

# Information Flow to support **Decisions & Development** in Professional Cycling

Stephen Seiler - **University of Agder**, Kristiansand, Norway

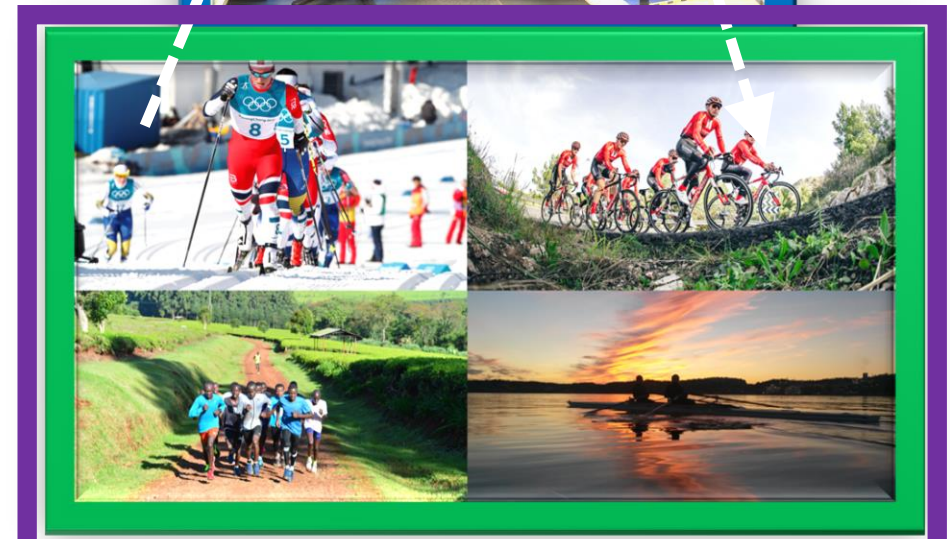
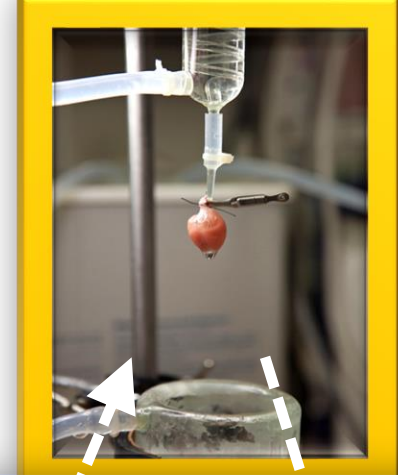
Espen Aareskjold - **Uno-X Pro Cycling Team**

John Peters- **Blue Cat Technical Limited**



# Multiple endurance sports & methods

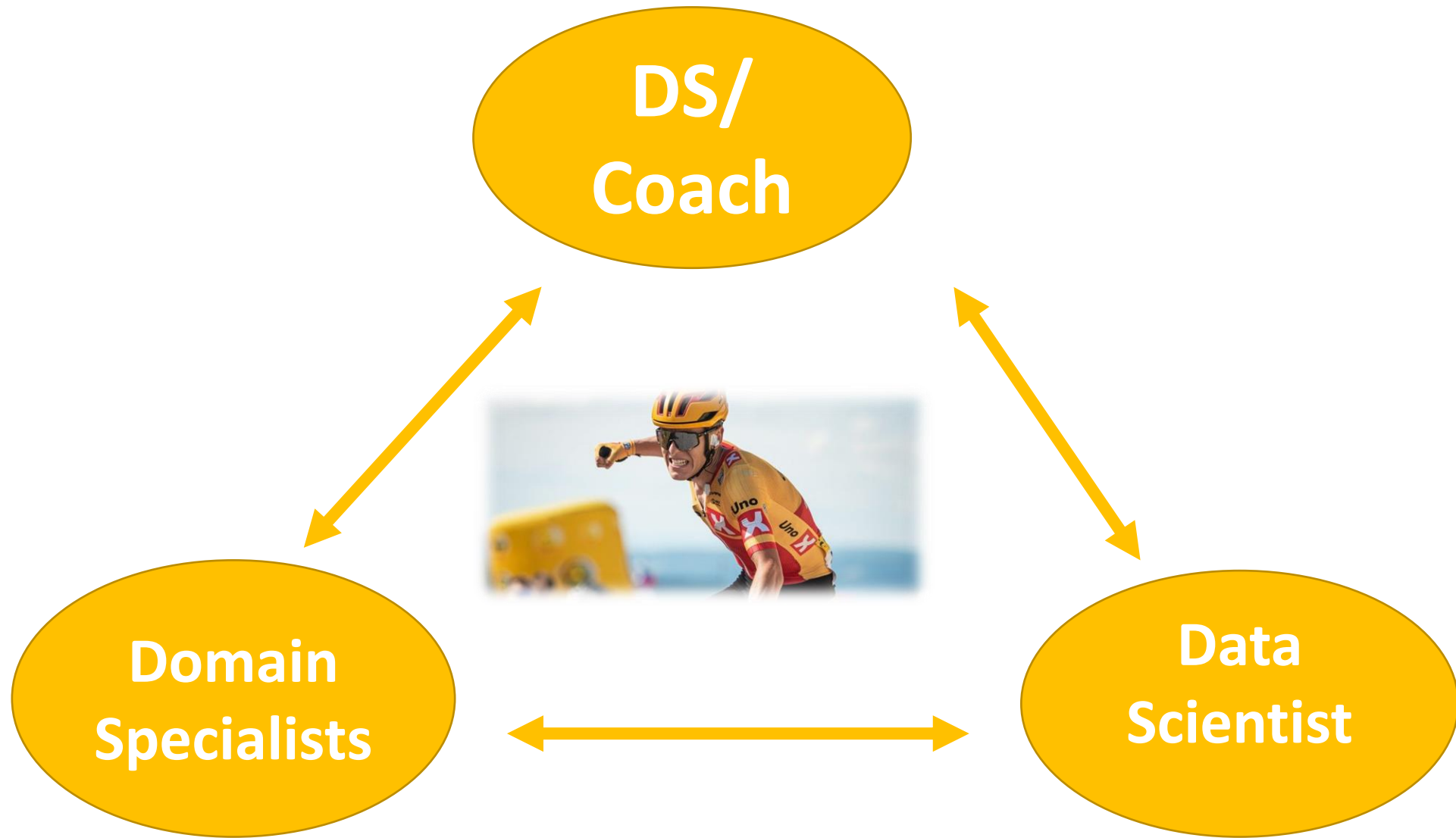
1. Accurately quantify how the best are **actually** training
2. Identify universalities/ commonalities across sport disciplines
3. Use sub-elite athletes in controlled intervention studies to test hypotheses & "scalability"
4. Reference training best practice against molecular biology & mechanistic research findings
5. Analyze "free-training" data to understand response variation & improve individual optimization



Single Source  
of Truth



Trusted  
Interpreter



# Integrating multiple expertise domains

Medicine

Physiology

Psychology

Engineering

Biomechanics

Logistics

Aero-  
dynamics

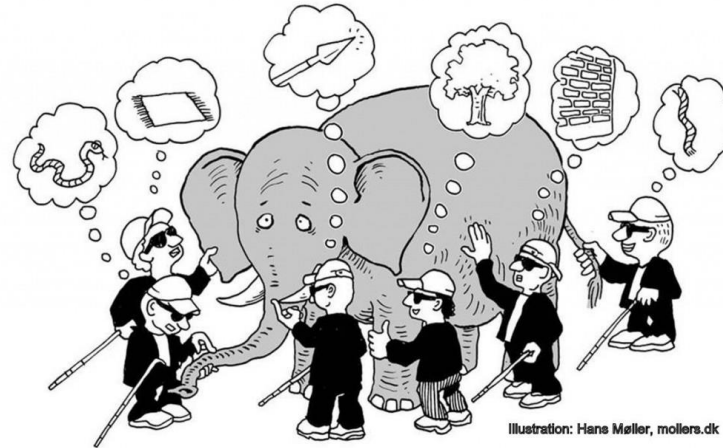


Illustration: Hans Møller, mollera.dk

The path forward  
(from my perspective)

**From Reductionist to Realistic**

From  
N=30

To  
N=1 x 30



N=1 N=1 N=1 N=1  
N=1 N=1 N=1 N=1  
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# From **One-off** research **Projects** to a **Continuous R&D Process**

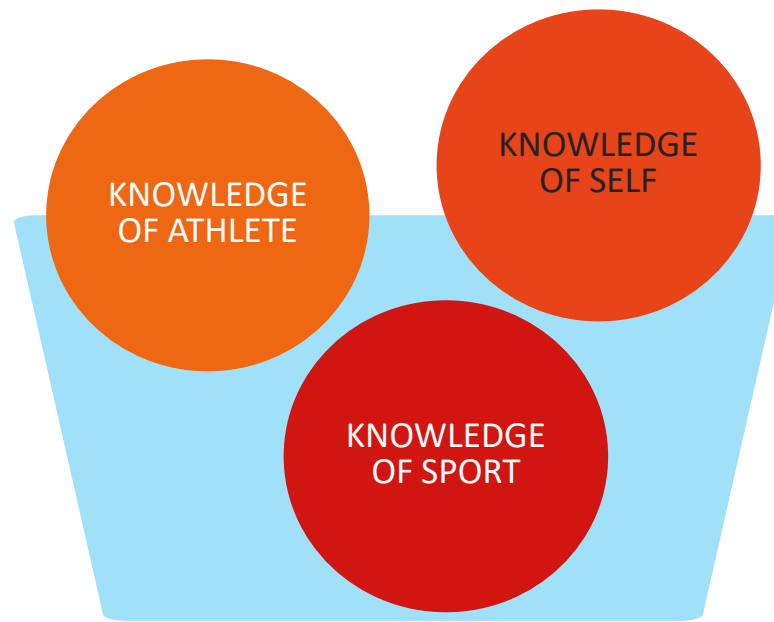


# Starting point



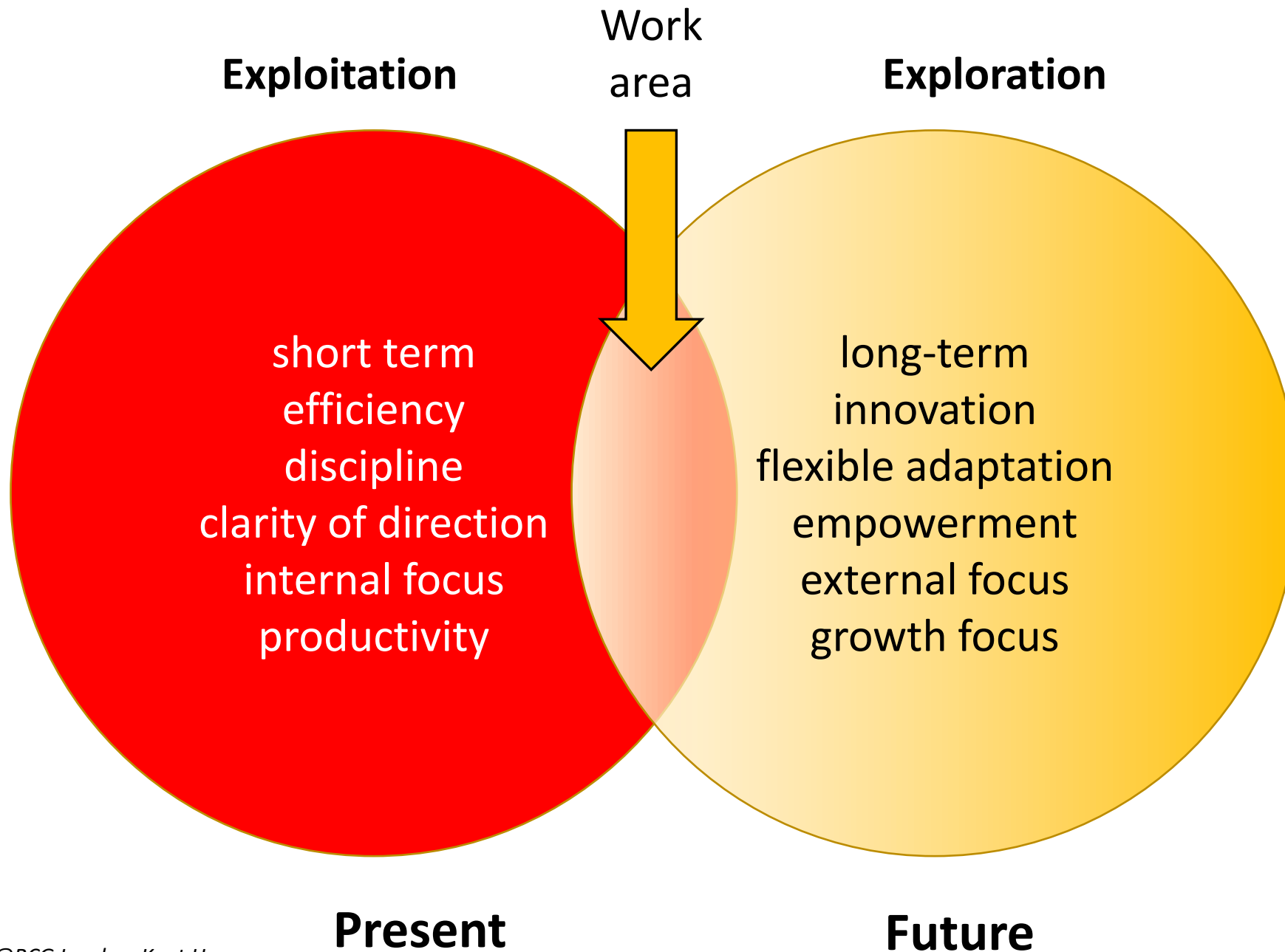
	<b>Paris-Tours</b> U23 - Ryttere ✓ Photocredit	12.10.2020
	<b>Paris-Tours</b> Staff Victor forlot	12.10.2020
	<b>Paris-Tours</b> ALL Victor forlot	11.10.2020
	2020 <b>Paris-Tours</b> Zonehopp Patryk forlot	10.10.2020





## COACHING EFFECTIVENESS

ABILITY TO **CONSISTENTLY** GUIDE ATHLETES AND TEAMS TO IMPROVED **COMPETENCE, CONNECTION, AND CHARACTER** (4C'S)



# Professional Cycling Team Reality 2022

50+  
Riders



Millions  
of kJ



70+  
Staff

~500 Race  
Days



350+  
Bikes



~6000  
Flights



46  
Vehicles



# Data Science to Support the Experts

- Applying common techniques across industries
  - Always learning
- Converting **Expert** ideas into practical solutions
  - User Centered Design
- Software development best practice
  - Parallels with developing athletes

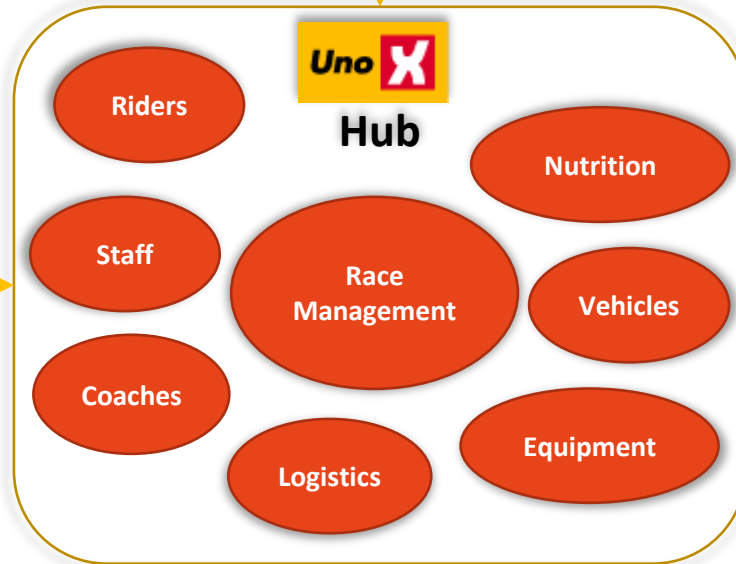


# Uno-X Hub Ecosystem

- Web and Mobile Apps
- Secured using Two-Factor Authentication
- Single Source of Truth
  - Different but overlapping user views of the same world



Course Info



Rider Stats

Rider Race, Training & Travel Plan

**Intervals.icu**

Longitudinal Race & Training Management

Race / Training Data

Key Race Data (VeloViewer Waypoints)

**EnDuRA**

Detailed Race & Training Analysis

Race / Training Feedback (TBD)

# Race Programme Overview

- 3 Teams
  - Women's World Team
  - Men's Pro Team
  - Men's Development Team
- Range of calendar views
- Who and what is scheduled to be where?
  - Riders
  - Staff
  - Vehicles
- Technical Challenge
  - Simple interactive calendar as a starting point
  - Getting the basic architecture right to accommodate any future requirements

The image displays two overlapping screenshots of a race programme overview interface. The top screenshot shows a 'Calendar' view for the period from 2022-04-11 to 2022-04-24. It includes a filter section with options for Gender (mens, womens, all), Staff (Aareskjold, Espen, Andersen, Christi), Teams (PRT, DEVO, WTW, ALL), and Category (.1.1, 1.2, 1.2U, 1.Ncup, 1.Pro, 1.UWT). The calendar grid shows events such as 'Presidential Cycling Tour of Turkey' and 'Paris-Roubaix recon' spanning multiple days. The bottom screenshot shows a 'Timeline' view for April 2022, with a grid of dates from 3 to 29. It displays various race events as horizontal bars, including 'Ronde', 'Paris-Roubaix recon', 'Tour of the Alps', 'Scheld', and 'Presidential Cycling Tour of Turkey'. A large yellow box on the left side of the timeline contains the text 'Names deleted'.

# Race Management

- Rider, staff and vehicle selection
- Detailed day-to-day planning
  - Push to individual rider and staff calendars
  - Mobile and web app
- Everyone knows who needs to be where and when
- Technical Challenge
  - Multiple feeds to multiple calendars
  - Standardising routine events
  - Time zones and Daylight Saving

The screenshot displays the 'Event Details' for 'Women's Tour - WWT'. It includes a 'Save Details' button and a table of event information:

event_id	type	title	start	end	category	cat	country	status	gender	team	max_riders	published
655	race	Women's Tour - WWT	06/06/2022	06/11/2022	allday	2.WWT	GBR	none	womens	WTW	0	<input checked="" type="checkbox"/>

Below the table, there are sections for 'Riders - Selected', 'Riders - Reserve', 'Staff', and 'Vehicles'. The 'Staff' section shows a grid of roles with counts:

- 6/0 Selected Riders
- 0 Reserve Riders
- 6 Days (From 2022-06-06 To 2022-06-11)
- 1 Sports Director
- 0 Coach
- 1 Carer
- 2 Mechanic
- 1 Driver
- 1 Nutritionist
- 0 Mental Coach
- 0 Physics
- 0 Doctor
- 1 Logistics
- 0 Media
- 0 Commercial
- 0 Senior Manager
- 2 Car

The main interface features a calendar for June with a 'Women's Tour - WWT' event highlighted. A detailed view of the event shows a timeline of activities:

- 8:30 depart hotel for start (1.15hr) (6/7)
- 8:30 depart hotel (1hr drive) (0/0)
- Elinor joining in the car (0/3)
- 8:50 depart hotel (40mins drive) (6/7)
- 8:40 depart hotel (50mins) (6/7)
- 10:20 sign on (6/5)
- 10:14 sign on (6/5)
- 10:10:50 sign on (6/5)
- 11 neutral start, 11:15 official start (6/5)
- 11 neutral start, 11:15 official start (6/5)
- 11 neutral start, 11:15 official start (6/5)
- PPD Finish (0/7)
- Race meeting (bus to hotel) (6/2)
- PPD Finish (0/7)
- Race meeting (bus to hotel) (6/2)
- PPD Finish (0/7)
- 4:00 Bus drive to London Heathrow (1.20hr drive) (4/7)

At the bottom, there are sections for 'Programme', 'Vehicle Plan', and 'Zone Hopping and Feeds', each with a 'Save' button and a table of event details.





# Race Travel and Hotels

- Who's on what flight?
  - Riders and staff
  - Pushed to individual calendars
  - Web and mobile app
- Where are we staying?
  - Who's in which room?
  - What's the WiFi code? (TBD)
- Detailed "Hotel Booking" Export
  - All personnel key details in one place
- Technical Challenge
  - Intuitive interface
  - Quick and easy for the logistics team

The screenshot displays a web application interface with a navigation menu at the top including Dashboard, Activities, Riders, Staff, Vehicles, Travel, Travel Summary (selected), Hotels, Metrics, Performance, Equipment, Race Info, Licenses, and Nutrition.

**Flights Summary**

Name	Role	Dep Date Out	Dep Time Out	Arr Date Out	Arr Time Out	Flight No. Out	Origin Out	Destination Out	Dep Date Return	Dep Time Return	Arr Date Return	Arr Time Return	Flight No. Return	Origin Return	Destination Return	Ticket
Ahtosalo, Annina	rider	25-May	15:40	25-May	19:55	D8 3520	Helsinki	London Gatwick								LR9ICB
Andersen, Susanne	rider	25-May	19:30	25-May	20:35	DY 1336	Stavanger	London Gatwick								LQDU42
Lutro, Amalie	rider	25-May	19:30	25-May	20:35	DY 1336	Stavanger	London Gatwick								LQDU42
Barnes, Hannah	rider	25-May	19:00	25-May	20:20	VY 7820	Barcelona	London Gatwick	30-May	06:45	30-May	09:45	FR9802	London Stansted	Barcelona Girona	LR7IMR
Koerner, Rebecca	rider	25-May	19:00	25-May	19:00	D8 3520	Copenhagen	London Gatwick								LR9AG8
Bjornedal, Mie	rider	25-May	17:20	25-May	20:35	DY 1336	Oslo	London Gatwick								J69D6P

**Hotel Rooms**

Save Rooms



**Riders**

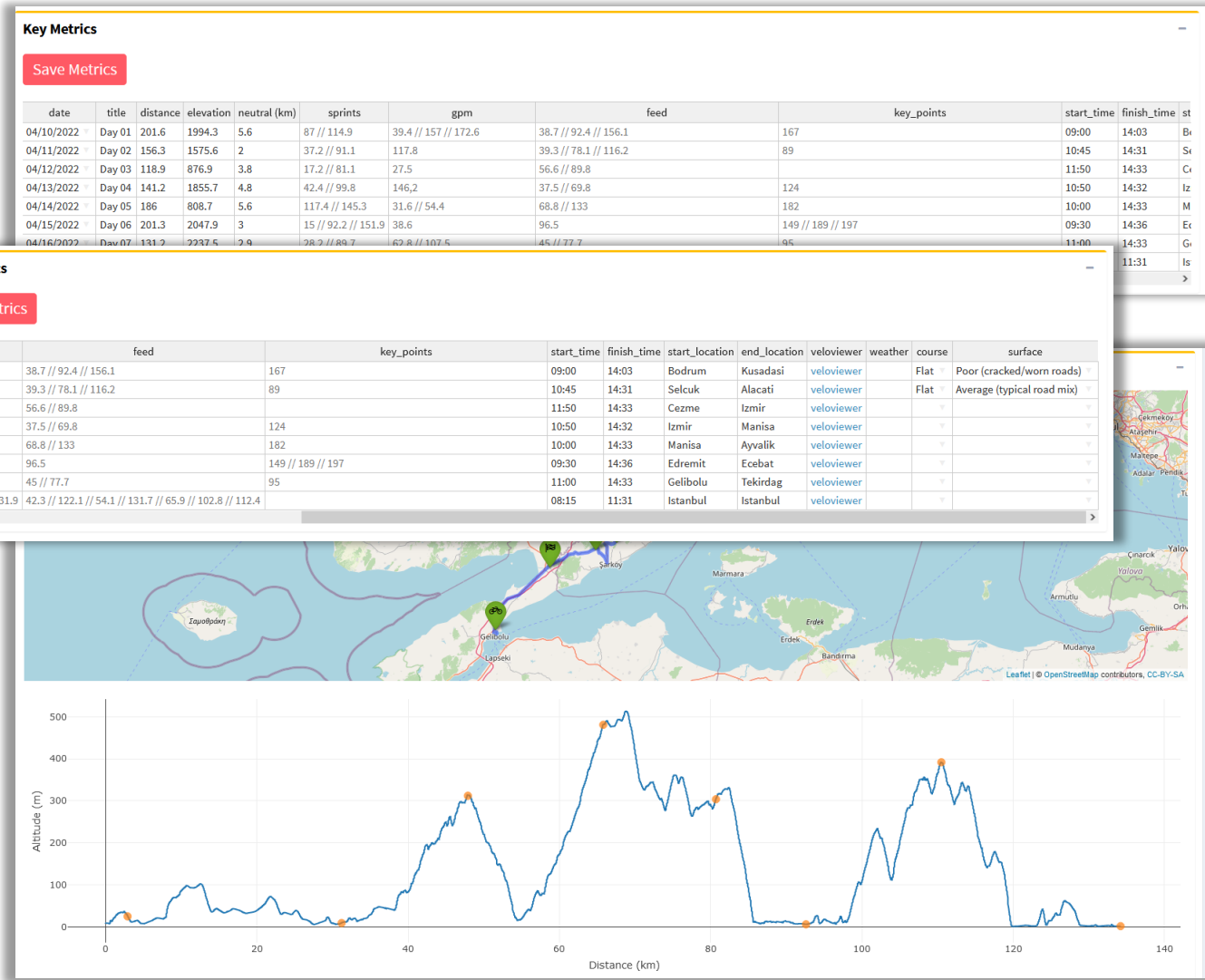
Booking Ref.	Rider ID	Hotel	Check In	Check Out	Name	Room
635_MW1	36	Marriott Waltham Abbey	05/25/2022	05/28/2022	Names deleted	
635_RL-2	36	Best Western Ariel	05/28/2022	05/29/2022		
635_MW1	39	Marriott Waltham Abbey	05/25/2022	05/28/2022		
635_RL-2	39	Best Western Ariel	05/28/2022	05/29/2022		
635_MW1	45	Marriott Waltham Abbey	05/25/2022	05/28/2022		
635_RL-2	45	Best Western Ariel	05/28/2022	05/29/2022		
635_MW1	40	Marriott Waltham Abbey	05/25/2022	05/28/2022		
635_RL-2	40	Best Western Ariel	05/28/2022	05/29/2022		
635_MW1	41	Marriott Waltham Abbey	05/25/2022	05/28/2022		
635_RL-2	41	Best Western Ariel	05/28/2022	05/29/2022		
635_MW1	38	Marriott Waltham Abbey	05/25/2022	05/28/2022		
635_RL-2	38	Best Western Ariel	05/28/2022	05/29/2022		

**Staff**


Booking Ref.	Staff ID	Hotel	Check In	Check Out	Name	Room
635_MW1	51	Marriott Waltham Abbey	05/25/2022	05/28/2022	Names deleted	
635_RL-2	51	Best Western Ariel	05/28/2022	05/29/2022		
635_MW1	46	Marriott Waltham Abbey	05/25/2022	05/28/2022		
635_RL-2	46	Best Western Ariel	05/28/2022	05/29/2022		
635_MW1	53	Marriott Waltham Abbey	05/25/2022	05/28/2022		
635_RL-2	53	Best Western Ariel	05/28/2022	05/29/2022		
635_MW1	49	Marriott Waltham Abbey	05/25/2022	05/28/2022		
635_RL-2	49	Best Western Ariel	05/28/2022	05/29/2022		
635_MW1	48	Marriott Waltham Abbey	05/25/2022	05/28/2022		
635_RL-2	48	Best Western Ariel	05/28/2022	05/29/2022		

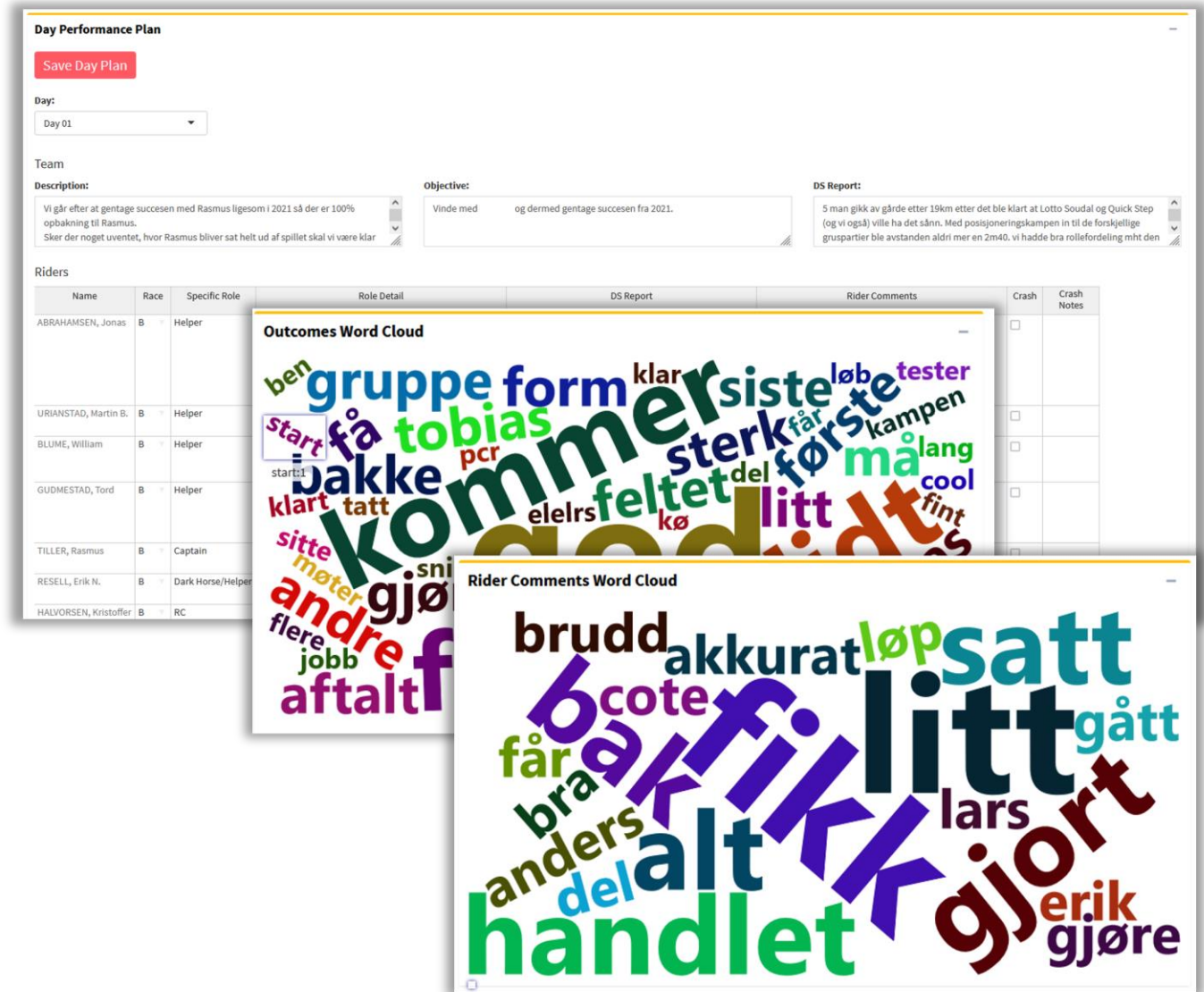
# Race Course Metrics

- Key course metrics
  - Profile, Length, Type, Waypoints, Weather (TBD)
- Import from 
- Export to 
  - Race analysis
- Integrated into other Hub algorithms
  - Individual calendars
  - Equipment / Tyre Pressure
  - Nutrition
- Technical Challenge
  - Developing a bespoke TCX parser
  - Sharing course metrics across the hub



# Performance Plan

- Rider and Staff Roles
  - What does success look like today?
- Post-Race Feedback
  - DS and Riders
- Building a valuable library of qualitative information
  - How does this align with the quantitative measures?
  - Multi-Lingual Sentiment Analysis
- Crash Reports
  - What happened?
  - What needs fixing (mechanics)?
  - Rider follow-up – automatic emails to key staff.
- Technical Challenge
  - Multi-lingual text analytics
  - Interacting with  Intervals.icu



The screenshot displays a 'Day Performance Plan' interface. At the top, there is a 'Save Day Plan' button and a 'Day:' dropdown menu set to 'Day 01'. Below this, there are sections for 'Team', 'Description', 'Objective', and 'DS Report'. The 'Description' field contains text about Rasmus's performance in 2021. The 'Objective' field mentions 'Vinde med og dermed gentage succesen fra 2021.'. The 'DS Report' field describes a 19km ride and a race strategy. Below these fields is a table of riders with columns for Name, Race, Specific Role, Role Detail, DS Report, Rider Comments, Crash, and Crash Notes. The table lists riders like ABRAHAMSEN, Jonas (Helper) and TILLER, Rasmus (Captain). Overlaid on the interface are two word clouds: 'Outcomes Word Cloud' and 'Rider Comments Word Cloud'. The 'Outcomes Word Cloud' features words like 'kommer', 'gruppe', 'form', 'klar', 'sterke', 'første', 'få', 'tobias', 'klar', 'løb', 'tester', 'start', 'få', 'tobias', 'klar', 'sterke', 'første', 'få', 'tobias', 'klar', 'sterke', 'første'. The 'Rider Comments Word Cloud' features words like 'brudd', 'akkurat', 'løp', 'satt', 'litt', 'gått', 'brudd', 'akkurat', 'løp', 'satt', 'litt', 'gått', 'brudd', 'akkurat', 'løp', 'satt', 'litt', 'gått'.

# Equipment

- General rider setup
- Race specific setup
  - Configuration for the day
  - Tyre Pressure calculator
  - Pushed to mechanics' mobile app
- Crash Reports
  - Logged via mobile app during the race
  - What needs fixing?
- Technical Challenge
  - Event logging on the mobile app
  - Developing a bespoke tyre pressure calculator

### Equipment

Save Equipment

Day: Day 01

**Distance:** 180.7km  
**Elevation:** 2027.6m  
**Course Type:** Flat  
**Surface:** Average (typical road mix)

### GPM

KM	Description
174	KOM 4th 0.7km @ 4.7%
157.2	KOM 4th 0.7km @ 4.7%
133.8	KOM 3rd 2.5km @ 3.3%
67.7	KOM 2nd 1.4km @ 3.9%
23.5	KOM 1st 1.4km @ 5.6%

BAR / PSI  
 BAR  PSI

Tyre Type  
 High Performance  Medium Range

Weight Distribution  
 48/52  50/50


Name	Bike	Front Wheel	Rear Wheel	Front Tyre	Rear Tyre	Chaining Size	Cassette	Chainguide	Chain	Bottle Cages	Tyre Pressure Front	Tyre Pressure Rear
ANDERSEN, Idar	Dare VRSu	ARC 1400 DB 50 mm	ARC 1400 DB 50 mm	25 mm	25 mm	2x54/39	11-30	No	Waxed	Carbon	5.60	5.80
HALVORSEN, Kristoffer	Dare VRSu	ARC 1400 DB 50 mm	ARC 1400 DB 50 mm	25 mm	25 mm	2x54/39	11-30	No	Waxed	Carbon	5.70	5.80
LARSEN, Niklas	Dare VRSu	ARC 1400 DB 50 mm	ARC 1400 DB 50 mm	25 mm	25 mm	2x54/39	11-30	No	Waxed	Carbon	5.80	6.00
									Waxed	Carbon	5.80	5.90
									Waxed	Carbon	5.60	5.80

### Incidents

Save Incidents

Logged By	Stage	Rider/General	Bike	When	Incident	Comment
frederik.svendsen	Day 01	Names deleted	First		Puncture	
frederik.svendsen	Day 01	Names deleted	First		Tyre Pressure	We will try with 0.2 more on stage 2
frederik.svendsen	Day 01	Names deleted	First	Finale	Puncture	hit a rider in the front of him with his front wheel. Front wheel broken
frederik.svendsen	Day 03	Names deleted	First		Puncture	Rear puncture
frederik.svendsen	Day 03	Names deleted	First		Crash	Front wheel puncture
frederik.svendsen	Day 04	Names deleted	First	14	Puncture	Front wheel
frederik.svendsen	Day 04	Names deleted	First		Shifting Failure	Broke 3 spokes in rear wheel and went to crash mode

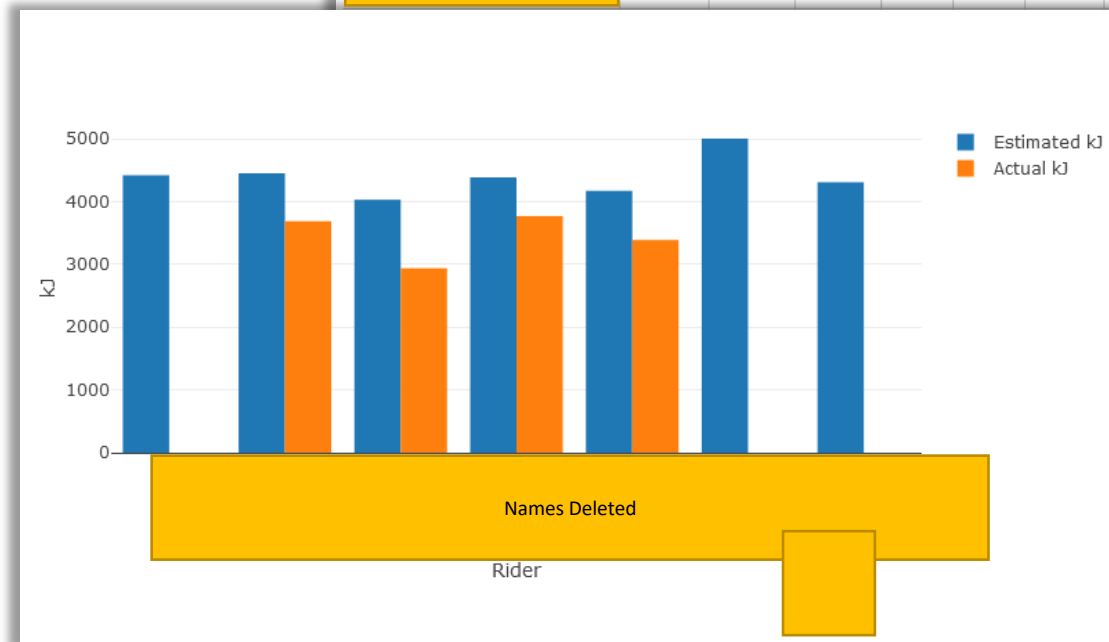
# Nutrition

- Rider Preferences
  - Starting bottles
- Expected kJ Burn
  - Forecast based on course profile, rider weight, W/kg
- Technical Challenge
  - Developing a bespoke KJ predictor
  - Can we improve the algorithm? Rider specific?
    - Can we break this down into course phases?
  - Integrating with  Intervals.icu
    - Comparing prediction vs actual


Day:

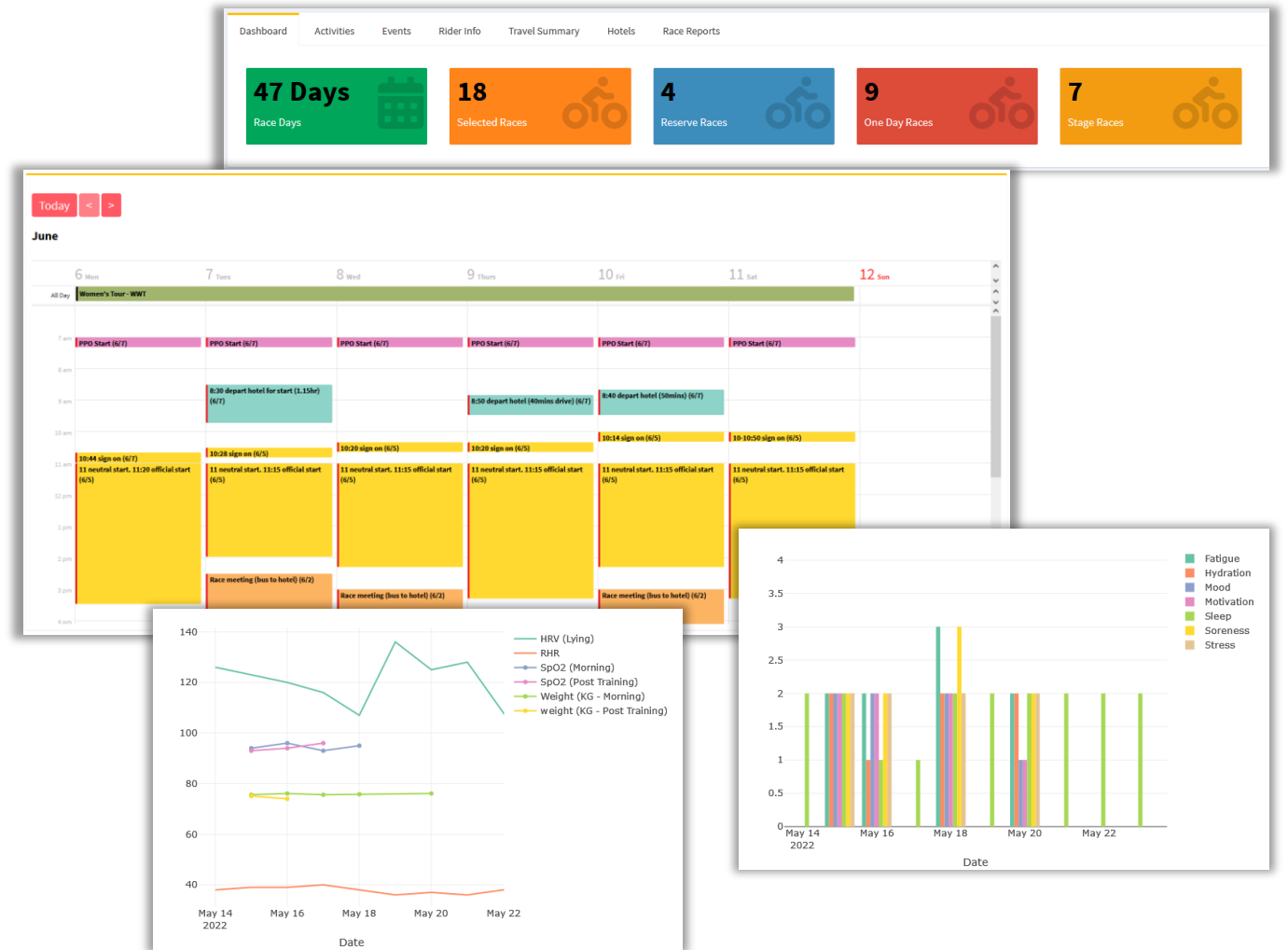
**Distance:** 191.5km  
**Elevation:** 2301.6m  
**Course Type:**  
**Surface:** Average (typical road mix)  
**Elevation / Distance:** 12.02m/km  
**Estimated Speed:** 37km/h  
**Estimated Time:** 5.18hrs

Name	Nutrition	Bottle 1	Bottle 2	Weight	W/kg	kJ	Actual Power (W/kg)	Actual kJ
Names deleted		320	160	68.00	3.49	4421.00		
		320	160	64.20	3.49	4174.00	2.96	3389.79
		160	160	77.00	3.49	5006.00		
		160	160	68.50	3.49	4453.00	2.98	3689.14
							2.89	2939.72
						3.11	3771.39	



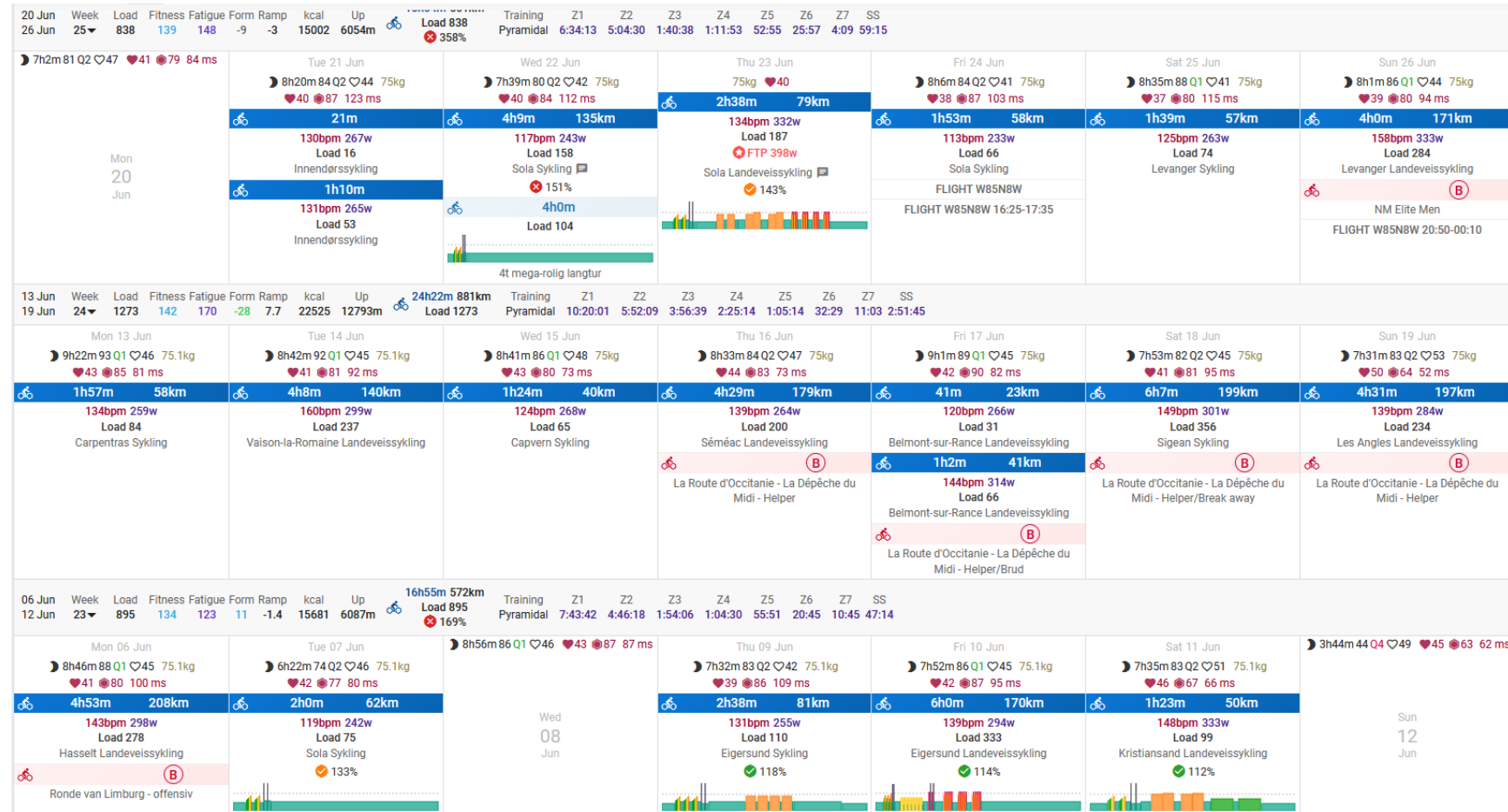
# Rider Management

- Dashboard
- Individual Calendar
- Wellness
  - Quantitative (e.g. HRV, RHR, Weight etc.)
  - Qualitative (e.g. Sleep, Stress, Soreness etc.)
- Travel
- Race Reports
- Integration with
- Technical Challenge
  - Synchronizing with  Intervals.icu
  - MacBook behaviour



# Intervals.icu Integration

- Race Plans
  - Detailed race info
  - Rider role
- Travel
- Training Plans
  - Training Phases (TBD)
- Wellness data
  - Injury & Illness reports
- Import into **EnDuRA**
  - Detailed Race and Training Analysis
- Technical Challenge
  - Understanding the Open API (art of the possible)
  - Synchronization



# FLIGHT W85N8W 20:50-00:10

**Flight Number:** SK383  
**From:** TRD  
**To:** SVG  
**Dep:** 20:50  
**Arr:** 00:10  
**Ticket:** W85N8W

MARK DONE EDIT

9h22m 93 Q1 ♡46 75.1kg ♡43 Ⓢ85 81 ms	8h42m 92 Q1 ♡45 75.1kg ♡41 Ⓢ81 92 ms	8h42m 92 Q1 ♡45 75.1kg ♡41 Ⓢ81 92 ms
1h57m 58km 134bpm 259w Load 84 Carpentras Sykling	4h8m 140km 160bpm 299w Load 237 Vaison-la-Romaine Landeveis sykling	1h57m 58km 134bpm 259w Load 84 Carpentras Sykling

Mon 06 Jun 8h46m 88 Q1 ♡45 75.1kg ♡41 Ⓢ80 100 ms	Tue 07 Jun 6h22m 74 Q2 ♡46 75.1kg ♡42 Ⓢ77 80 ms
4h53m 208km 143bpm 298w Load 278 Hasselt Landeveis sykling	2h0m 62km 119bpm 242w Load 75 Sola Sykling

Thu 23 Jun 75kg ♡40	Fri 24 Jun 8h6m 84 Q2 ♡41 75kg	Sat 25 Jun 8h35m 88 Q1 ♡41 75kg ♡37 Ⓢ80 115 ms	Sun 26 Jun 8h1m 86 Q1 ♡44 75kg ♡39 Ⓢ80 94 ms
------------------------	-----------------------------------	--	--

1h39m 57km 125bpm 263w Load 74 Levanger Sykling	4h0m 171km 158bpm 333w Load 284 Levanger Landeveis sykling
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Tue 14 Jun 11° 17° → 27 39	Wed 15 Jun 12° 18° → 16 25	Thu 16 Jun 12° 19° → 20 29	Fri 17 Jun 13° 20°
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### Wellness Thu 9 Jun 2022

Weight(lb)	173	Resting HR	47
kCal Consu...		Sleep Score	6.3
Sleep	7h57m	Avg Sleepin...	
SpO2	30	HRV (SDNN)	69
Readiness	7.1	HRV (rMSSD)	30
Baevsky SI		Systolic	
Diastolic		Blood Glucos	
Hydration (L)	25	Body Fat	37
VO2 Max			
Sleep Quality	GREAT		
Soreness	LOW	Pre training	AVG
Fatigue	LOW	Pre training	AVG
Stress	LOW	Pre training	AVG
Mood	GREAT		GC
Motivation	EXTREME		
Injury	NONE		NIGG
Hydration	GOOD		C

Comments

FIELDS

OK & NE

### Elfstedenronde Brugge - Helper/Train

Sunday 12 Jun

**Role:** Helper/Train

**Distance:** 195.6km

**Elevation:** 301.7m

**Description:** Udgangspunkt er en massesprint med Doffen som vinder. Plan-B sprint for [redacted]: Hjælper og første mand i toget og kører os i første position og kører til venstre svinget med cirka 2,1km til mål. [redacted]: Hjælper og kører laget i position 5-3km inden toget tager fat ved 3km. [redacted]: Hjælper og kører fra cirka 1,1km til 400m fra mål. [redacted]: Leadout 400 fra mål sidende leadout til 175m fra mål og slå ud til den side vi vælger. (vigtigt at vi beslutter side) [redacted]: Hjælper og kører toget fra venstre svinget 2,1km fra mål og til cirka 1,1km fra mål (der er 3 sving så der bliver mulighed for lidt luft) Erlend: Dark horse skal sidde bag [redacted] og klar til at bidrage med hjælp hvis [redacted] pludseligt kommer ud af position. Ellers holde andre væk [redacted]: Kontrollerer laget og køre de sidste 175m og vinde rittet

**Objective:** Vinde med Doffen

**Detail:** [redacted]: Hjælper og kører fra cirka 1,1km til 400m fra mål.


MARK DONE EDIT CLOSE

08 Jun Load 110 Eigersund Sykling 118%
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56s 378w 10s 679w 11s 536w 4x 5m54s 285w Indendørs sykling	1m57s 340w 9m17s 338w 3x 11m56s 338w København Cykling på vej	1h37m 117bpm 298w Load 114
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# Coaches Corner

- Collated view of “My Riders” in a single location
- Define individual parameters
  - Sync with  Intervals.icu
- Snapshot of recent progress
- What’s planned for the future?
- Technical Challenge
  - Informative summary info in one place
  - Avoid information overload

**Coaches**

Coach: Aareskjold, Espen

Riders: BLIKRA, Erlend J. BLUME, William DVERSNES, Fredrik GUDMESTAD, Tord HALVORSEN, Kristoffer HINDSGAUL, M., Jacob KULSET, Kristian KULSET, Sindre LARSEN, Niklas NORMAN HANSEN, Lasse LÖLAND, Sakarias MYRESTÖL JOHANSSON, Oskar

Overview Parameters Progress Future

**Settings**

Save Settings

Name	CP (W)	W Prime (KJ)	MMP (W)	Max HR
DVERSNES, Fredrik				
KULSET, Kristian				
KULSET, Sindre				
NORMAN HANSEN, Lasse				
BLUME, William				
MYRESTÖL JOHANSSON, Oskar				
LARSEN, Niklas				
GUDMESTAD, Tord				
HINDSGAUL, M., Jacob				
LÖLAND, Sakarias				
BLIKRA, Erlend J.				
HALVORSEN, Kristoffer				

**Power and HR Zones**

Save Power Zones

Name	Zone 0	Zone 1	Zone 2	Zone 3a	Zone 3b	Zone 4	Zone 5	Zone 6
Names deleted								

Save HR Zones

Name	Zone 0	Zone 1	Zone 2	Zone 3a	Zone 3b
Names Deleted					

Power and HR Zones into

Energy system	Zone	Main 'Training goal'	Est Duration of efforts	Borg	RPE	Power targets	HR	Description on feeling
Anaerob alactic	27	Fast twitch fibers plastic / short sprint	0-6"	NA	NA	All Out	NA	All-out but short enough so that the legs don't get exhausted.
	26	Fast twitch fibers lactic / Long sprints	6"-30"	NA	NA	1' PPD > All Out	NA	All-out with high lactate development - heavy legs
Anaerob lactic	25	Anaerobic Capacity	30"-3'	>18	7-8	3' PPD > 1' PPD	NA	Slightly legs towards the end which will feel really heavy. This will be the limiting factor instead of breathing. You feel the acid very fast from when you start to push in the pedals.
	24	Threshold into VO2max	3'-1h	16-18	6-7	L12 > 3' PPD	L12 > max	Here the push is high. Breathing increases both in volume and frequency, legs will get heavier during the efforts. Sub-threshold continues to increase.
Aerob glycolytic	Z3b	Sub-threshold Sweetspot	5'-3h	13-16	4-6	50% > L12	50% > 50%	Sweetspot is with a higher push into the pedals. The breathing is increased, but still in control. And the push is sustainable for a longer duration. Sub-threshold will feel bit harder, but still a steady state. Similar to a long climb.
	Z3a							
Aerob low-glycolytic	22	FatMax / Endurance plus	10'-4h	10-12	3-4	Fatmax% > L11	90% > L11	Fatmax should feel just like endurance, but with a bit more of push in the pedals. Breathing is still easy.
	21	Endurance zone	1h-7h	8-10	2-3	60% L11 > FatMax	75% > 90%	You will likely tire towards the end of a longer ride. But you shouldn't feel like having to stomp on the pedals or push. Breathing will be easy. At the end you should have a feeling that you could have continued.
	20	Active recovery	1h-7h	6-7	1-2	0 > 60% L11	60% > 75%	Active recovery should feel just like walking. Just let your legs drop with a very light increase in heart rate.

Save Power Zones

Save HR Zones

# Where Next?

- Rider Health
  - Daily rider monitoring
  - Auto alerts triggered when something “goes wrong”
- Nutrition planning
  - Helping riders make the right meal choices
- Automated feedback between EnDuRA and the Hub
  - “Single-Click” race analysis
  - Constant feedback on rider performance and status
- Improve on everything we’ve already done
  - The next level of detail
  - Unique Research database

