAGE AND CONSTRUCTION OF PHYSIOLOGICAL BASELINES.

Conceptual representation of the contrast between the sports variables commonly monitored and the mechanical body-surface interaction, which normally remains unmeasured.

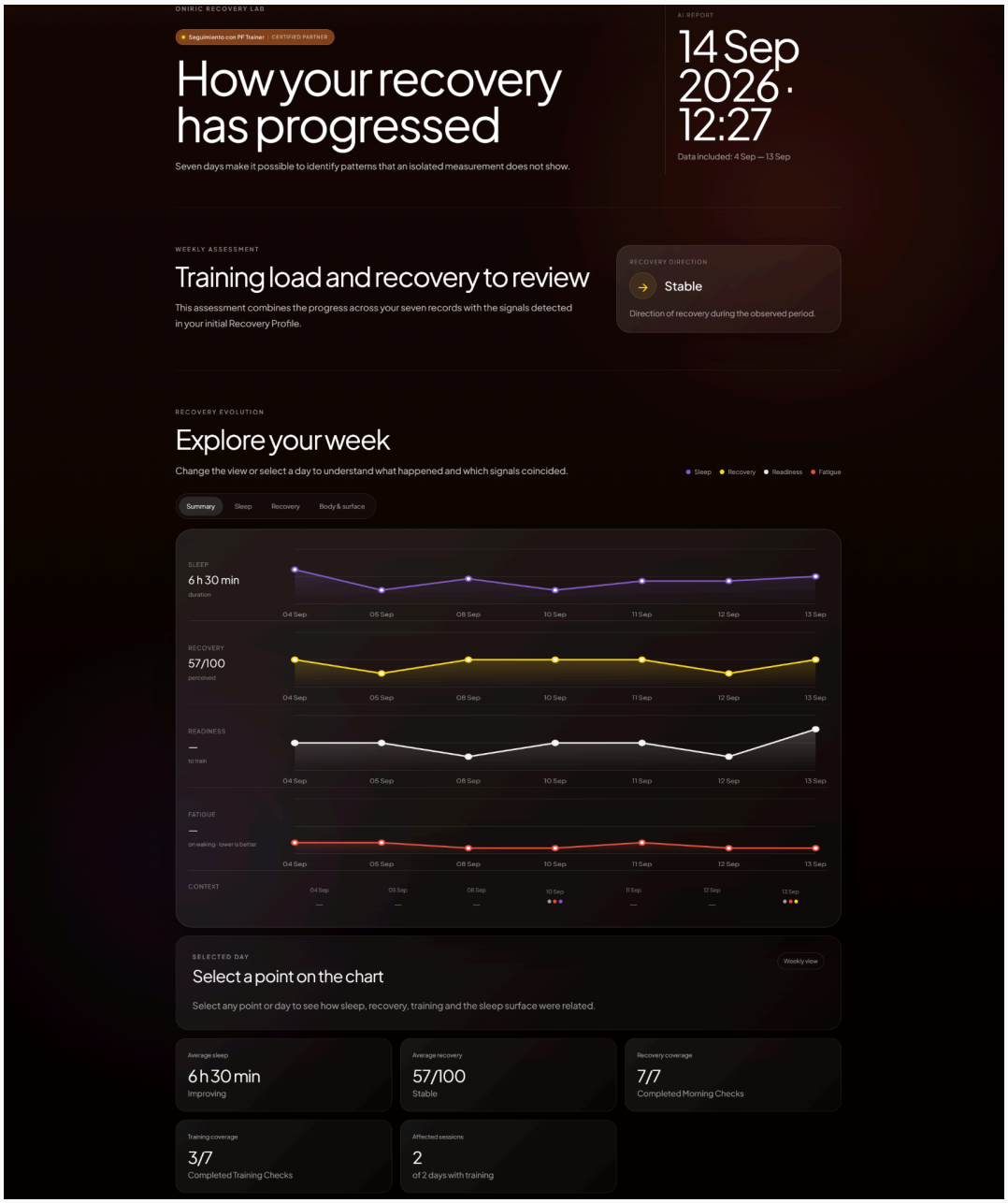


FIGURE 4. WEEKLY INTERPRETATION: PROGRESSION, CONFIRMED SIGNALS AND NEXT STEP.

Conceptual representation of the contrast between the sports variables commonly monitored and the mechanical body-surface interaction, which normally remains unmeasured.

6. The Six-Stage Oniric Decision Model

Recovery Profile and Recovery Tracking form a decision cycle that reopens when the athlete, load, symptoms or recovery changes:

- SCREEN — collect and organise signals, habits, sensations and context.
- BASELINE — synthesise the starting point and formulate an initial hypothesis.
- TRACK — observe real progression without imputing missing days.
- INTERPRET — identify persistence, direction, consistency and confirmed signals.
- ACT — maintain, modify habits or the environment, review with a professional, adjust the sports context or activate Pressure Mapping where appropriate.
- FOLLOW — reassess when a change justifies observing again.

7. Proportionate Decisions: When to Measure, When to Wait and When to Refer

Pressure Mapping is not the mandatory output of Recovery Profile. It is considered when the combined information makes it reasonable to objectively study body-surface interaction: for example, when recurring waking discomfort, persistent signals of adaptation to the surface, relevant postural predominance and a pattern that cannot be adequately explained by habits or load converge.

Choosing not to measure yet can also be a good decision. If the main issue appears to be insufficient sleep opportunity, irregular schedules, thermal environment, disproportionate load or habits that can clearly be improved, the proportionate option is to address those factors first. If the data are scarce or variable, continuing Tracking may be preferable.

When intense or persistent pain, recent injury, loss of strength, sensory alterations, neurological symptoms or significant mobility limitations appear, assessment by a healthcare professional is the priority. Oniric structures the conversation; it does not replace clinical history, examination, diagnosis or medical follow-up.

8. Recovery Interpreted in Motion

Weight, sport discipline, load, discomfort, sleep, readiness to train and response to interventions change over time. Therefore, personalisation and monitoring should not be understood as static decisions.

Recovery Profile and Recovery Tracking make it possible to maintain source traceability, recognise relevant changes and decide when to observe, when to intervene, when to measure the surface and when to refer. The rules, thresholds, windows and criteria of the ONIRIC-RP-0.1 protocol are operational and should be validated and recalibrated with in-house data.

■ FINAL SYNTHESIS: "RECOVERY INTELLIGENCE IS NOT A SCORE. IT IS A DECISION PROCESS."

Oniric Recovery Lab integrates perceived signals, habits, load, available physiological data, progression over time and decision rules to improve the quality of the conversation between athlete, partner and sleep system.

View full document:
White Paper Recovery Profile & Recovery Tracking -Oniric Recovery Lab- v1.0

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