



STRENGTH TRAINING STARTS WITH DATA

**FROM MAXIMAL FORCE TO ENDURANCE
A MULTI-TECHNOLOGY APPROACH**

MICRO PILLS



STRENGTH IS NOT JUST LIFTING HEAVY

In sport, **strength is not a single quality**. It determines every technical gesture: jumping, sprinting, changing direction.

Training it effectively means understanding **how much** force to apply, **how fast**, and for **how long**.

And to train it effectively, you need to measure it.





THREE EXPRESSIONS OF STRENGTH

1. MAXIMAL STRENGTH
the highest force the muscle can voluntarily generate.

2. EXPLOSIVE STRENGTH
the ability to generate force rapidly

3. STRENGTH ENDURANCE
the ability to sustain repeated efforts over time

Each expression requires a dedicated training approach and a dedicated measurement tool.



MAXIMAL STRENGTH: EVERY REP HAS A STORY

Traditional load prescription is static.
Velocity-Based Training reads the athlete's real readiness,
rep by rep.

GYKOPRO MEASURES

- Mean velocity + peak velocity [m/s]
- Force and power output per repetition
- Velocity loss across the set

**Same load, different velocity =
different training stimulus**





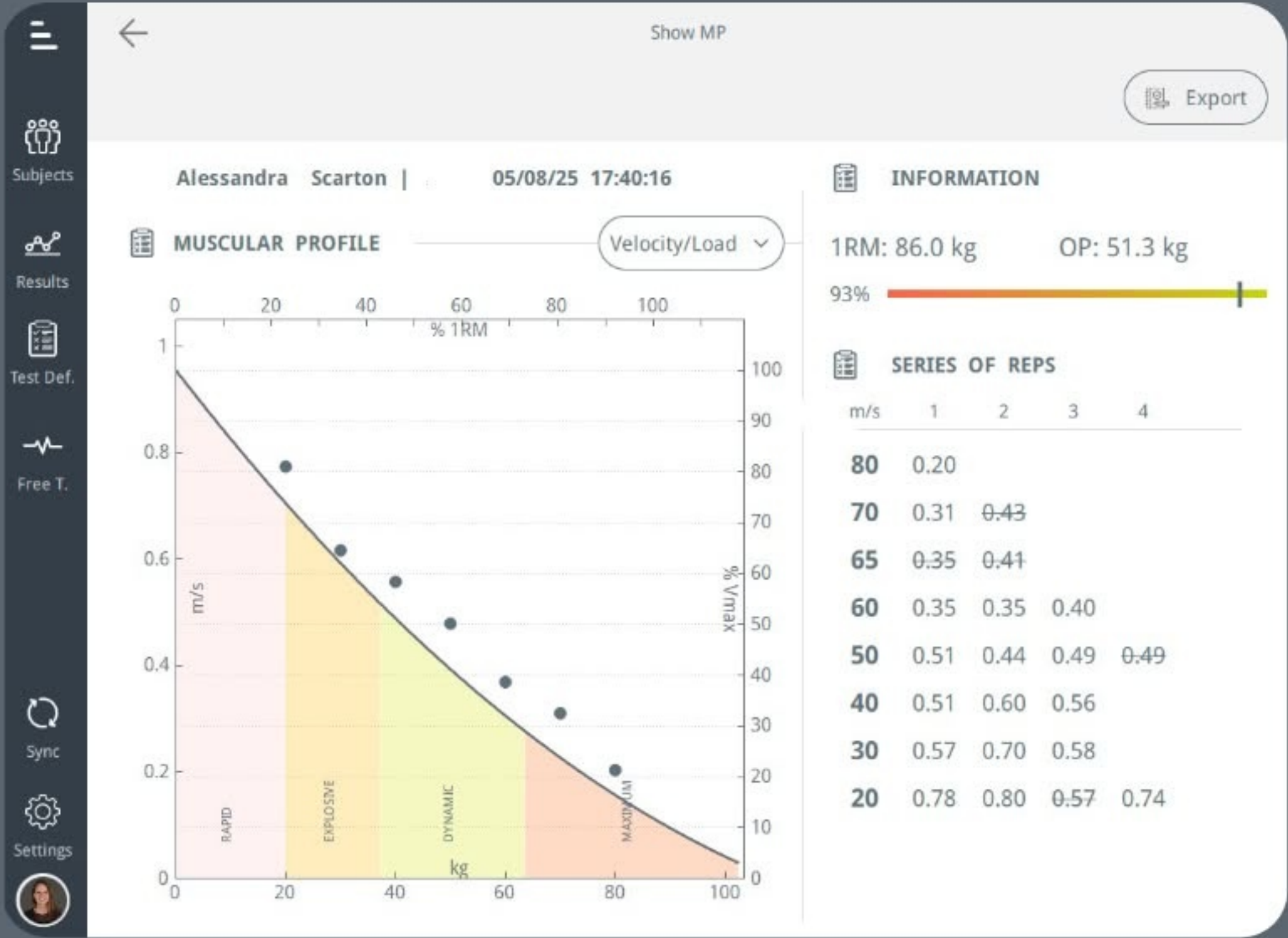
VELOCITY ZONES: TRAIN THE RIGHT QUALITY

Different velocity ranges target different strength qualities.

Velocity [m/s]	Training Zone
> 1.0	Pure velocity
0.8 - 1.0	Speed-strength
0.6 - 0.8	Power
0.4 - 0.6	Strength-speed
< 0.4	Maximal strength

GykoPro tells you exactly where you are, and where you should be.







EXPLOSIVE STRENGTH HOW FAST CAN YOU APPLY FORCE?

Vertical jumps are the gold standard for explosive strength assessment and monitoring.

OPTOJUMP + GYKOPRO MEASURE

- Reactive Strength Index (RSI) = flight time / contact time
- Concentric and eccentric phase duration
- Power output per jump

**Short contact time + long flight time
= high neuromuscular efficiency**



WHAT YOUR JUMPS REVEAL

Numbers alone are not enough, interpretation makes the difference.

FLIGHT TIME

→ explosive power output

CONTACT TIME

→ reactivity and neuromuscular coordination

ECCENTRIC PHASE

→ stretch-shortening cycle efficiency

POWER DECAY across reps

→ neuromuscular fatigue accumulation

A drop in power between repetitions is not failure. It is information. Use it to adjust the training load.



CAN YOU SUSTAIN YOUR POWER?

Strength endurance is the ability to maintain power output under repeated efforts.

OPTOJUMP – Repeated jumps

- Power density decay across the set
- Landing area progression as fatigue marker

GYKOPRO – Resistance training

- Velocity and power output monitored rep by rep
- Force decrement across the set as real-time fatigue index

The athlete who maintains velocity and power under fatigue has a decisive competitive advantage.



ONE ATHLETE. TWO TOOLS. FULL PICTURE.

STRENGTH QUALITY	TOOL	KEY PARAMETER
MAXIMAL	GykoPro	Velocity loss
EXPLOSIVE	OptoJump + GykoPro	Power output, RSI
ENDURANCE	OptoJump + GykoPro	Power decay, fatigue index

Data-driven training means personalizing load, recovery and intensity based on what the athlete truly expresses, not what you assume.



SUMMARY

DATA-DRIVEN STRENGTH TRAINING PROVIDES:

- + OBJECTIVE LOAD PRESCRIPTION:
velocity tells you the real intensity
- + MULTI-QUALITY ASSESSMENT:
maximal, explosive and endurance in one session
- + REAL-TIME FATIGUE MONITORING:
adjust before it becomes overtraining
- + PERSONALIZED TRAINING:
based on what the athlete actually expresses

**MEASURE EVERY REP.
TRAIN EVERY QUALITY.
NEVER GUESS AGAIN.**