

THE WINNING CONCEPT

# REACH YOUR FULL POTENTIAL

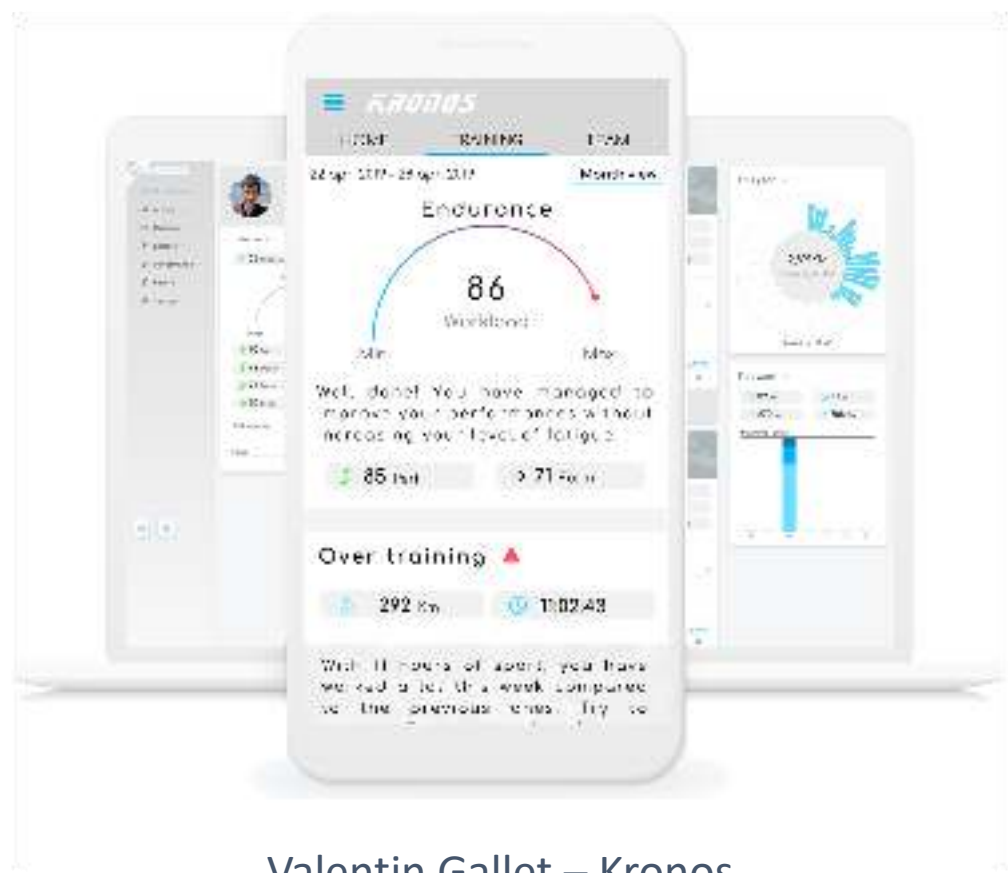
Your all-in-one solution to improve each aspect of your riders' performance, whether in training or racing. Make every watt count!



**TRAINING MONITORING**  
Track your rider progress, shape and conditions



**MANAGE YOUR TEAM**  
Get in touch with your riders daily



**PACING STRATEGY**  
Set the optimal time trial strategy for your team



**OPTIMAL EQUIPMENT**  
Measure and improve your aerodynamics

Valentin Gallet – Kronos  
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ATHLETE PERFORMANCE

PHYSICAL CAPACITIES

The athlete performance can be expressed as the power profile or MMPC

1

PACE STRATEGY

How to perform an ITT or TTT

3

WORK ZONES

For perfect trainings & workouts



TRAINING PLAN

To maximize performance

2

WORKLOAD

To quantify the volume & intensity

4



OUR GOAL

## PERFORMANCE ESTIMATION

Developing models capable of predicting the power profile without requiring any specific test



### Day-to-day estimation

To know the current rider capacities



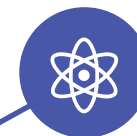
### Future prediction

What we can expect in the next few weeks



### No max effort required

No need of specific test interfering on the training



### Cutting-edge techniques

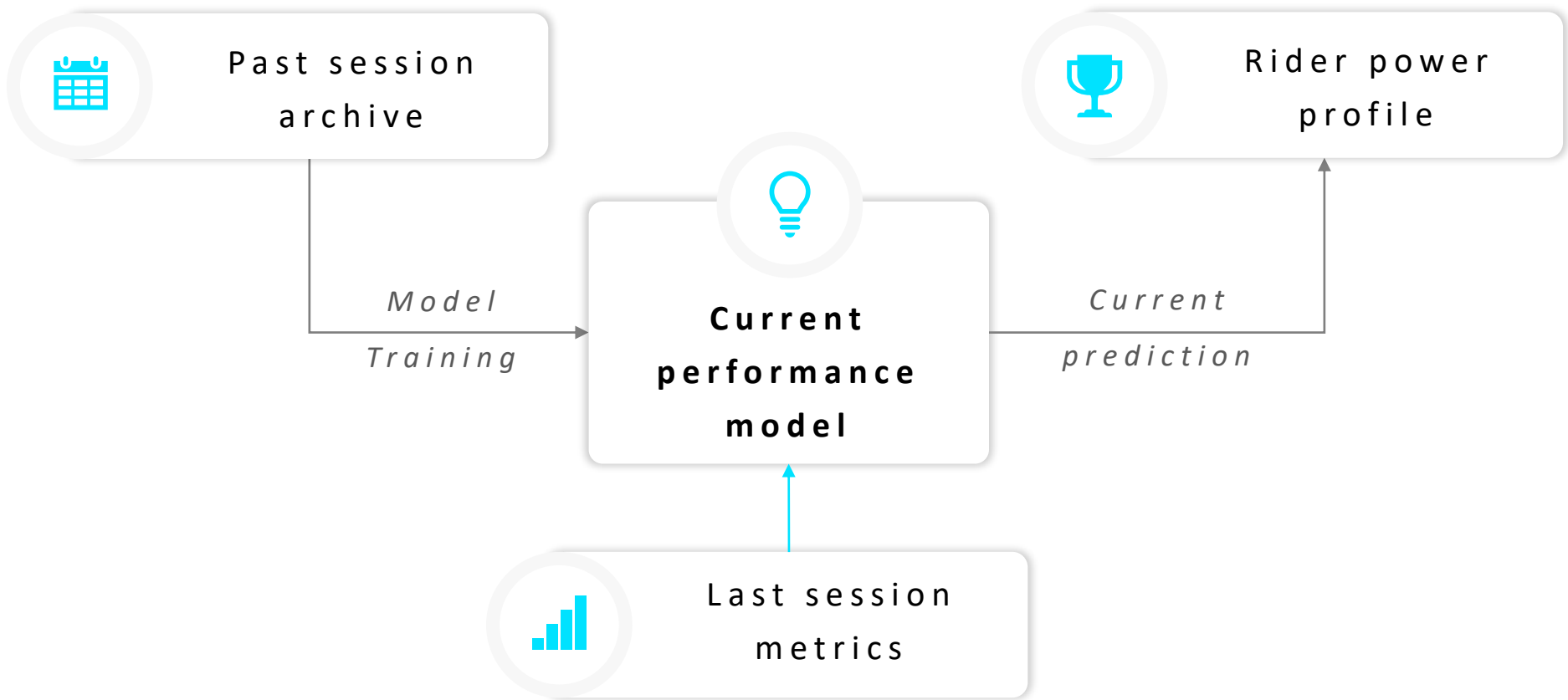
Machine Learning, physiology...



PRINCIPLES OF THE MODEL

**CURRENT RIDER CAPACITIES**

A Machine Learning model trained over more than 20 metrics : power, heartrate, workload, shape and performance indeces...



WHY IT MATTERS

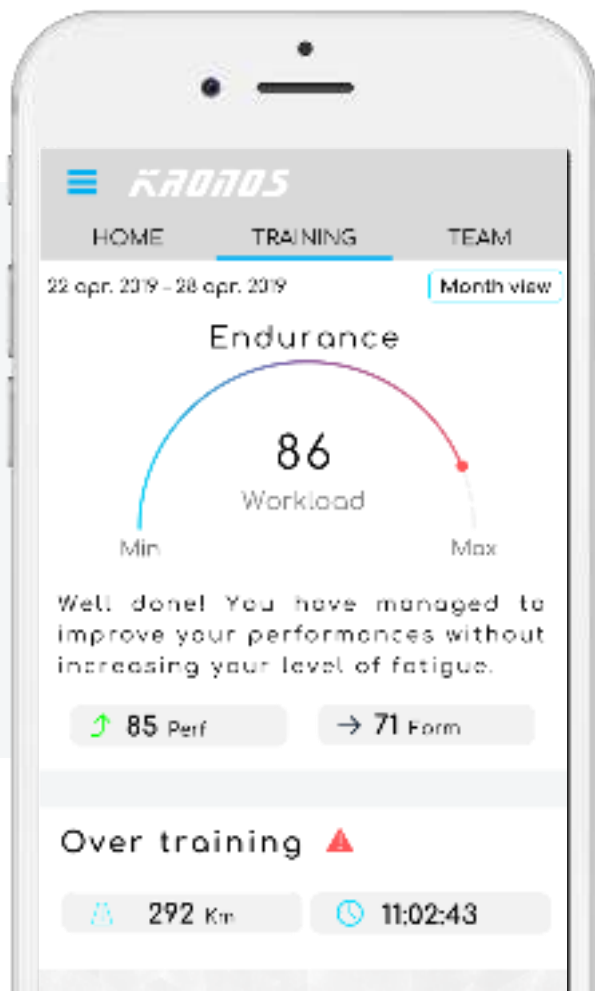
## NORMALISED METRICS

Normalised metrics are used in our ML algorithm to predict performance

**Personalised**  
Normalised over the all athlete history



**Daily update**  
For an optimal training monitoring



**Meaningfull**  
Value goes from 0% (min) to 100% (max)

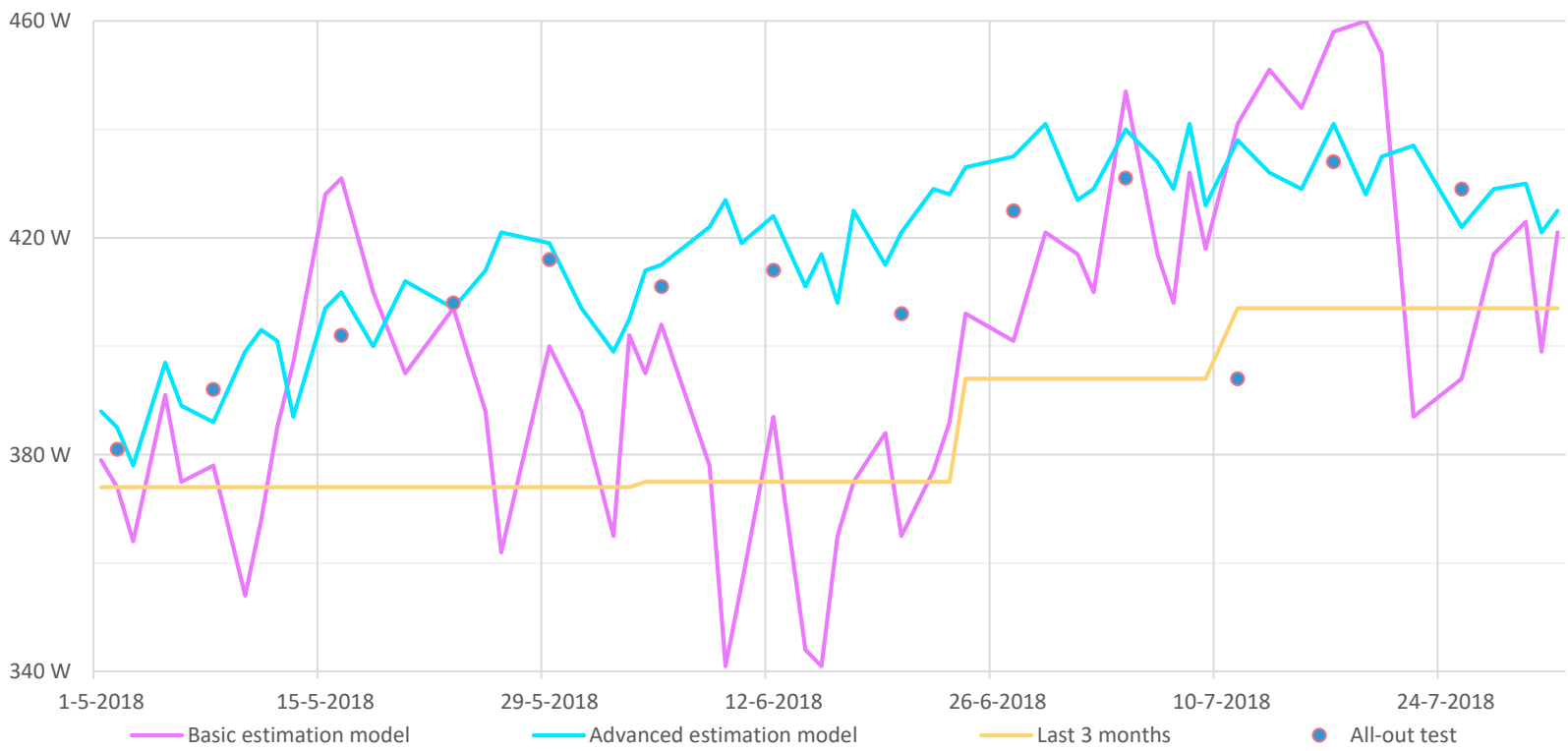


**Global concept**  
Applied to workload, fatigue index...

THE RESULTS

CURRENT RIDER CAPACITIES

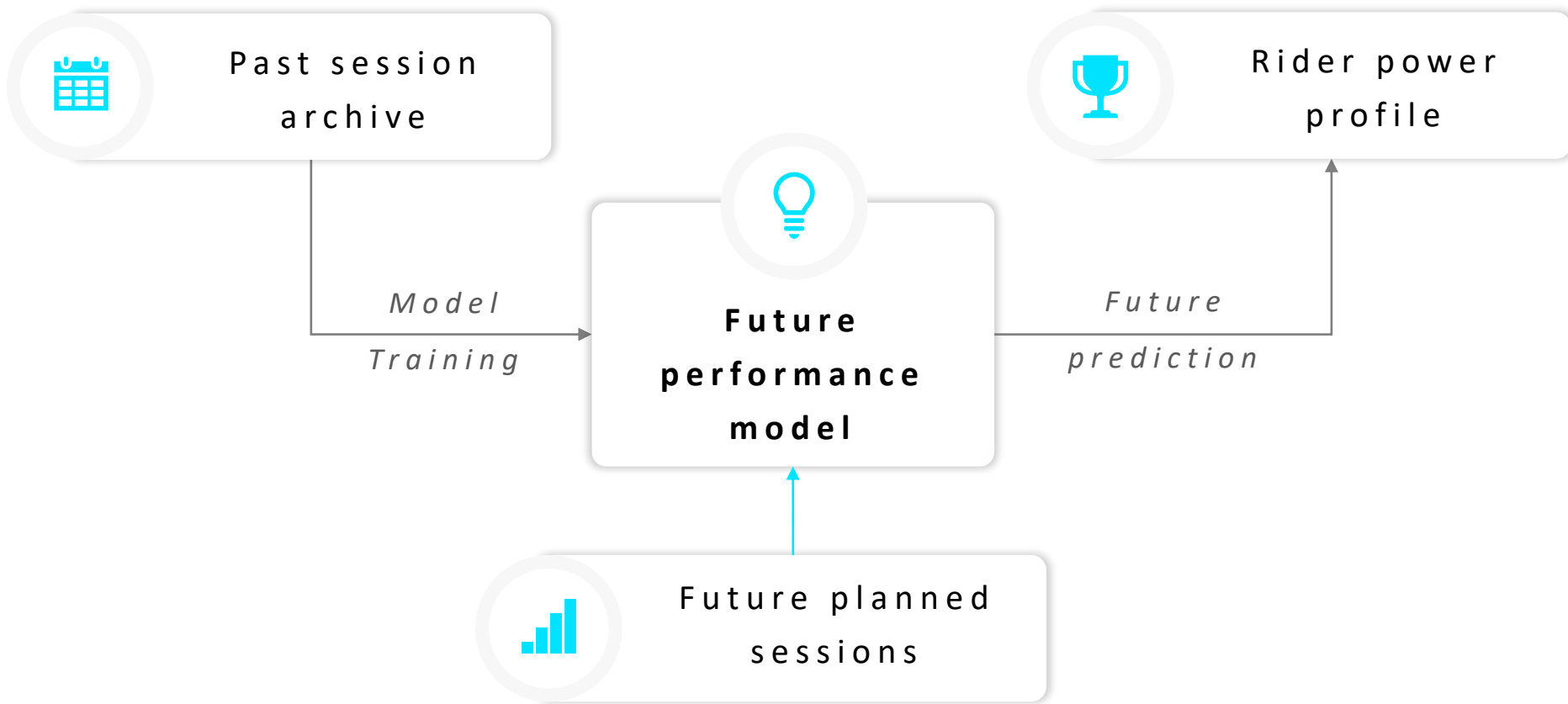
Protocol : measured and predicted 10min max effort of an athlete over 3 months in 2018



PRINCIPLES OF THE MODEL

## FUTURE RIDER CAPACITIES

A Machine Learning model trained over more than 20 metrics : power, heartrate, workload, shape and performance indeces...

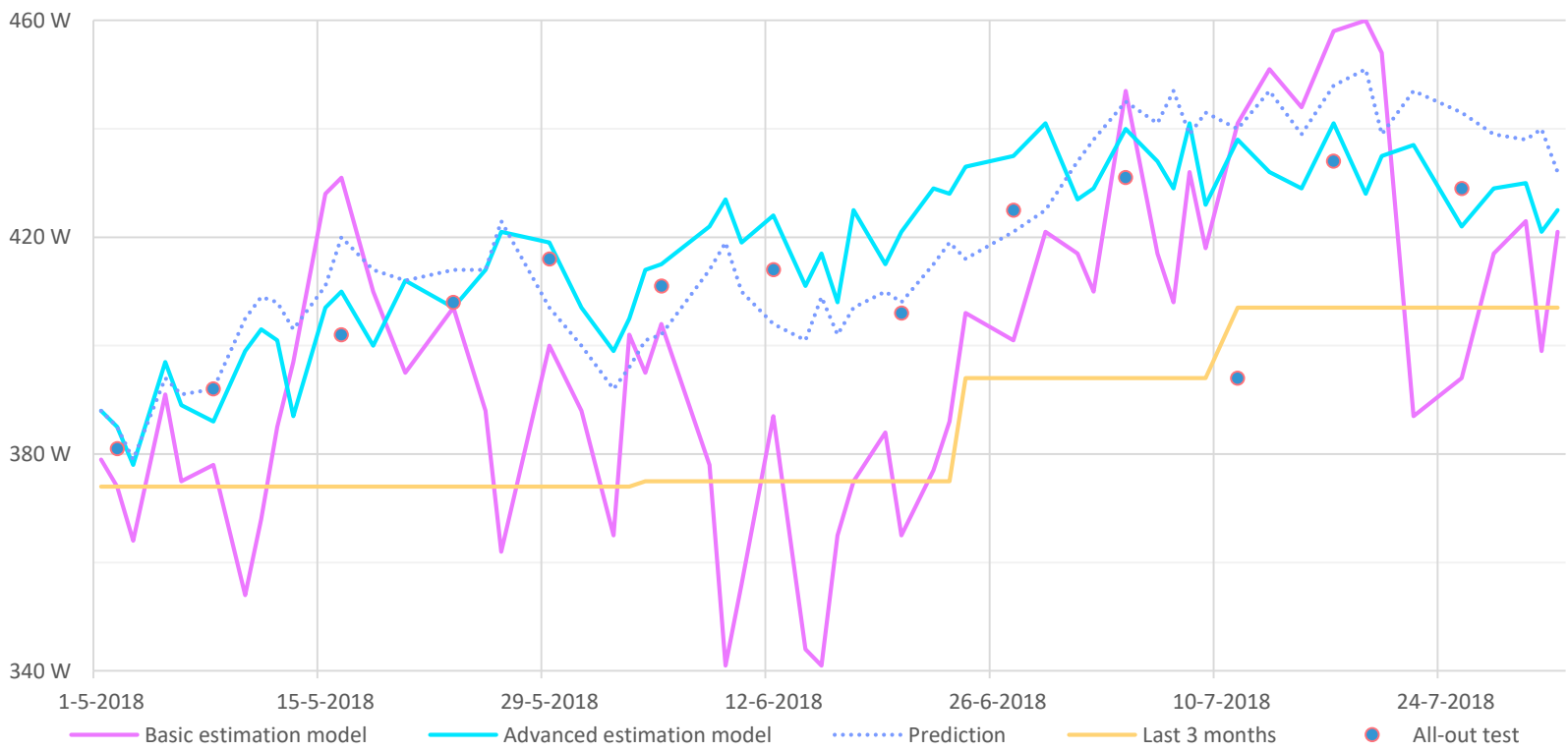




THE RESULTS

FUTURE RIDER CAPACITIES

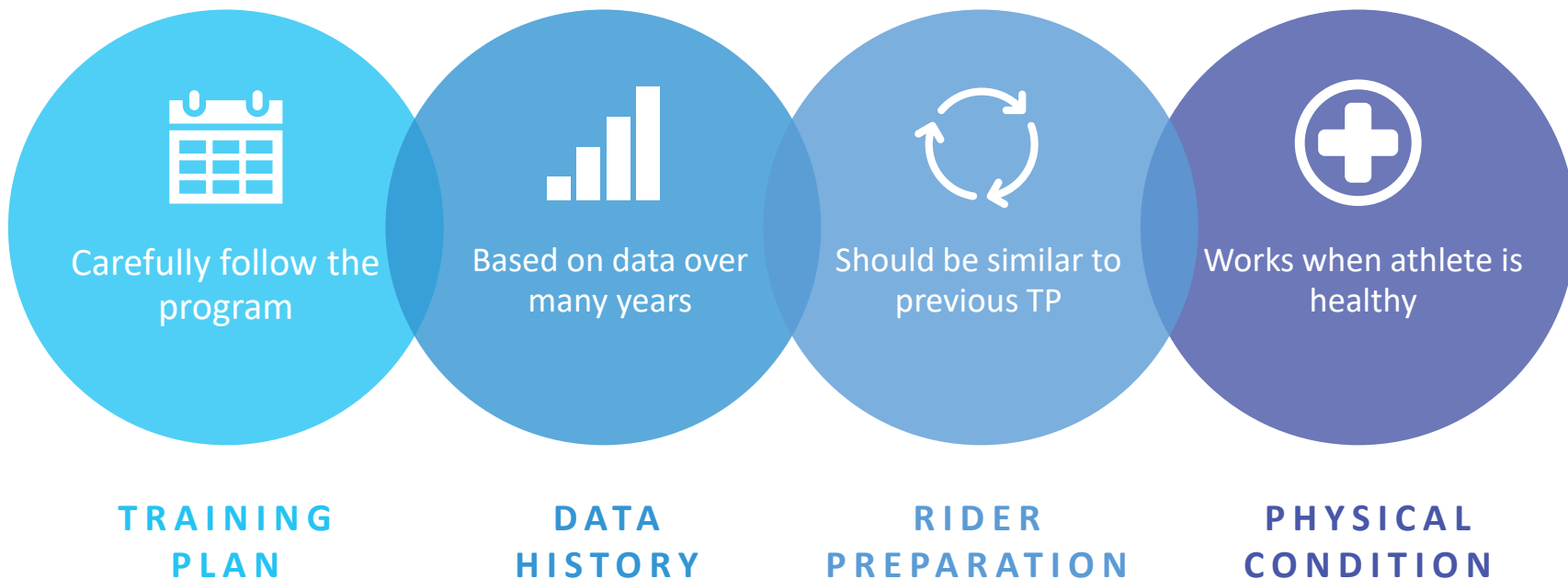
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CONDITIONS FOR ACCURACY

**FUTURE RIDER CAPACITIES**

Predicting rider performance works fairly well under these 4 assumptions



HOW TO BUILD THE PERFECT PROGRAM ?

## TRAINING PLAN OPTIMISATION

Using future performance prediction to improve the athlete performance on d-day



1

### Create your own sessions

Recovery, endurance, interval training...

2

### Build your training plan

Drag & drop the created sessions on the desired day

3

### Maximize the performance

Modify the program to increase the predicted power on d-day

TO OBTAIN THE OPTIMAL TEAM PERFORMANCE

## TEAM TIME TRIAL

Knowing accurately the current performance of each rider to determine the team strategy



### Pace strategy

Speed, pull time and power on each split



### Team selection

Build the ideal team with your best riders



### Best equipment

Find the right gears to go faster



### Optimal strategy

Check if it's worth dropping riders



CONCLUSION

THE FUTURE OF CYCLING

Using innovative data science techniques allows to track and monitor performance with an unprecedented accuracy

PERFORMANCE PREDICTION

To know the future power capabilities of the athlete

NORMALIZED METRICS

The best tool to track the rider shape and progress



CURRENT CAPACITIES

The exact today's level of performance of the rider

TRAINING PROGRAM

Adapt your plan to maximize your power

THE WINNING CONCEPT

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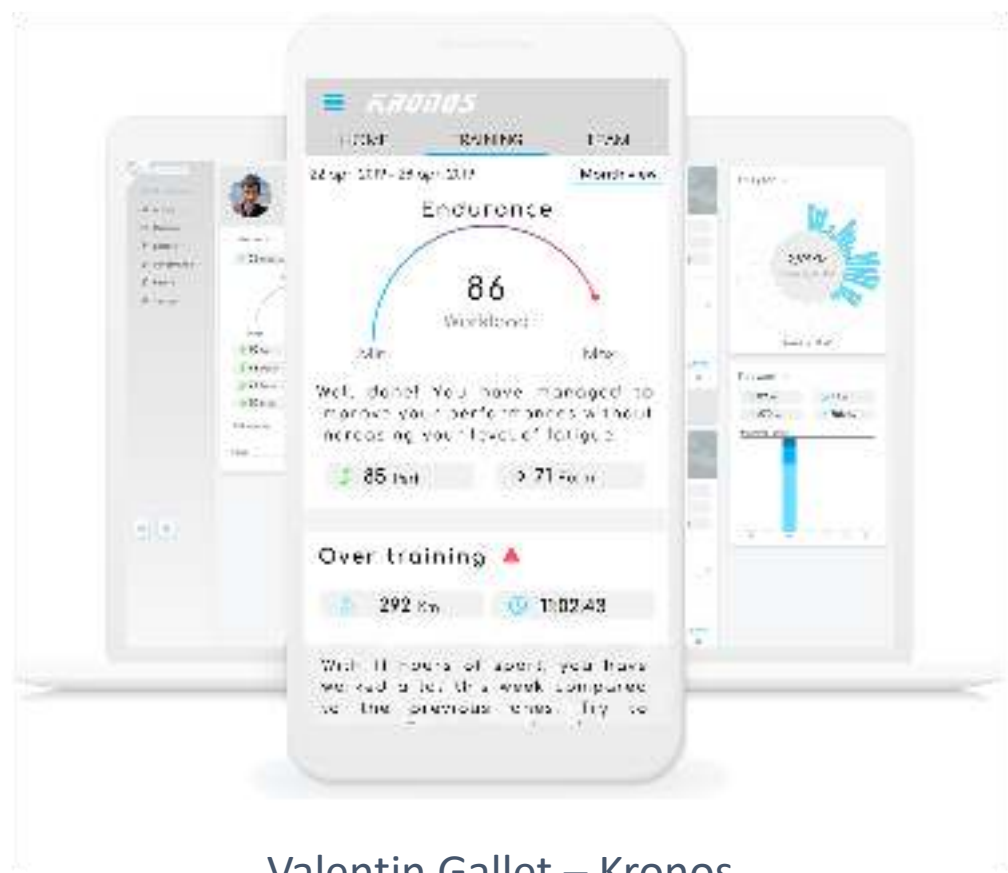
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HOW TO BECOME BETTER ?

## PERFORMANCE MONITORING

Understand the whole picture of your training and performance

### Actionable insights

Get tips to increase your capacities



### Manage your shape

Train safely to be in form & avoid injury



### Track your progress

Check how much you improve yourself



### Understand your training

Learn how positive training can be



SESSION, CLIMB, TERRAIN, RIDER

### CLASSIFICATION

The athlete performance can be expressed as the power profile or MMPC

1

#### SESSION

Recovery, tempo, endurance...

2

#### RIDER

Sprinter, GC rider, Climber...

3

#### PROFILE

Flat, hilly, mid-mountain & mountain

4

#### CLIMB

Detection and category





WHY IT MATTERS

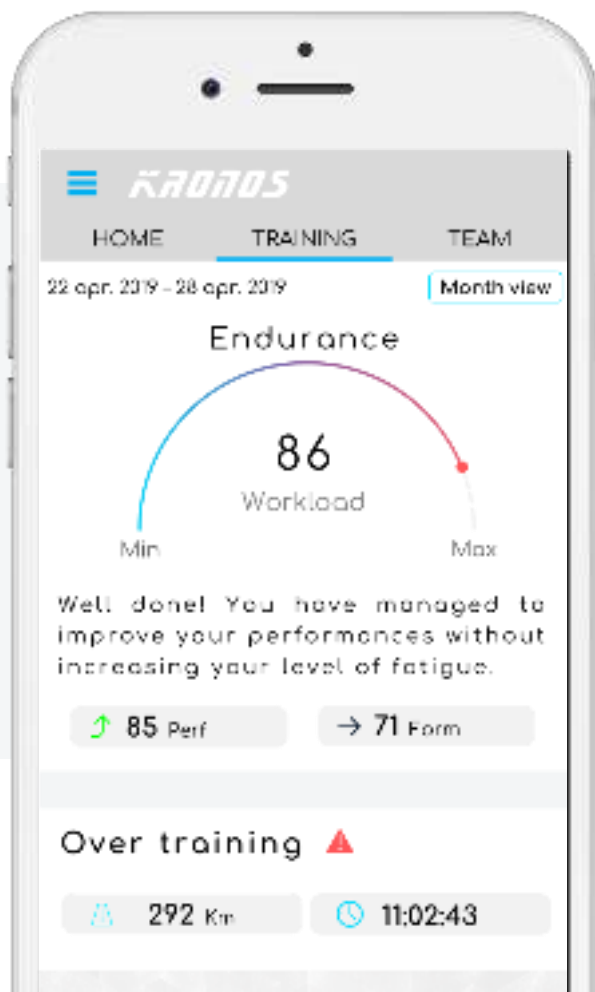
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TO FIND THE BEST PACE

## PERFORMANCE OPTIMISER

Check what is the right options to achieve the optimal performance



### Pacing strategy

For individual or team time trial



### Rider selection

Build the team with your strongest riders



### Best equipment

Save time with the right equipment



### Weather

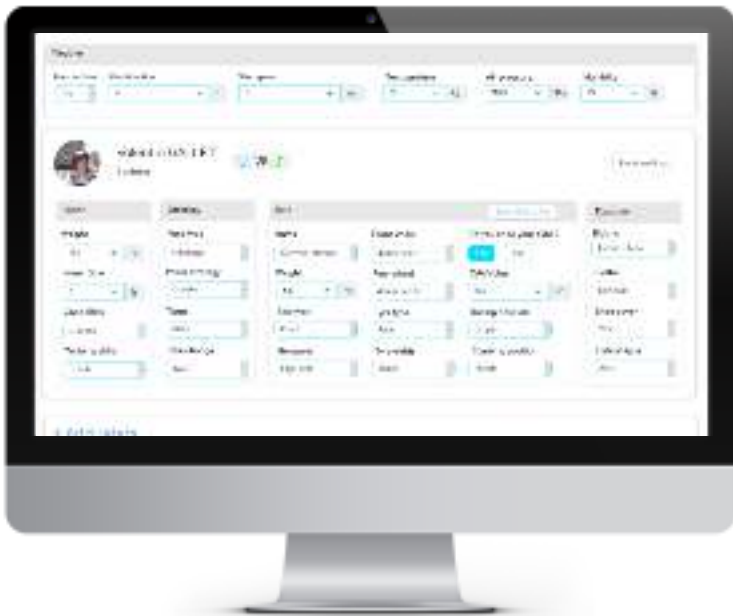
Check out when your leader should go



HOW TO GO FASTER?

**EQUIPMENT SELECTION**

See the effect of each component to optimize your performance



1

**Detail your current gears**

Indicate your frame, wheels, clothes...

2

**Check your performance**

Given your equipment and capacities, see what you can do

3

**Maximize the performance**

Modify the equipment to increase the predicted performance

STRONGER TOGETHER

**JOIN YOUR TEAM**

Enjoy being part of a team to discover new horizons



**Ride together**

Join your team mates on the next events



**See who is the strongest**

Find out who is the best and track their progress



**Stay tuned !**

Keep in touch with your friends

