

# USING VALD FORCEDECKS TECHNOLOGY TO TRANSFORM SPORTS PERFORMANCE IN RWANDA.

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## Introduction

Modern sport is no longer driven only by instinct, observation, or traditional coaching methods. Around the world, elite teams, professional athletes, rehabilitation centers, and sports organizations now rely heavily on sports science and performance technology to understand the body with precision and accuracy.

As an Athlete Testing & Performance Consultant, my role is to bridge the gap between sports performance and technology by using advanced assessment tools such as VALD ForceDecks to analyze how athletes move, produce force, absorb force, recover, and perform.

Through detailed testing and performance analysis, I help athletes, coaches, and organizations understand:

- Where an athlete is strong
- Where weaknesses exist
- How asymmetries affect performance
- Which injury risks may be present
- How performance can be improved efficiently
- How rehabilitation progress can be measured objectively

Rather than coaching through assumptions, guesses, or opinions, my work focuses on coaching with measurable evidence, curves, force data, movement analysis, and objective results.

The future of sport belongs to organizations and athletes who understand data-driven performance.

This is the future I aim to help build in Rwanda.

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## What Are VALD ForceDecks?

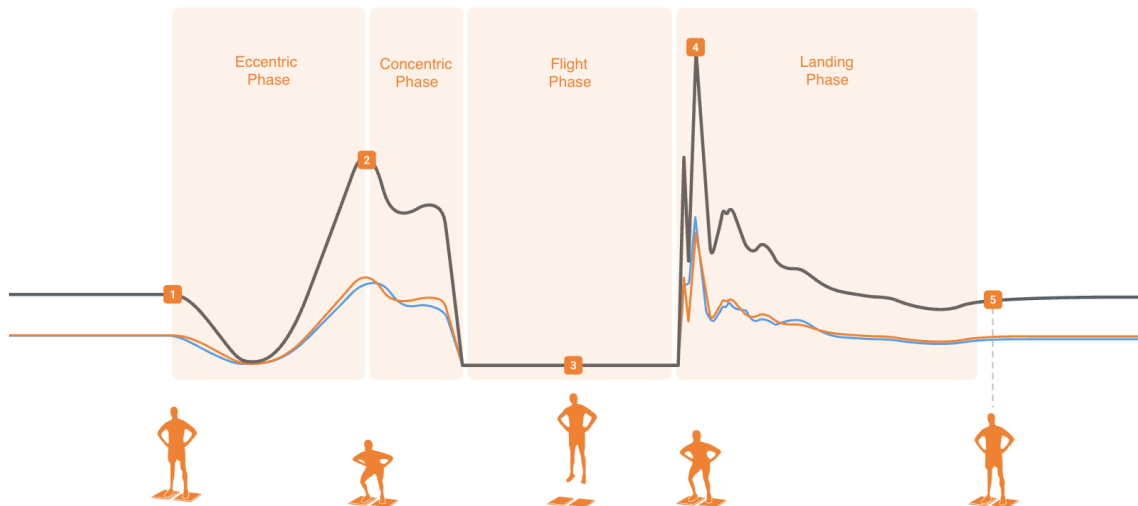
VALD ForceDecks are advanced dual force plate systems designed to measure and analyze human movement, strength, power, balance, and neuromuscular performance.

These plates are widely used by:

- Professional sports teams

- Olympic programs
- Rehabilitation clinics
- Universities with a sports background
- High-performance centers
- Elite performance coaches

ForceDecks work by measuring ground reaction forces through the piezoelectric or strain gauges, the forces produced between the body and the ground during movement (GRF).



Every jump, landing, push, squat, or explosive movement produces force.

The ForceDecks capture these forces with extremely high precision and provide valuable metrics that help understand how an athlete performs (Of course if proper cues and form are maintained).

The system transforms movement into measurable data, graphs, and performance curves that can be interpreted scientifically.

This allows performance professionals to:

- Identify strengths and weaknesses
- Monitor fatigue and readiness
- Detect asymmetries between limbs
- Track rehabilitation progress
- Improve explosive performance
- Reduce injury risk
- Build individualized training programs

Instead of relying only on visual observation, ForceDecks provide objective evidence.

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# My Role as an Athlete Testing & Performance Consultant

My role is not only **to collect data**.

My responsibility is to interpret that data and transform it into practical performance solutions for athletes.

Using ForceDecks technology, I conduct multiple tests and assessments that help evaluate:

- Explosive strength
- Lower body power
- Reactive ability
- Jump performance
- Landing mechanics
- Neuromuscular fatigue
- Limb asymmetries(L&R)
- Movement efficiency
- Force production capacity
- Eccentric and concentric control (EPV)

After testing, I analyze the data carefully and explain the results in a simple and understandable way for athletes, coaches, teams, and rehabilitation professionals.

This process allows athletes to clearly understand:

- What their body is doing well
- Which weaknesses require improvement
- How their movement patterns affect performance
- How to train more effectively
- How to reduce injury risks

Every athlete is different.

**Two athletes may jump the same height but produce force differently.**

**One athlete may compensate heavily on one leg. Another may struggle with eccentric force absorption. Another may produce high peak force but have poor reactive strength.**

**Without technology, many of these details remain invisible.**

**With ForceDecks, they become measurable.**

**My job is to explain these measurements and create a pathway toward improved athletic performance.**

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# Key Performance Metrics Explained

## Reactive Strength Index (RSI)

Reactive Strength Index (RSI) is one of the most important performance indicators in explosive sports.

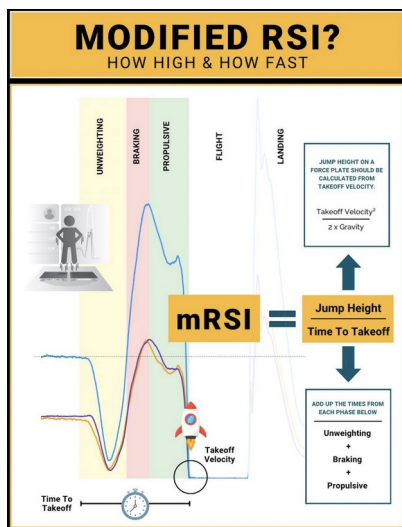
RSI measures how efficiently an athlete transitions from absorbing force into producing force.

In simple terms, it evaluates how quickly and powerfully an athlete can react.

RSI is especially important in sports requiring:

- Jumping
- Sprinting
- Rapid direction changes
- Explosive movement
- Volleyball
- Basketball
- Football
- Rugby

By analyzing RSI, I can determine whether an athlete needs improvements in explosiveness, stiffness, plyometric ability, or reactive performance.



## Rate of Perceived Exertion (RPE)

RPE refers to how difficult an athlete perceives a training session or physical effort to be.

An athlete may report feeling fine, but ForceDecks testing may show:

- Reduced jump height

- Lower peak force
- Longer contact time
- Poor reactive strength

This combination helps identify hidden fatigue or reduced readiness (within time & continuous tests).

Monitoring RPE alongside objective data allows better decisions regarding:

- Recovery
- Training load
- Performance readiness
- Overtraining prevention

<b>RPE Scale</b> (Rate of Perceived Exertion)	
<b>1</b>	<b>Very Light Activity</b> (anything other than complete rest)
<b>2-3</b>	<b>Light activity</b> (feels like you can maintain for hours, easy to breath and carry on a conversation)
<b>4-5</b>	<b>Moderate Activity</b> (feel like you can exercise for long periods of time, able to talk and hold short conversations)
<b>6-7</b>	<b>Vigorous Activity</b> (on the verge of becoming uncomfortable, short of breath, can speak a sentence)
<b>8-9</b>	<b>Very Hard Activity</b> (difficult to maintain exercise intensity, hard to speak more than a single word)
<b>10</b>	<b>Max Effort</b> (feels impossible to continue, completely out of breath, unable to talk)

## Eccentric Force

Eccentric force refers to the body's ability to absorb force during movement.

This occurs when muscles lengthen under tension.

Examples include:

- Landing from a jump
- Decelerating while sprinting
- Lowering into a squat
- Changing direction rapidly

Eccentric strength is critical because athletes must first absorb force safely before producing force effectively.

Poor eccentric control may lead to:

- Knee injuries

- ACL injury risk
- Poor landing mechanics
- Reduced movement efficiency
- Increased stress on joints

ForceDecks allow detailed analysis of how athletes absorb force during landing and deceleration.




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## The Role of ForceDecks in Rehabilitation

ForceDecks are also extremely valuable during rehabilitation and return-to-play processes.

After injury, athletes often recover visually before they recover functionally.

An athlete may appear healthy but still possess:

- Strength deficits
- Force asymmetries
- Poor landing mechanics
- Reduced confidence
- Compensation strategies

ForceDecks help objectively evaluate whether an athlete is truly ready to return safely.

This is especially important following:

- ACL injuries
- Knee rehabilitation (such as jumper's knee or patellar Tendonitis)
- Ankle injuries
- Hamstring injuries
- Tendon rehabilitation

By measuring force production and asymmetries, rehabilitation professionals can monitor:

- Recovery progression

- Limb symmetry restoration
- Neuromuscular readiness
- Functional strength recovery

This reduces guesswork in rehabilitation decisions.

Athletes, coaches, and therapists gain measurable evidence regarding recovery progress.

The goal is not simply to return athletes to play.

The goal is to return them stronger, safer, and more prepared.

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## Why Sports Technology Matters in Rwanda

Rwanda possesses tremendous athletic potential.

Our country continues to grow in sports participation, talent development, and international competitiveness.

However, one major area that still requires development is sports science and performance technology integration.

Many athletes train extremely hard.

But hard work alone is no longer enough in modern sport.

Elite performance today depends on:

- Objective testing
- Data-driven decision making
- Monitoring systems
- Injury prevention strategies
- Scientific athlete development

Technology like ForceDecks allows Rwanda to move toward international performance standards.

This creates opportunities to:

- Develop stronger athletes
- Reduce preventable injuries
- Improve athlete longevity
- Optimize performance training
- Support rehabilitation scientifically
- Educate coaches and athletes
- Build professional sports environments

Most importantly, technology removes uncertainty.

Instead of saying:

“I think the athlete is improving.”

We can now say:

“The athlete improved force production by 12%, reduced asymmetry by 8%, and improved reactive strength significantly.”

Now the coach has evidence based on performance development and not on personal opinions.

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## My Vision for Athlete Performance Development

My mission is to help athletes and organizations understand the body beyond what the eyes can see.

Through ForceDecks technology and sports science principles, I aim to:

- Educate athletes on performance metrics
- Help coaches make informed decisions
- Improve athletic performance scientifically
- Reduce injury risks
- Support rehabilitation pathways
- Promote long-term athlete development
- Build a stronger sports science culture in Rwanda

Performance is not random.

Movement leaves measurable information.

Every jump, landing, and explosive action tells a story about how the body functions.

My responsibility is to interpret that story through data, curves, and performance metrics, then transform it into actionable solutions that help athletes reach higher levels.

The future of sports performance in Rwanda should be built on:

- Science
- Technology
- Education
- Precision
- Measurable progress

This is the direction modern sport is moving toward globally.

And Rwanda has the potential to be part of that future.

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## Conclusion

VALD ForceDecks represent more than just technology.

They represent a shift toward intelligent athlete development.

By combining sports science, performance testing, force analysis, and athlete education, we can better understand how athletes move, perform, recover, and improve.

As an Athlete Testing & Performance Consultant, my role is to ensure that athletes do not simply train harder but train smarter.

Through objective testing and scientific interpretation, athletes gain clarity about:

- Their strengths
- Their weaknesses
- Their asymmetries
- Their readiness
- Their performance potential

The goal is not only to improve performance.

The goal is to help athletes become healthier, stronger, safer, and more efficient throughout their sporting careers.

The future of sport belongs to those who understand performance through evidence.

And with the right technology, education, and commitment, Rwanda can build athletes capable of competing at the highest levels.

Below is an example of my personal results on an easy Sunday workout:

They type of results shown through two tests done, 3 reps each.

-The Abakalov Jump

-The CMJ jump (Counter movement jump)

And many more results which are not attached here can be seen, analyzed and assessed for bettering the athlete to achieve his maximum effort, for a better performance and better play at his/her game.

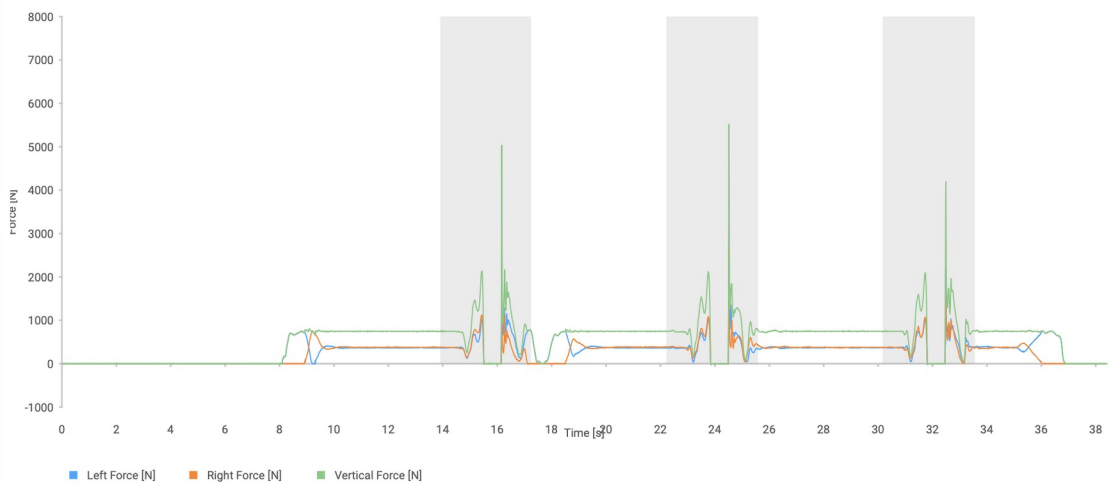


Result type: **Both** | Calculation type: **Mean** | Group test type: **Yes**

### Tests (1)

PROFILE	DATE	TAGS	REPS	BW [LBS]
Jules Valentin Kabagamba	09/05/2026	0	3	167.5
1 Test	5:03 PM			

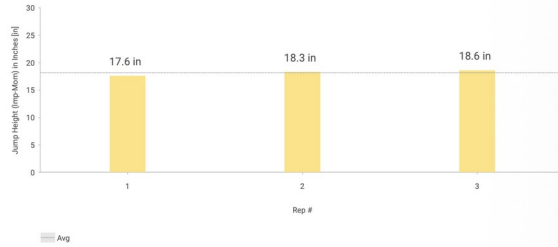
### Force Trace



Result type: Both | Calculation type: Mean | Group test type: Yes

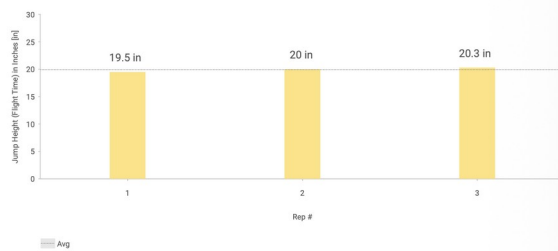
**Jump Height (Imp-Mom) in Inches [in]**

Range	Average	CoV	SD
17.6 - 18.6	18.2	2.4%	0.4



**Jump Height (Flight Time) in Inches [in]**

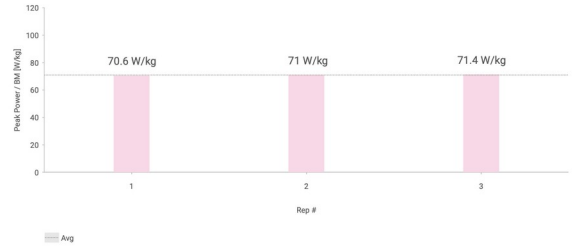
Range	Average	CoV	SD
19.5 - 20.3	19.9	1.6%	0.3



Result type: Both | Calculation type: Mean | Group test type: Yes

**Peak Power / BM [W/kg]**

Range	Average	CoV	SD
70.6 - 71.4	71	0.5%	0.3



**RSI-modified [m/s]**

Range	Average	CoV	SD
0.63 - 0.7	0.67	4.4%	0.03

