

The background of the top section features a dark blue field with a dense burst of colorful lines (blue, green, yellow, orange, red) radiating from the center, resembling a fireworks display or a data visualization. To the right of this burst, there are three vertical bars of increasing height and color gradient from dark blue to light blue.

SAP Leonardo Live

Not just another business conference

Sports Analytics and Insights with Connected Training

Markus Richter, SAP

PUBLIC

Introduction to Deutscher Ruderverband (DRV)

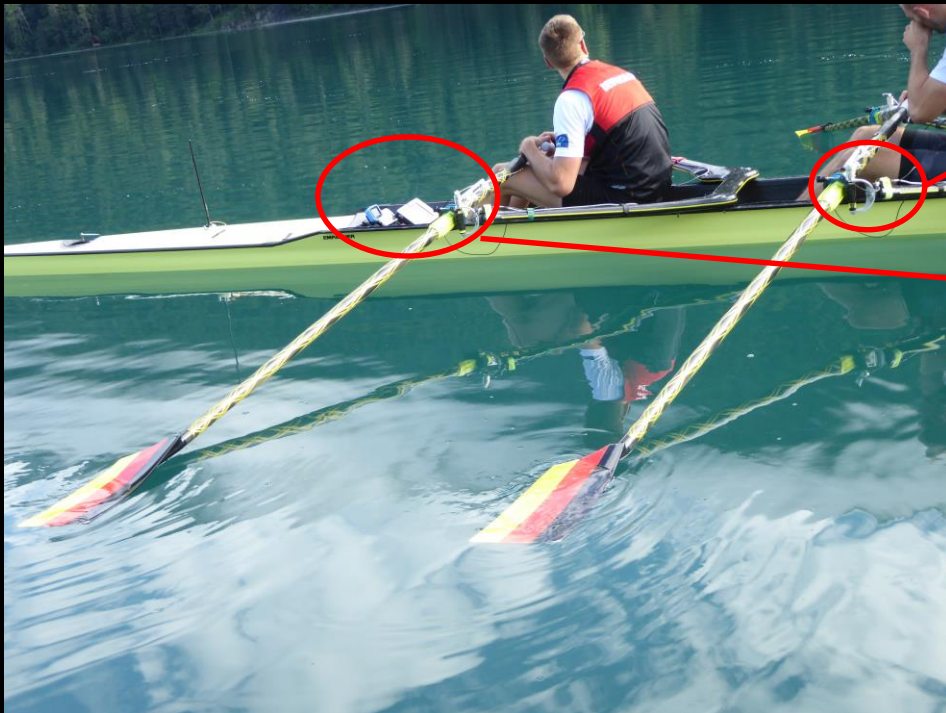
Deutscher Ruderverband (English: German rowing federation; <http://www.rudern.de/>):

- It is the largest rowing federation in the world.
- It is one of the most successful rowing federations in the world.
- It was founded in 1883 in Cologne, and is therefore the oldest sport federation in Germany.
- Rowing has been part of the Olympic Games since 1896.
- Starting with the Olympic Games in Beijing in 2008, rowing has also been part of the Paralympic Games.
- There are more than 600 rowing clubs in Germany with over 83,000 members.
- DRV is one of the most successful national sport federations in Germany.

The Role of Technology and Digital Transformation Within the DRV

Role of technology and digital transformation

- Using technology in rowing is key to competing on a world-class level.



Role of technology and digital transformation

- Indoor rowing is not just another training exercise to simulate water rowing exercises; it has its own championships.



IoT Co-Innovation Project with DRV

Internet of Things (IoT) project

Key issues:

- Training locations are distributed across Germany.
- The national head coach specified an overall training plan but the boats coaches turn this plan into operational training exercises.
- Quite often the coach is not present while the exercises are being done.

IoT project

Objective of the solution

Provide a holistic view on various sport-related aspects of each athlete

- General attributes such as weight, height, address, and so on
- Injuries
- Performance diagnostic
- Training management

Provide automatic tracking of all exercises

- Track types of exercises: weight lifting, general endurance, rowing, ergometer
- Identify successor exercises based on the individual's strengths and weaknesses
- Provide some options for the athlete if measurement devices are used

Solution:

SAP Sports One

SAP Sports One

The screenshot displays the SAP Sports One web application interface. At the top, there is a dark navigation bar with the DRV logo on the left and a menu of options: TEAMS, COMPETITIONS, CLUB, ANALYSES, MEDIA, and TRAINING MANAGEMENT. A search icon and a user profile picture are on the right. Below this is a blue header bar with 'TEAM DETAILS' and 'MÄNNER-DOPPELVIERER'. The main content area is divided into sections. The 'TEAM INFO' section features a team photo and a table of details: Team Name (Männer-Doppelvierer), Short Name (M4x), Gender (Men's Team), and Age (Professionals). The 'PLAYERS' section, titled 'ROWER', shows four player cards: WENDE PHILIPP (31 YEARS), SCHULZE KARL (29 YEARS), GRUHNE HANS (28 YEARS), and SCHOOF LAURITZ JOHANNES (26 YEARS). The 'STAFF' section includes a 'COACHING TEAM' with SCHWARZROCK MARCUS (HEAD COACH) and SCHMIDT ALEXANDER, and a 'MEDICAL TEAM' with KAU DR. ULRICH (TEAM DOCTOR). A 'PERFORMANCE ANALYSES' sidebar is visible on the left. A 'Show Departures' toggle is set to 'NO' in the top right of the players and staff sections.

DRV

TEAMS ▾ COMPETITIONS ▾ CLUB ▾ ANALYSES ▾ MEDIA TRAINING MANAGEMENT ▾

TEAM DETAILS
MÄNNER-DOPPELVIERER

Season
OLYMPICS 2016 ▾

TEAM INFO

Team Name: Männer-Doppelvierer
Short Name: M4x
Gender: Men's Team
Age: Professionals

PLAYERS

Show Departures ☐ NO

ROWER

WENDE PHILIPP
31 YEARS

SCHULZE KARL
29 YEARS

GRUHNE HANS
28 YEARS

SCHOOF LAURITZ JOHANNES
26 YEARS

STAFF

Show Departures ☐ NO

COACHING TEAM

SCHWARZROCK MARCUS
HEAD COACH

SCHMIDT ALEXANDER

MEDICAL TEAM

KAU DR. ULRICH
TEAM DOCTOR

PERFORMANCE ANALYSES

SAP Sports One

DRV

DRV

TEAMS

COMPETITIONS

CLUB

ANALYSES

MEDIA

TRAINING MANAGEMENT

SEARCH

USER

PLAYER DETAILS

KARL SCHULZE

AREA NAME

Max

Heavy

Medium

Low

Very Low

HEART RATE VALUE

150bpm - 170bpm

141bpm - 150bpm

123bpm - 141bpm

104bpm - 123bpm

88bpm - 104bpm

FITNESS HISTORY

Search

From

MMM d, y

To

MMM d, y

INJURIES

Name	Description	Reference	Date Range	Training Exemption	Doping- Relevant
Cut	Accident at home - needed 4 stitches		Oct 19, 2016 - Oct 26, 2016		
Back Extensor Exerci...	3 x 20 deep stand with 6kg dumb-bell	Lower Back	Oct 17, 2016 - Apr 29, 2017		
Lower Back	Disbalance between upper and lower part of the back. Additionally, it seems that there is also a disbalance between abdominal muscles and back, which leads to slight rotation of the hip.		Oct 17, 2016 - Apr 29, 2017		
Intervertebral disc	Karl reports about pain in the lower part of this back. It seems that he is having some issue with his intervertebral.		Oct 17, 2016 - Dec 31, 2016		

INJURIES

TRAINING LIST

Attended Trainings: 0

Participation: 0%

★★★★★

Date Range

Today ~ 7 days

Apr 17, 2017 - May 1, 2017

SAP Sports One

The screenshot displays the SAP Sports One Training Management interface. At the top, a navigation bar includes the DRV logo, a user profile icon, and a menu with options: TEAMS, COMPETITIONS, CLUB, ANALYSES, MEDIA, and TRAINING MANAGEMENT. Below this, a secondary bar shows 'MANNER: DOPPELVIERER' and a 'TRAINING' button with a calendar icon. The main section is titled 'TRAINING MANAGEMENT' and features filters for 'Target Group' (Männer-Doppelvierer), 'Team' (Individual), and 'Karl Schütze'. A calendar view for the week of April 23-29, 2017, is shown, with tabs for Day, Week, Month, and 3 Months. The calendar grid displays training sessions: 'HRV' (yellow) at 8 AM, 'Rowing' (blue) at 10 AM, and 'Running' (pink) at 13 PM, all occurring from Sunday to Saturday. A sidebar on the left contains icons for 'TRAINING MANAGEMENT', a chart, and a social media icon.

DRV

TEAMS COMPETITIONS CLUB ANALYSES MEDIA TRAINING MANAGEMENT

MANNER: DOPPELVIERER

TRAINING

TRAINING MANAGEMENT

Target Group: Männer-Doppelvierer Team: Individual Karl Schütze

Day Week Month 3 Months

< CW 17, Apr 23, 2017 - Apr 29, 2017 >

	Sun 23	Mon 24	Tue 25	Wed 26	Thu 27	Fri 28	Sat 29
8	HRV	HRV	HRV	HRV	HRV	HRV	HRV
9							
10	Rowing	Rowing	Rowing	Rowing	Rowing	Rowing	Rowing
11							
12							
13	Running	Running	Running	Running	Running	Running	Running
14							
15							
16							
17							
18							

more hours

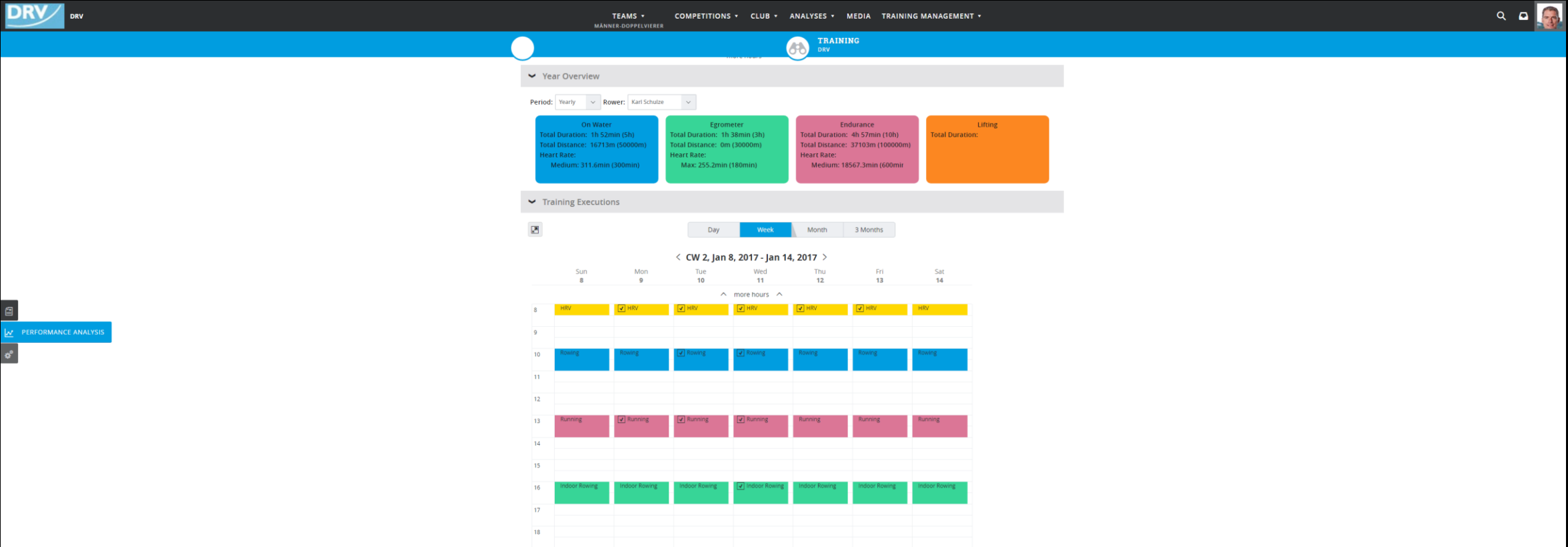
more hours

TRAINING MANAGEMENT

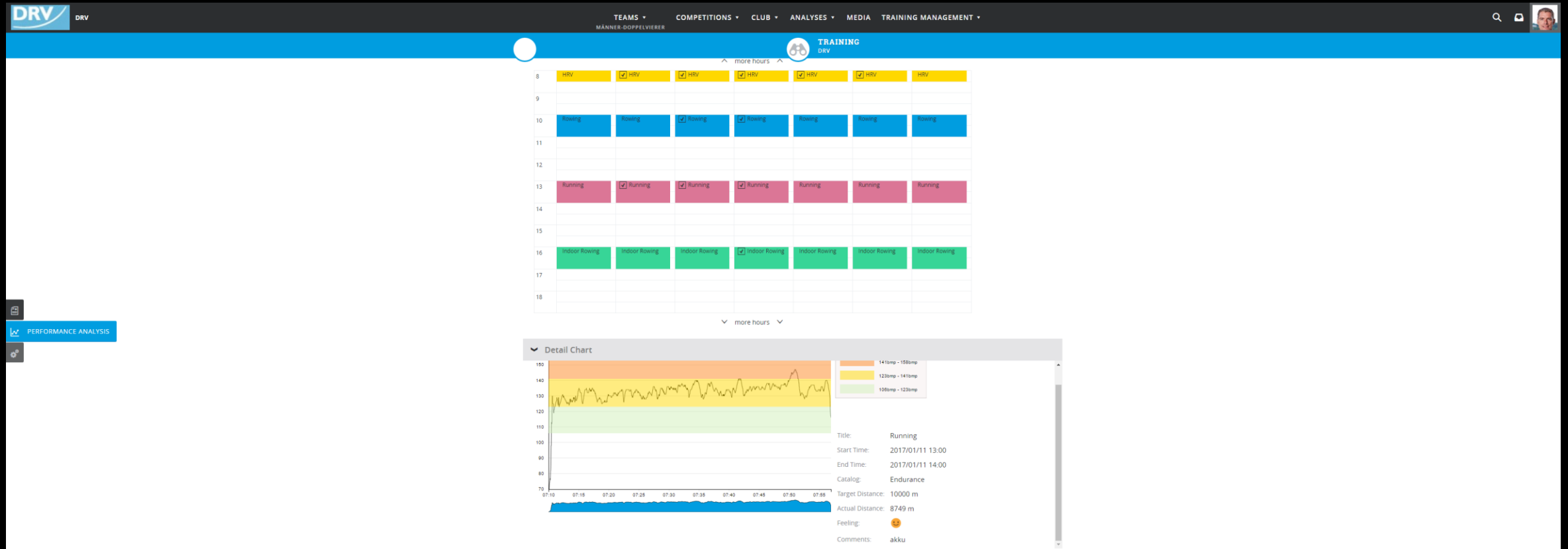
Chart icon

Social media icon

SAP Sports One



SAP Sports One



Benefits

Benefits

Objective measurements allow:

- Training program adjustments on shorter feedback cycles
- Training program adjustments on personalized strength and weaknesses

SAP's IoT infrastructure provides:

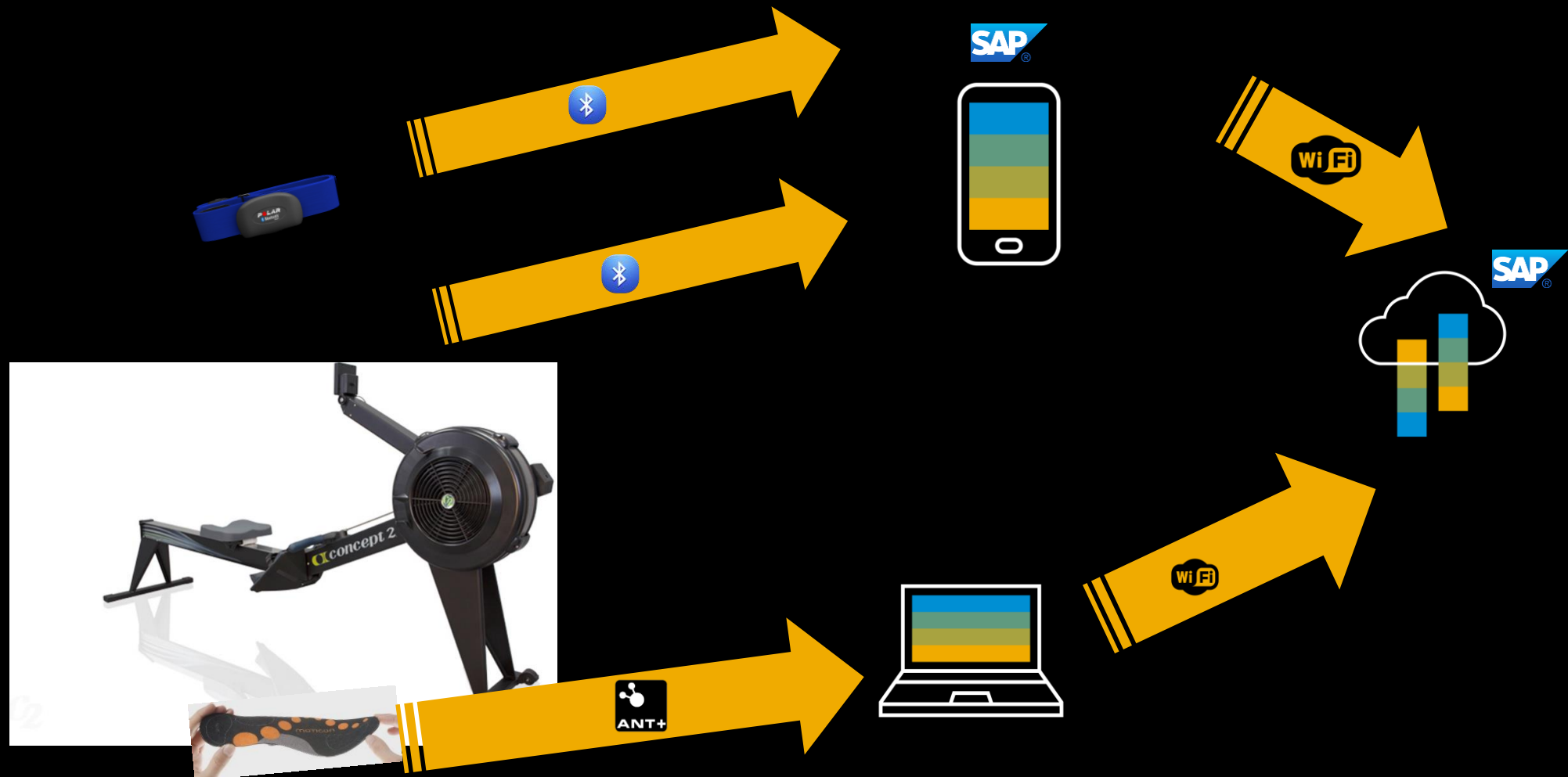
- A scalable and secure platform with enterprise messaging
- Real-time data analysis

Benefits

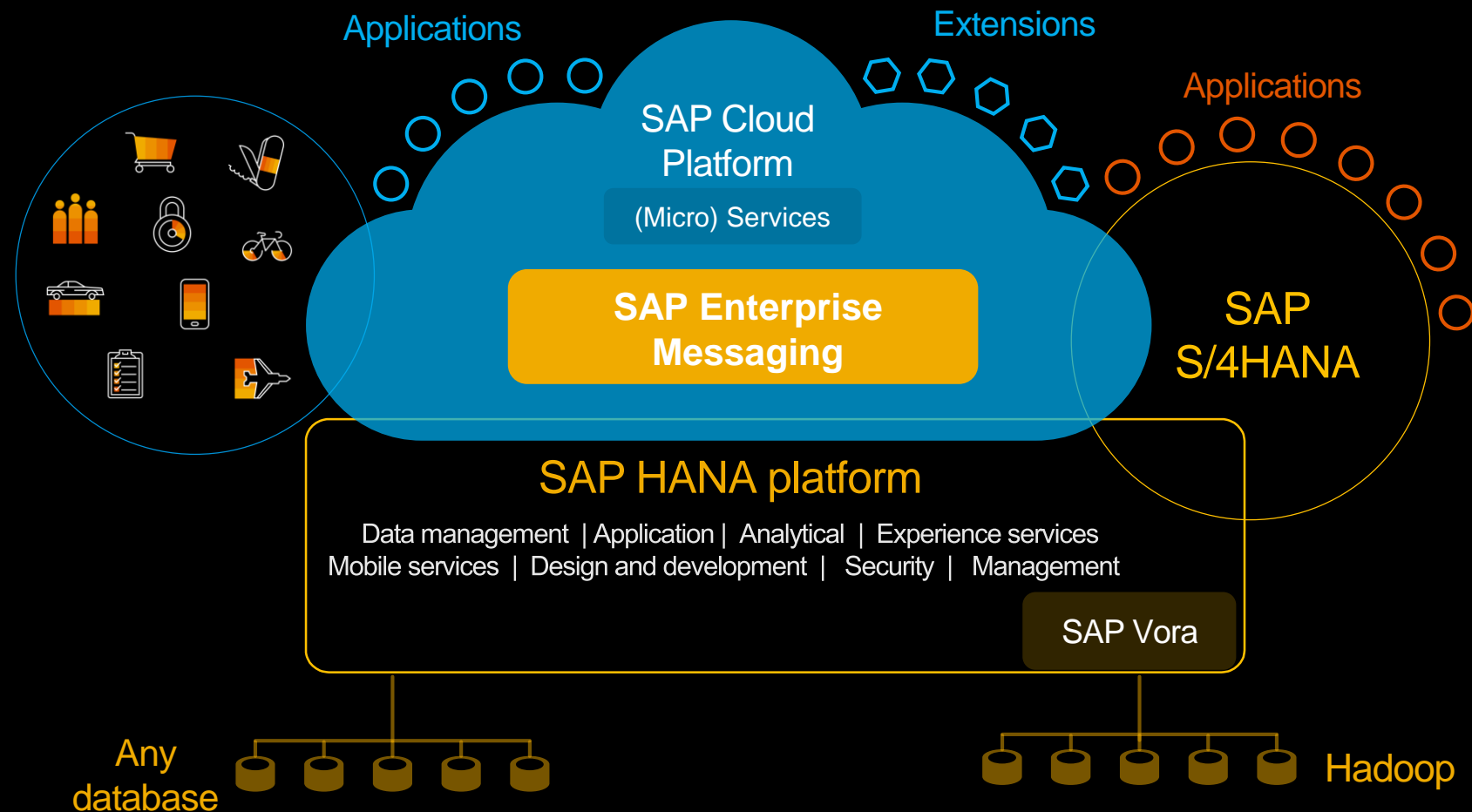
- DRV trust in SAP
- A solution for DRV that will last for the next two Olympic decades

DEMO

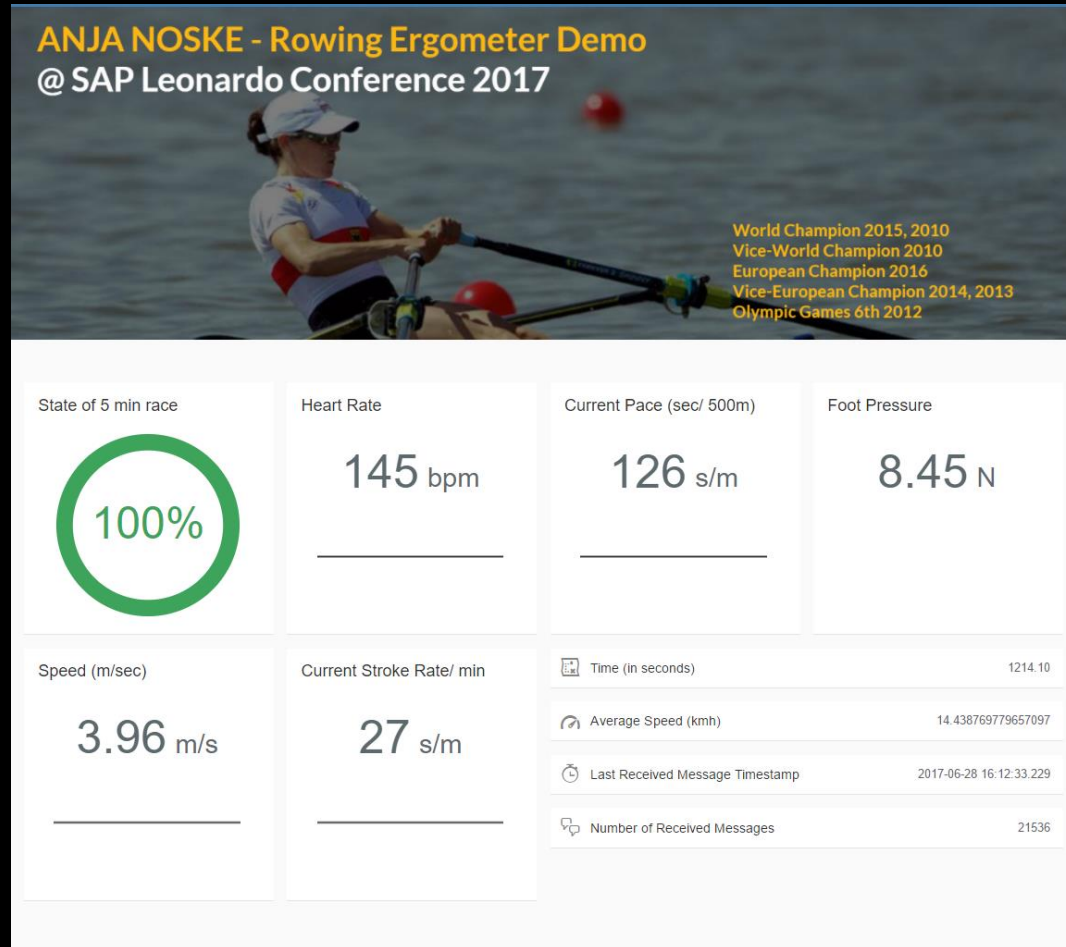
Solution architecture



SAP Enterprise Messaging

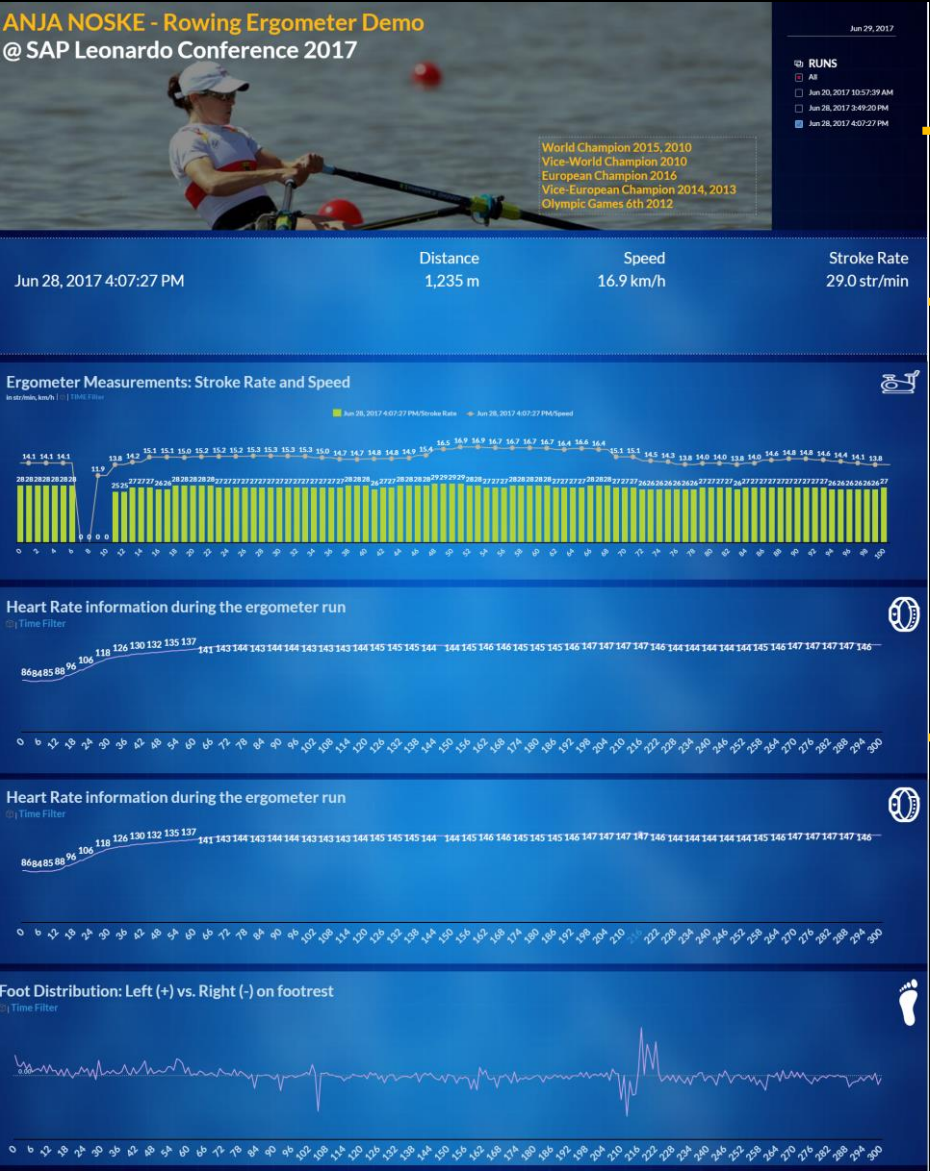


DEMO – Real-time dashboard with SAP Leonardo Internet of Things



Various types of
sensor information

DEMO – Analytics with SAP Leonardo Analytics



Takeaways

- The IoT is a key success factor in competing on a world-class level.
- DRV considers SAP to be a trusted partner for long-term approaches (next two Olympic cycles)
- SAP Leonardo offers a combination of machine learning, PaaS, analytics, IoT, Big Data, and blockchain.

Thank you.

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