



INDIANA STRENGTH BASEBALL

**CHRIS VIRTUE
STRENGTH COACH**



VIRTUE IS IN HIS 17TH YEAR WITHIN THE INDIANA STRENGTH AND CONDITIONING DEPARTMENT AND IS CURRENTLY THE ASSISTANT DIRECTOR OF ATHLETIC PERFORMANCE FOR THE INDIANA UNIVERSITY DEPARTMENT OF INTERCOLLEGIATE ATHLETICS. HE IS RESPONSIBLE FOR THE DEVELOPMENT AND IMPLEMENTATION OF SPORT SPECIFIC STRENGTH, CONDITIONING, FLEXIBILITY, SPEED AND AGILITY PROGRAMS FOR INDIANA BASEBALL

IN ADDITION TO THE RESPONSIBILITY OF HIS PRIMARY PROGRAMS HE HAS SERVED TWO STINTS AS THE INTERIM HEAD ATHLETIC PERFORMANCE COACH FOR THE INDIANA MEN'S BASKETBALL PROGRAM, SERVED FIVE YEARS AS AN ASSISTANT ATHLETIC PERFORMANCE COACH FOR THE INDIANA MEN'S BASKETBALL PROGRAM, SERVED 3 YEARS AS AN ASSISTANT ATHLETIC PERFORMANCE COACH FOR THE INDIANA FOOTBALL PROGRAM. VIRTUE ALSO CREATED THE INDIANA ATHLETICS APPLIED SPORTS SCIENCE, PERFORMANCE AND TECHNOLOGY PROGRAM. IN 17 YEARS AT INDIANA UNIVERSITY VIRTUE HAS SERVED AS THE HEAD ATHLETIC PERFORMANCE COACH FOR NINE DIFFERENT ATHLETIC PROGRAMS.





FLOW-STATE TRAINING

INDIANA STRENGTH

VELOCITY-BASED

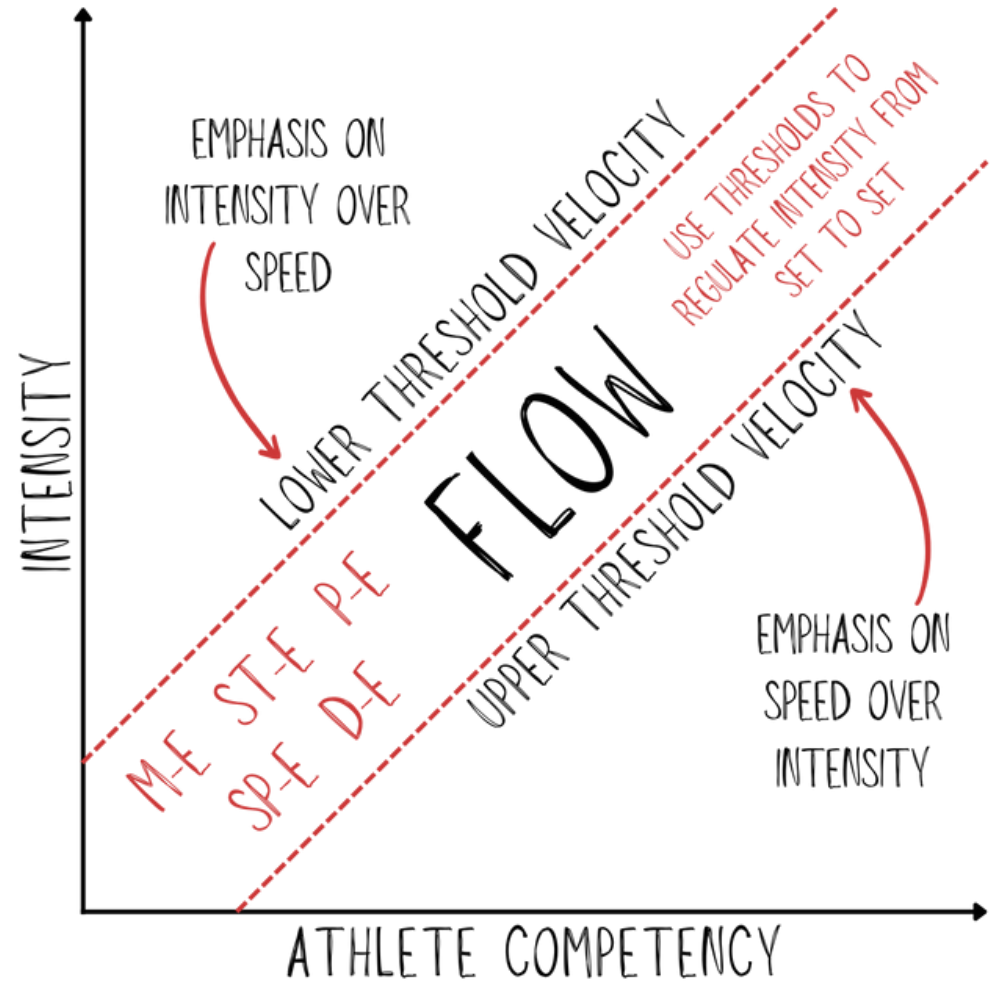
AUTO-REGULATION

FLOW STATE



**"OPTIMAL STATE OF
CONSCIOUSNESS
WHERE WE FEEL OUR
BEST AND PERFORM
OUR BEST"**

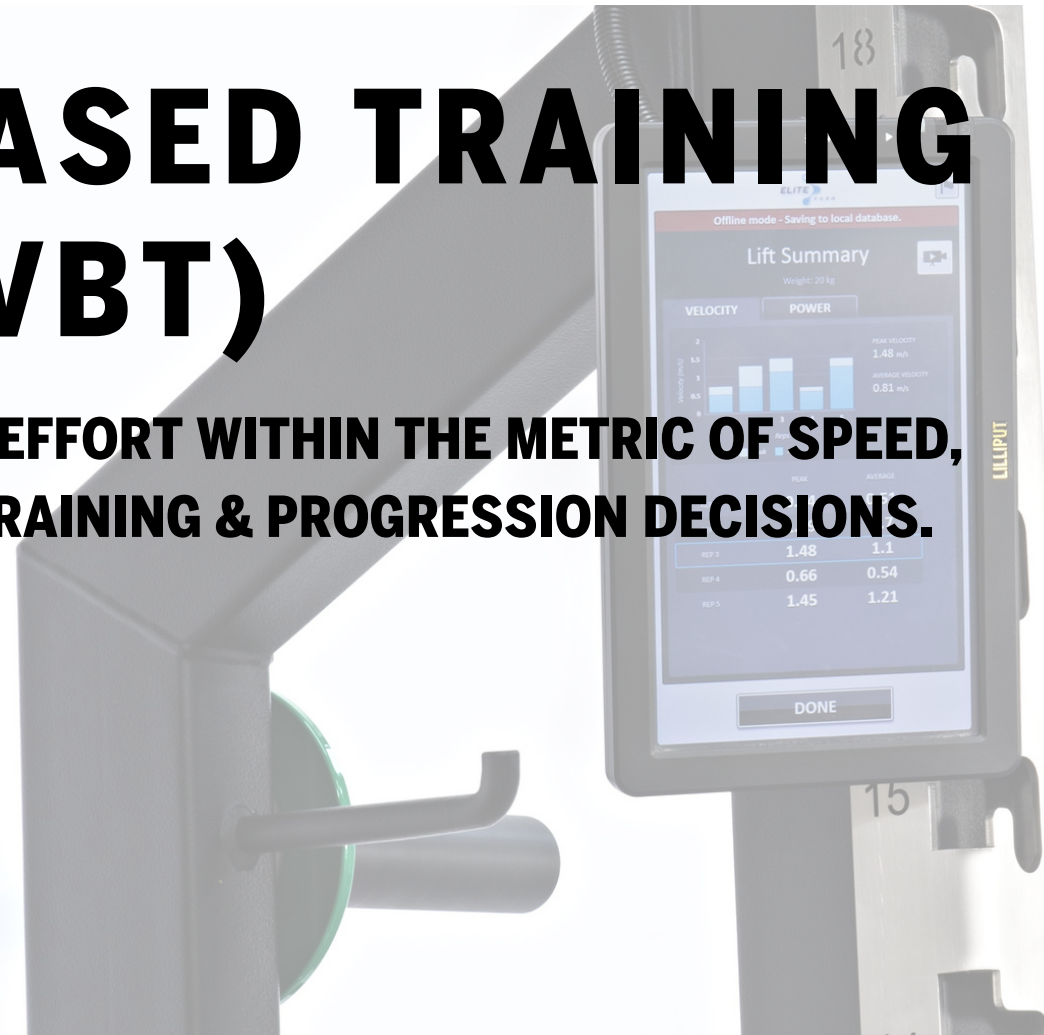
-FIRAS ZAHABI





VELOCITY BASED TRAINING (VBT)

**MEASURING & MANIPULATING THE EFFORT WITHIN THE METRIC OF SPEED,
OR VELOCITY TO BETTER INFORM TRAINING & PROGRESSION DECISIONS.**





AUTO-REGULATION

SUBJECTIVE REGULATORS

- **RATING OF PERCEIVED EXERTION (RPE)**
- **REPS IN RESERVE (RIR)**
- **EXPERIENCE & FEEL**

OBJECTIVE REGULATORS

- **VELOCITY**
- **PERCENTAGES**
- **TO FAILURE SETS (AMRAP)**



CONCURRENT SYSTEM

**COMPRISING A COLLECTION OF
INDEPENDENT COMPONENTS WHICH MAY
PERFORM OPERATIONS CONCURRENTLY —
THAT IS, AT THE SAME INSTANT OF TIME.**



CONCURRENT SYSTEM IN THE WEIGHT ROOM

MAXIMAL EFFORT

DYNAMIC EFFORT

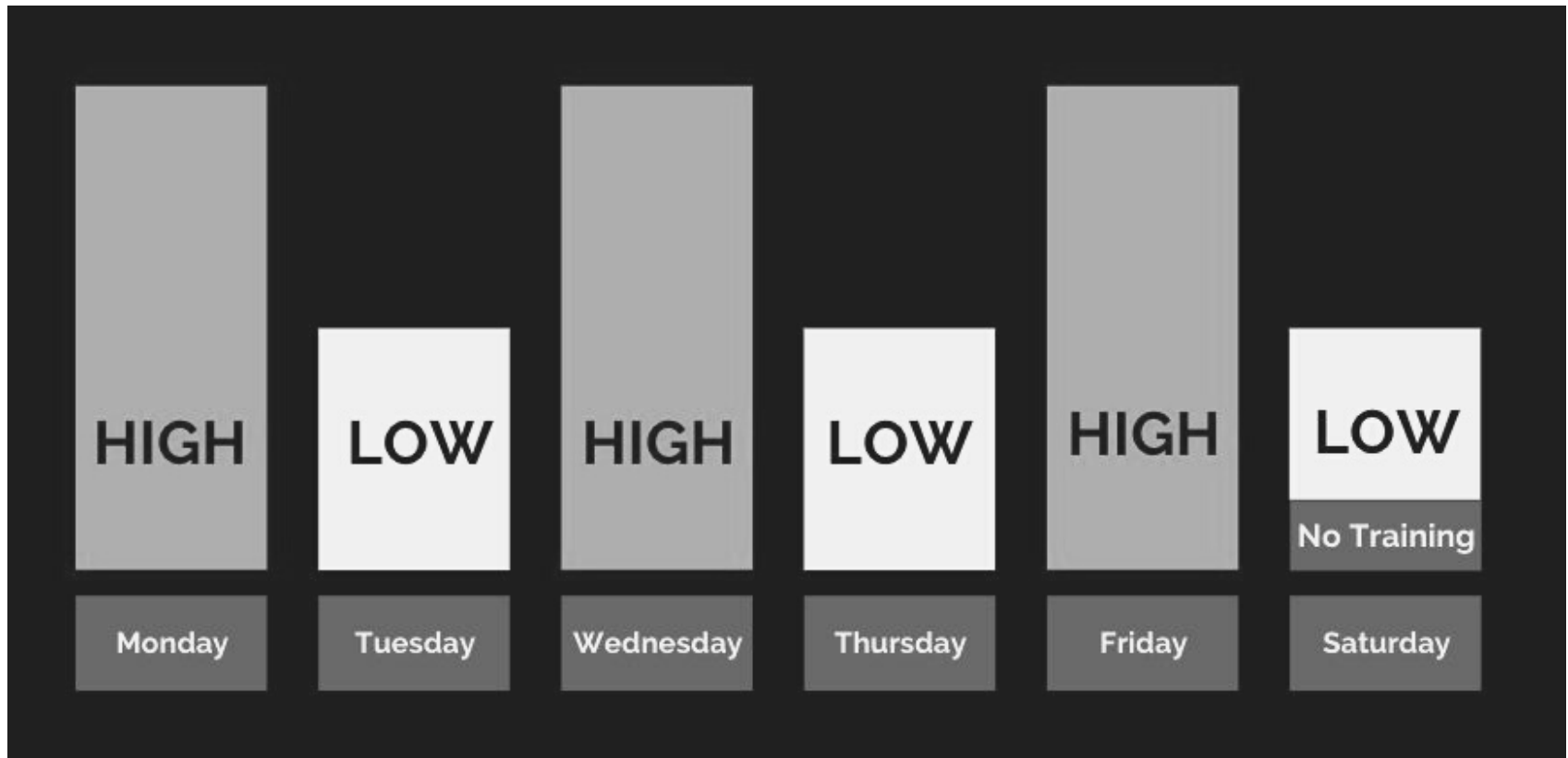
REPETITION

ACCOMMODATING RESISTANCE

LAW OF ACCOMMODATION



CONCURRENT BALANCE

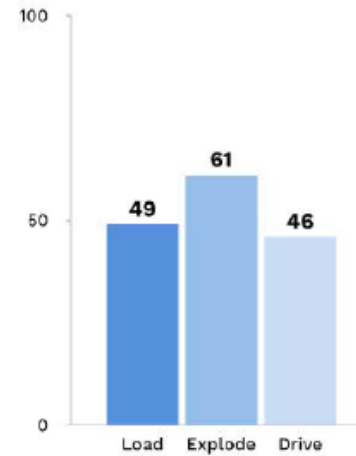
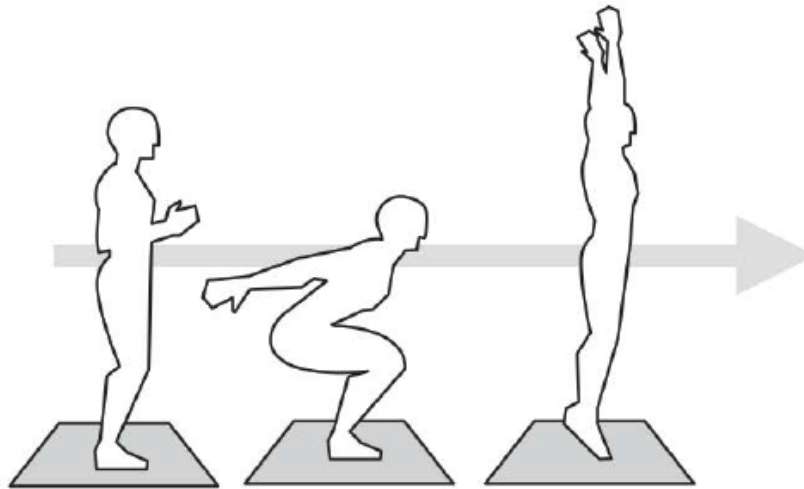




ATHLETIC PROFILING

FORCEDECKS

DUAL FORCE PLATE SYSTEM



LOAD

LOAD is the first movement measured and represents an individual's ability to generate force.

EXPLODE

EXPLODE is the transitional stage and measures an individual's ability to transfer force.

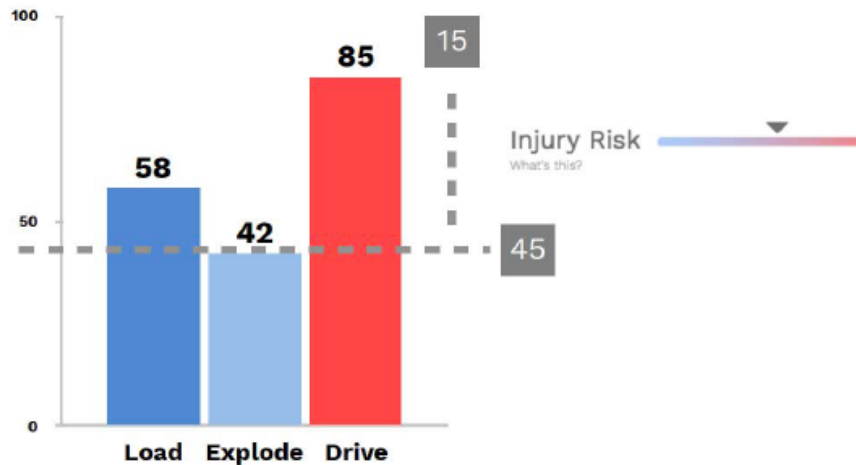
DRIVE

DRIVE is a product of force and time. It represents an individual's ability to finish movements smoothly.



Relative Assessment

A score **below 45** is an indicator of a lack of strength relative to their peers, and also indicates a risk for injury.



Imbalance & Injury Risk

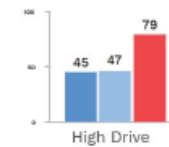
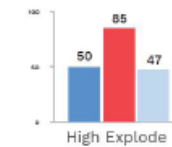
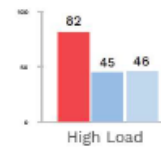
When variables are more than **15 points away** from each other, the athlete is mechanically imbalanced and at an increased risk of injury.

Examining Movement Signatures

Risk Analysis

A Movement Signature™ is considered 'High' when there is a variable 15 greater than others. A Movement Signature™ is considered "Low" is a variable is below 45 or 15 less than others. A more balanced scan signifies and lower risk of injury and a more efficient mover.

High Variables

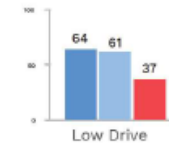
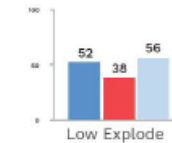
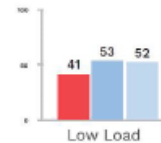


INSIGHT: Inability to absorb force effectively by flexing
RISK LOCATION: Foot (Lisfranc), Knee (ACL/Meniscus)

INSIGHT: Moves through short range of motion due to lack of mobility/strength
RISK LOCATION: Labrum Tears (Hip), Low Back (Spondy)

INSIGHT: Relies on momentum due to lack of eccentric strength/timing
RISK LOCATION: Ligamentous (UCL, Spinal)

Low Variables



INSIGHT: Inability to develop tension due to lack of strength or ankle range of motion
RISK LOCATION: Patella-femoral (Tendinosis)

INSIGHT: Poor postural stability
RISK LOCATION: Lumbopelvic hip pain (Osteitis Pubis), Low Back

INSIGHT: Inability to finish a movement smoothly
RISK LOCATION: Musculo-tendinous (Hamstring, Groin, Quad strain)



IMPLEMENTATION OF DATA

SMART

SPECIFIC

MEASURABLE

ACTIONABLE

RELEVANT

TIMELY



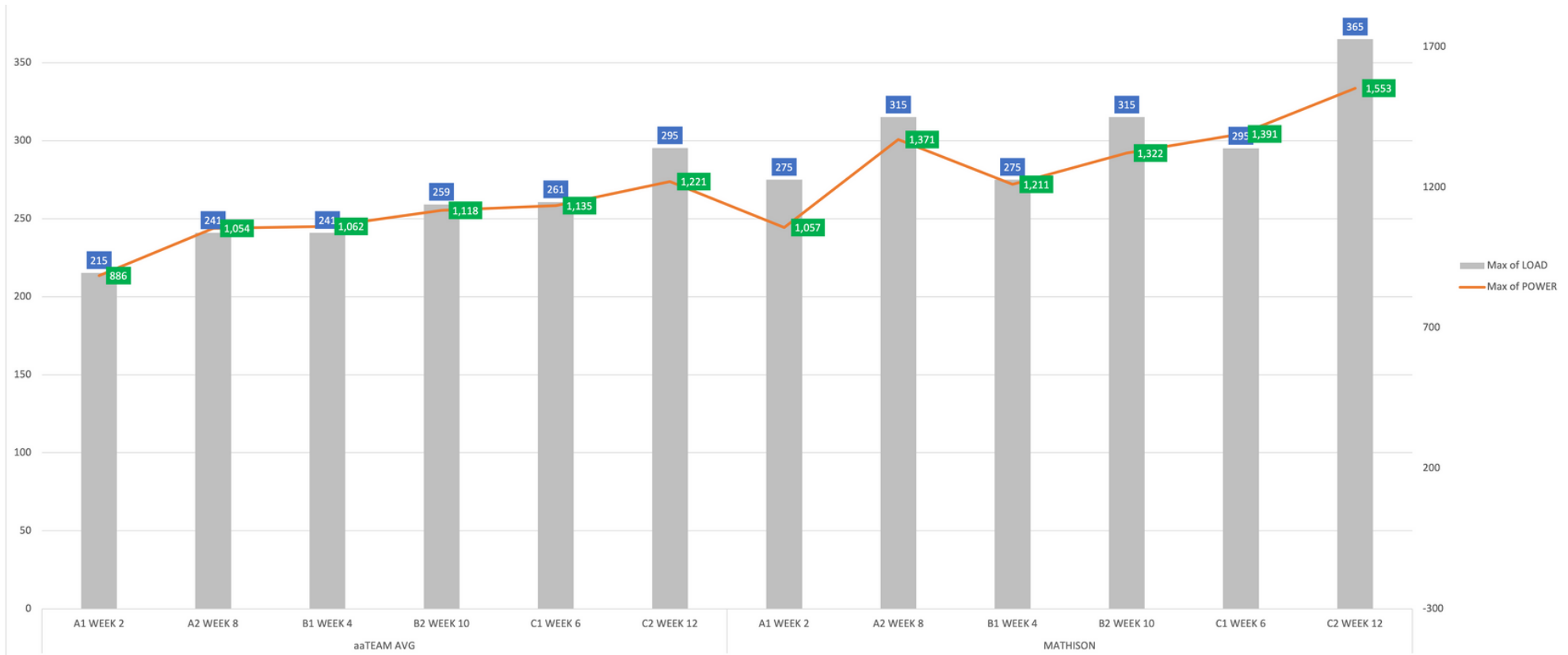


OBJECTIVE INDIVIDUALIZATION

NAME	JUMP (IN)	MRSI	LOAD	EXPLODE	DRIVE	SQUAT / DEADLIFT	
						BAND	SPEED
BALL	31.3	0.70	11391	1881	268	RED	FREE REIGN
BODE	30.1	0.61	7007	1804	243	ORANGE	HIGH THRESHOLD
BOTHWELL	35.3	0.70	7509	1739	247	ORANGE	HIGH THRESHOLD
BRENCZEWSKI	32.0	0.61	4566	1550	205	ORANGE	LOW THRESHOLD
BURTON	25.5	0.51	7391	1811	235	RED	HIGH THRESHOLD
CERNY	35.6	0.68	8402	1734	237	GREEN	LOW THRESHOLD
COLOPY	31.6	0.60	7870	2066	286	GREY	HIGH THRESHOLD
DECKERPETTY	32.1	0.63	5354	1790	296	NONE	LOW THRESHOLD
DEGOTI	34.1	0.77	11278	1682	244	RED	LOW THRESHOLD
ELLIS	28.4	0.52	6393	1951	229	GREY	HIGH THRESHOLD
EY	29.8	0.68	13930	1929	280	RED	FREE REIGN
FOLEY	35.8	0.74	10332	2093	324	RED	FREE REIGN
GLASSER	36.9	0.91	8510	1975	240	RED	FREE REIGN
GOFORTH	33.4	0.56	6727	1786	244	ORANGE	HIGH THRESHOLD

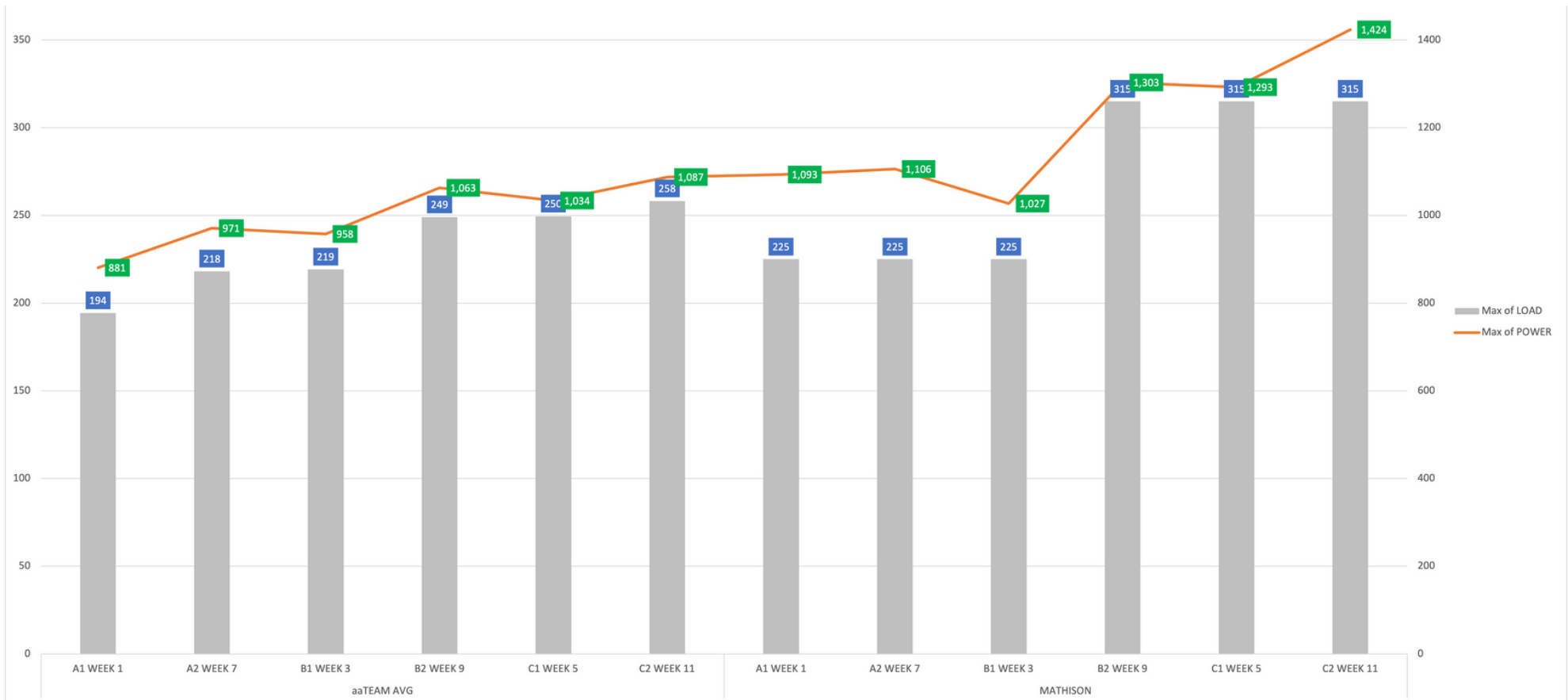


ELITEFORM : DEADLIFT LOAD VS POWER PROGRESSION



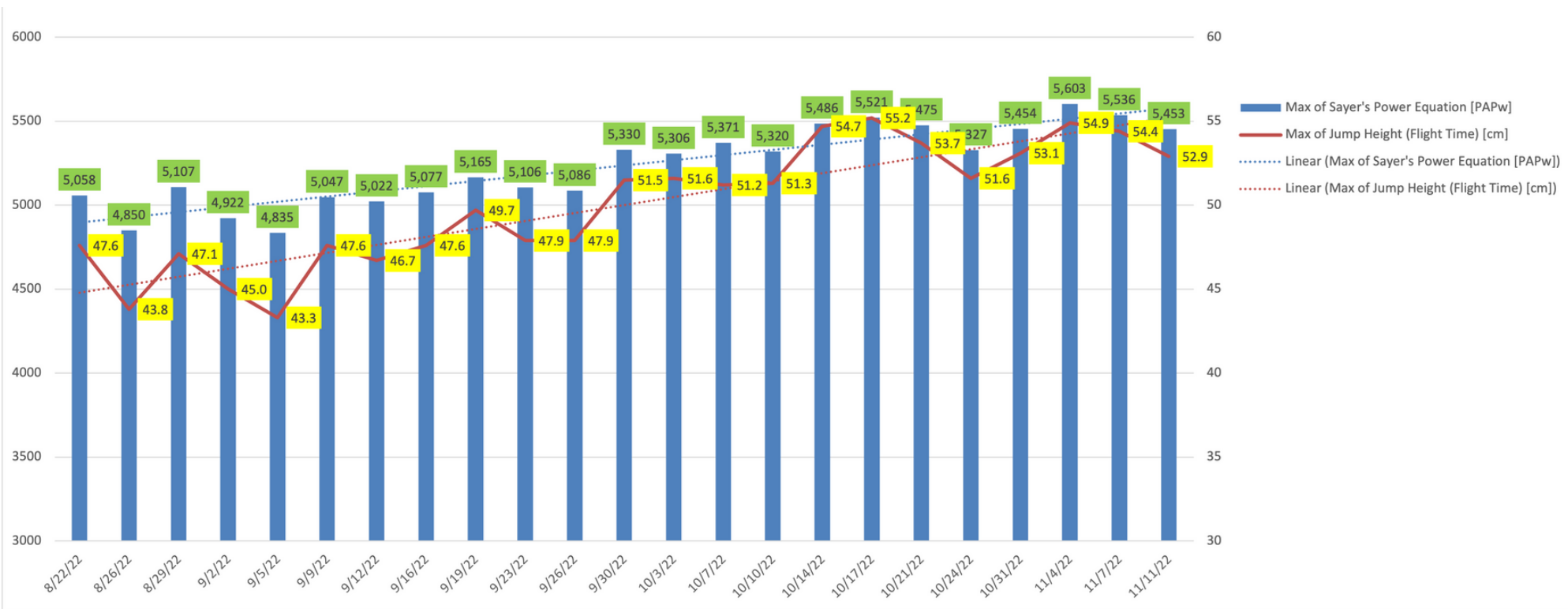


ELITEFORM : SQUAT LOAD VS POWER PROGRESSION





FORCE DECK RELATIVE POWER VS JUMP HEIGHT





CARTER MATHISON

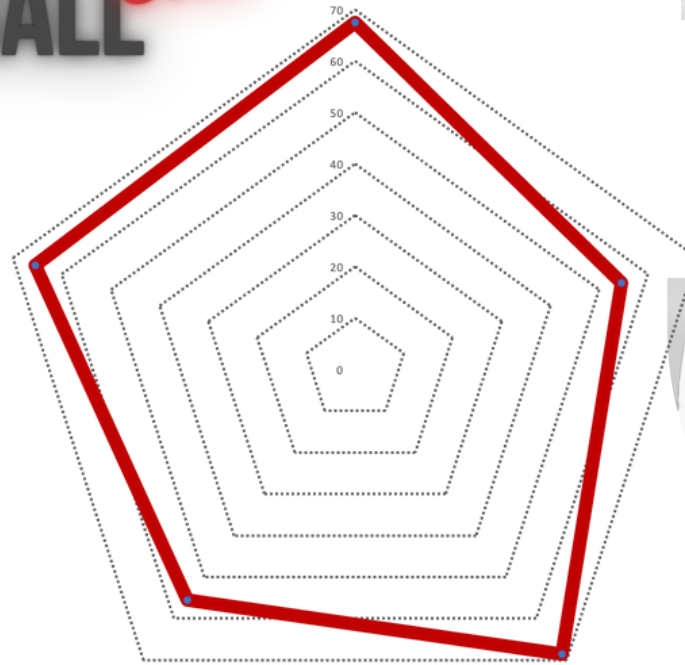
CARTER MATHISON



POWER 2ND
AGILITY 5TH
FITNESS 4TH
VERTICAL 3RD
ACCELERATE 2ND

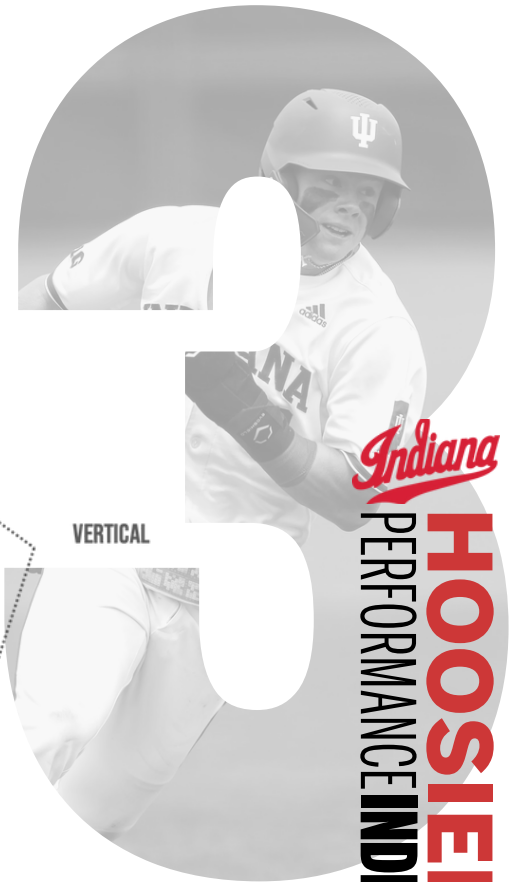
HPI SCORE 256
OVERALL 3RD

ACCELERATION



FITNESS

POWER



Indiana

HOOSIER
PERFORMANCE INDEX