LOS ALAMOS

TRACK AND FIELD

Building a CHAMPIONSHIP Sprint Program

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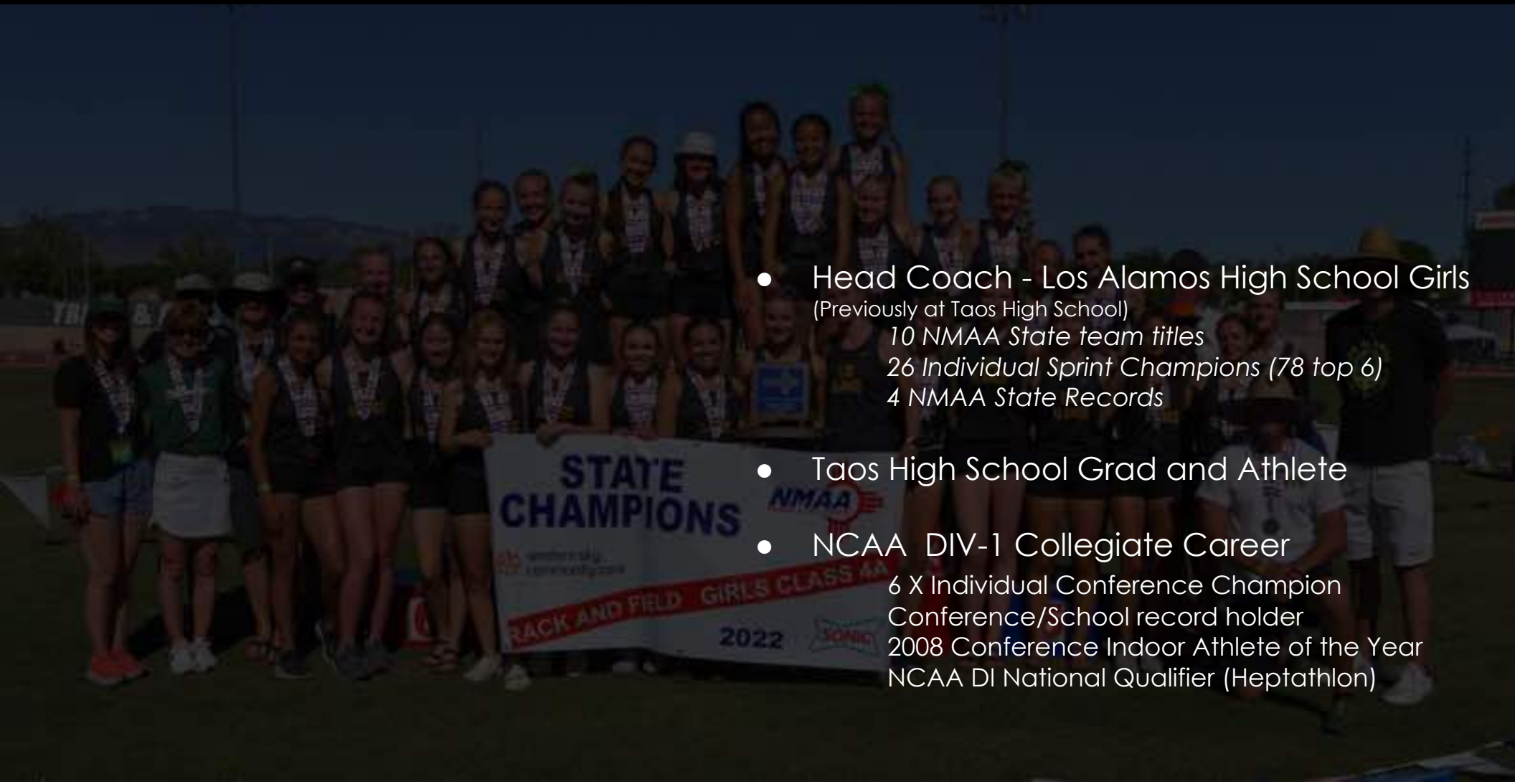
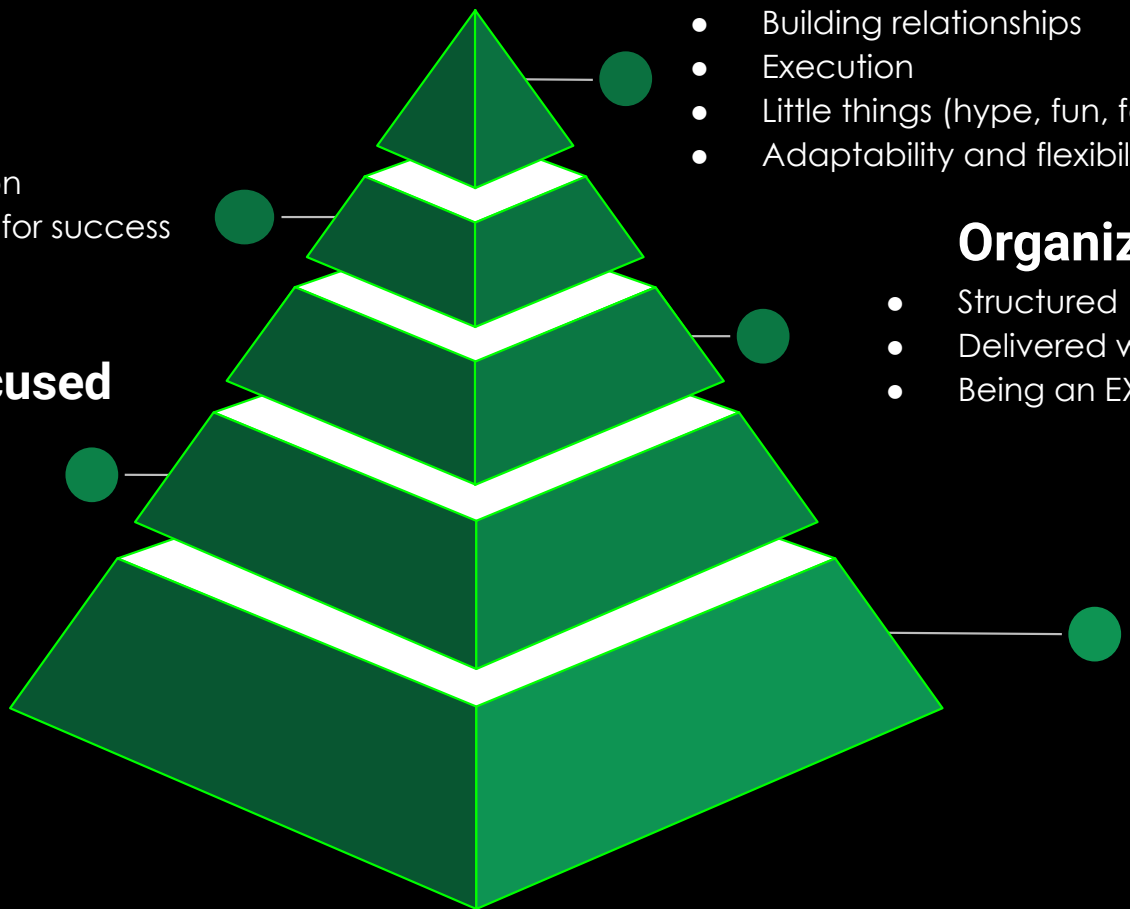


- Head Coach - Los Alamos High School Girls
  (Previously at Taos High School)
  - *10 NMAA State team titles*
  - *26 Individual Sprint Champions (78 top 6)*
  - *4 NMAA State Records*
- Taos High School Grad and Athlete
- NCAA DIV-1 Collegiate Career
  - 6 X Individual Conference Champion
  - Conference/School record holder
  - 2008 Conference Indoor Athlete of the Year
  - NCAA DI National Qualifier (Heptathlon)

Building an Identity



Intangibles

- Building relationships
- Execution
- Little things (hype, fun, facilities, etc)
- Adaptability and flexibility

Proactive

- Early intervention
- Looking ahead for success and needs

Organized

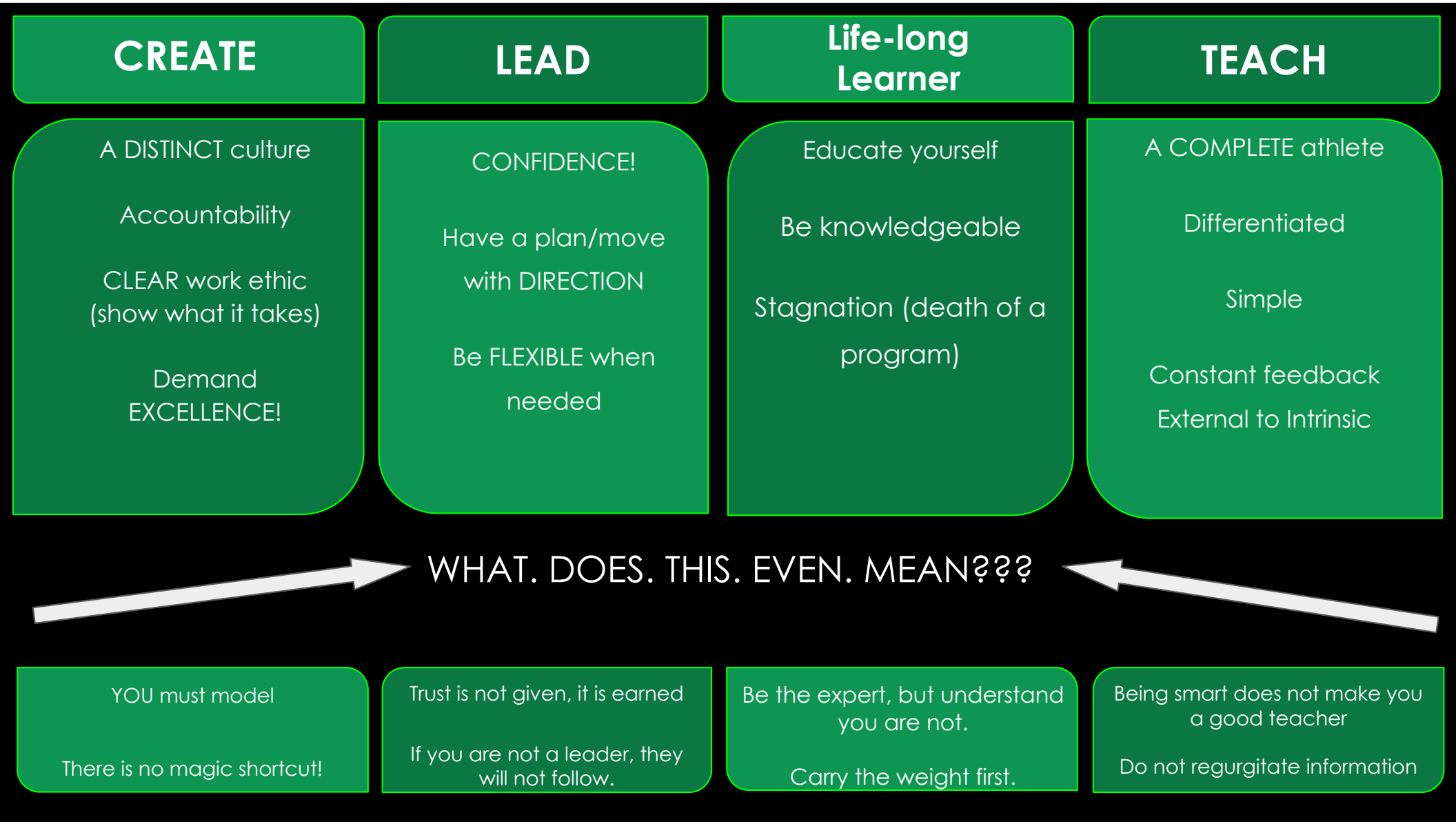
- Structured
- Delivered with Clarity
- Being an EXCELLENT teacher

Specific, Deliberate, Focused

- Know program direction
- Effective training philosophy
- Being an EXCELLENT teacher

Coach Initiated

- Bridge the gap
- Staff concerns
- One voice!

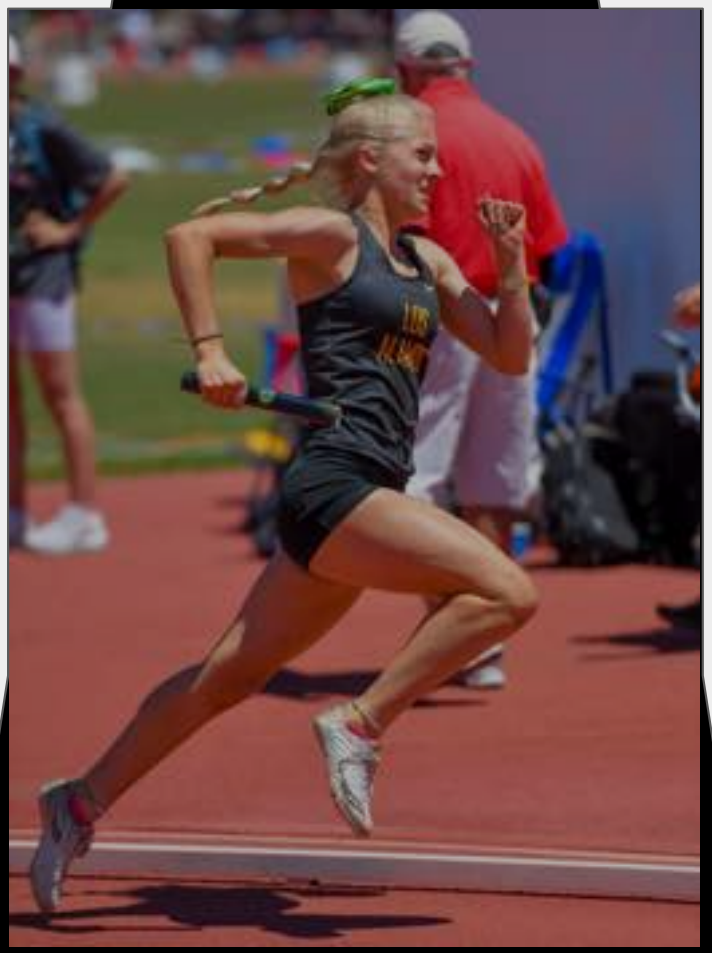

CREATE
LEAD
Life-long Learner
TEACH
A DISTINCT culture
Accountability
CLEAR work ethic (show what it takes)
Demand EXCELLENCE!
CONFIDENCE!
Have a plan/move with DIRECTION
Be FLEXIBLE when needed
Educate yourself
Be knowledgeable
Stagnation (death of a program)
A COMPLETE athlete
Differentiated
Simple
Constant feedback
External to Intrinsic
WHAT. DOES. THIS. EVEN. MEAN???
YOU must model
There is no magic shortcut!
Trust is not given, it is earned
If you are not a leader, they will not follow.
Be the expert, but understand you are not.
Carry the weight first.
Being smart does not make you a good teacher
Do not regurgitate information

Know Your Athletes

Spoiler Alert:

They are

COMPLEX!



Getting to work:
Your Foundation

Wide Scope

Sprinters
Hurdlers
Relays
Jumpers
Vaulters
Throwers

Mission Statement

What is our identity?

What are we about?

What are our goals?

Training Approach

What does our program model look like?

Who influences our philosophy?

<u>Periodization:</u>

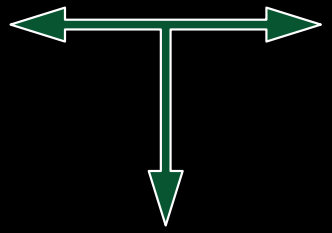
Short - Short
Short - Long
Long - Short
BLEND??

Physical Requirements: A Complete Sprinter

Strength

Raw Power

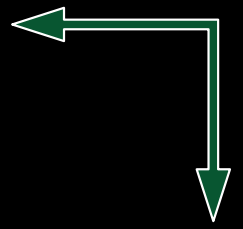
Ability to accelerate

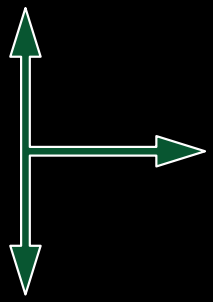


Dynamic Movement

Coordination and Body Awareness

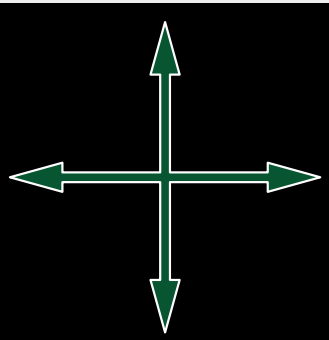
Ability to exert force, quickly!





Absolute Speed

Max Velocity



Sprint Mechanics

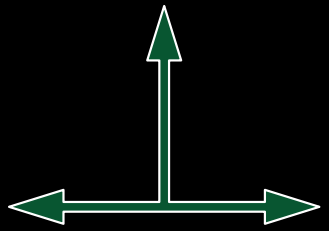
Efficiency

Ability to correctly transfer force into the ground

Flexibility & Mobility

Ability to perform event specific movements and training

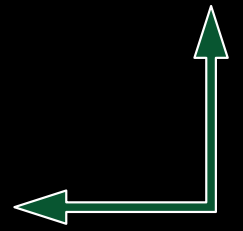
Injury prevention



Endurance

Sprint and event specific

Ability to handle the rigors of the sport, training, competitions



Technique: Max V. Sprint Mechanics

Posture	• Alignment of the head • Hip angle (force reduction) • Slightly leaning forward • Square (efficient and stable)
Front-side Mechanics	• Dorsiflexion (stretch reflex) • Hip flexion • Knee drive • Force application: MAX!
Back-side Mechanics	• Triple extension (post up!) • Rear elbow drive • Heel recovery (correct path)

MAX V vs. Acceleration Phase

Sprint Drills = warm up??

Start Early
(Constant Feedback)

Stationary
Dynamic

Ground Contact

Acceleration: Alactic Power System

Requirements:

- Produce MAX horizontal force (absolute strength requirements)
- Overcome inertia
- Explosive, Violent, and Powerful
- Stay Low?? Break at waist? NO

- Full Recovery
- 0-30 M Phase
- Blocks/stationary (crouched or 3pt)

Training basics

Absolute Strength (weights)

Resisted Sprints (Light sleds, short hills)

10's, 20's, 30's from 3 pt start

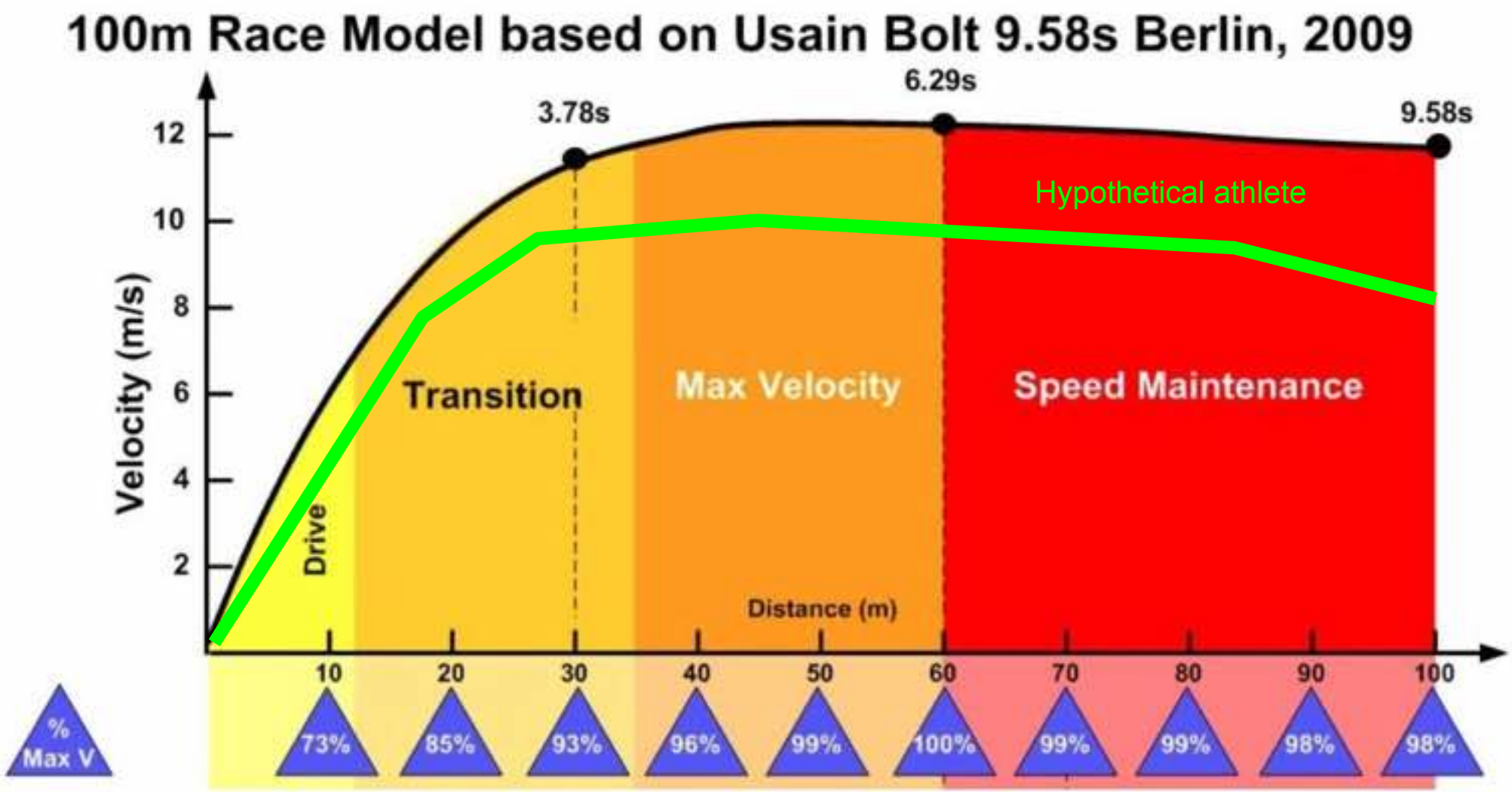
Block work (free or tethered)

Wall Drills

Triple Extension
torso angle = shin angle

Acceleration: Dynamic Transition

			Acceleration Phase	Max Velocity Phase
01	|	STRIDE FREQUENCY	SLOW	FAST
02	|	STRIDE LENGTH	*	*
03	|	VELOCITY	SLOW	FAST
04	|	GROUND CONTACT TIME	LONG	SHORT
05	|	HEEL RECOVERY	LOW	HIGH
06	|	SHIN ANGLES	ACUTE/SMALLER	LARGER
07	|	FORCE DIRECTION	HORIZONTAL	MORE VERTICAL



Composed by England Athletics, 2010

Maximal Velocity: Anaerobic Alactic System

Requirements:

- Highest velocity
- Need for acceleration zone
- Full recovery essential for necessary adaptations
- Once velocity drops = A.S. is no longer being developed

- 95 - 100% Intensity
- Maintain for 10-30M
- Session Volume - 50-150M

Training basics

ACC.

Endurance

TEMPO

Wicket and MVR'S

Flying 50's, 70's

"Oreo" Surges

Max Velocity SPRINT MECHANICS

Plyometrics

Stationary Drills

Speed Endurance: Anaerobic Lactic System

Requirements:

- Need to know your athletes %
- Differentiation!
- 2 different types (0-75M and 75-150m)
- Addresses deceleration/Speed Maintenance

- 90-95% Intensity
- Full recovery
- 0-75M & 75-150M
- Sesh vol: 300-800M (short) & 500-1K (long)

Training basics

Periodized

Volume High/ Intensity 90%

Volume Lower/ Intensity 95%

High Quality

ACC

TEMPO

Special Endurance I and II: Anaerobic & LAT

Requirements:

- Precision and QUALITY
- Differentiated
- Mental prep
- SE I = half the REP distance of SE II, but with the same Vol.

- 90% Effort (both)
- Rep: 150-300M & 300-600M
- Sesh Vol: 2-4 X event distance
- Full Recovery 10-15 min

Training basics

Event Runs
(race modeling)

Target 2's

300H
"touch-down"
target

Strength Training: Functional & Specific

Periodization

ALIGN and COMPLIMENT track specific training

Right time - Right exercise

Restorative

Prerequisite

Prepares athlete for increased stimulus

Addresses imbalances

Bigger is not better

A.S. gains not reflected on the track.

Pushing HEAVY weight??

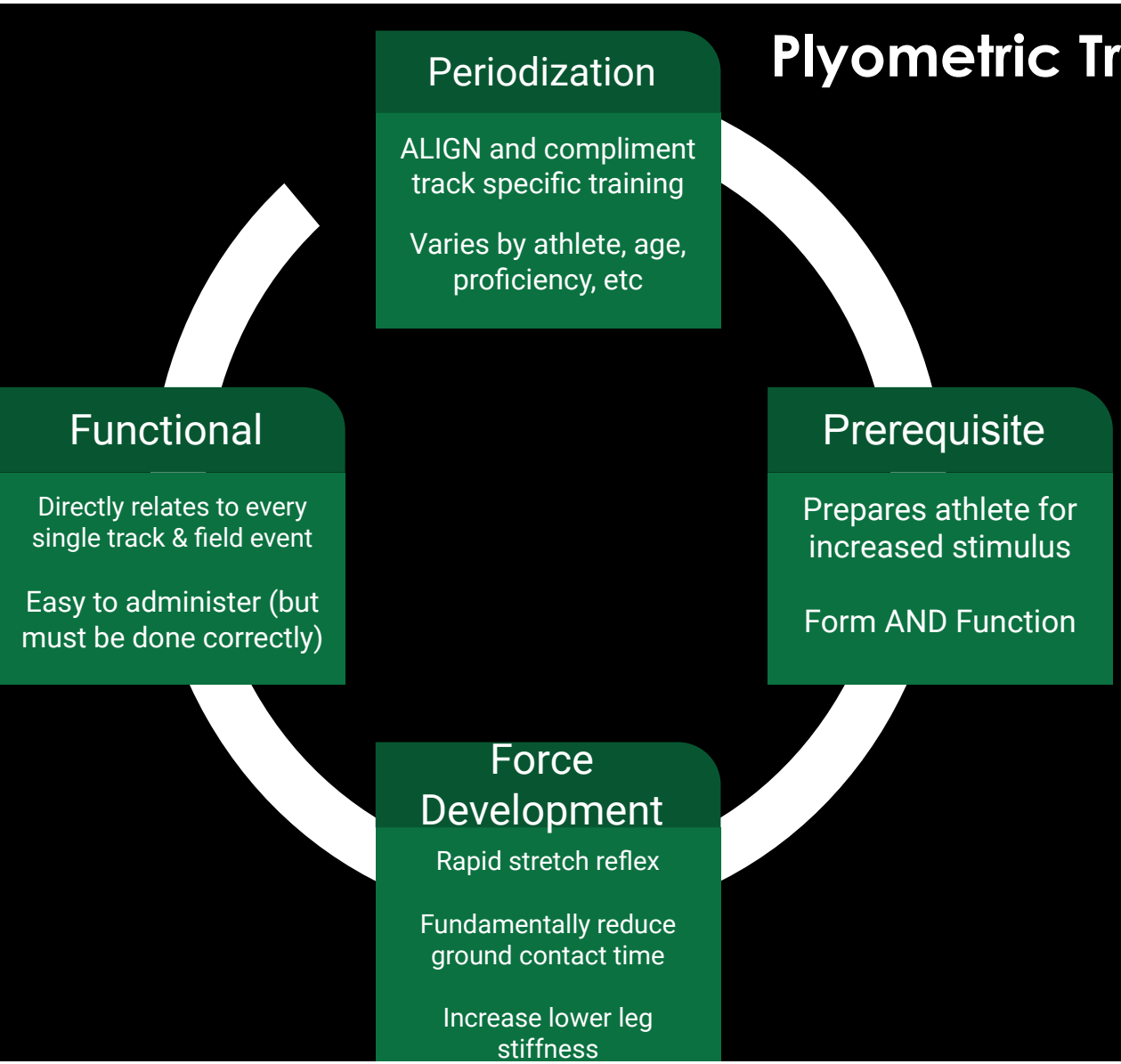
Convert

Translate Max Strength to Functional Power

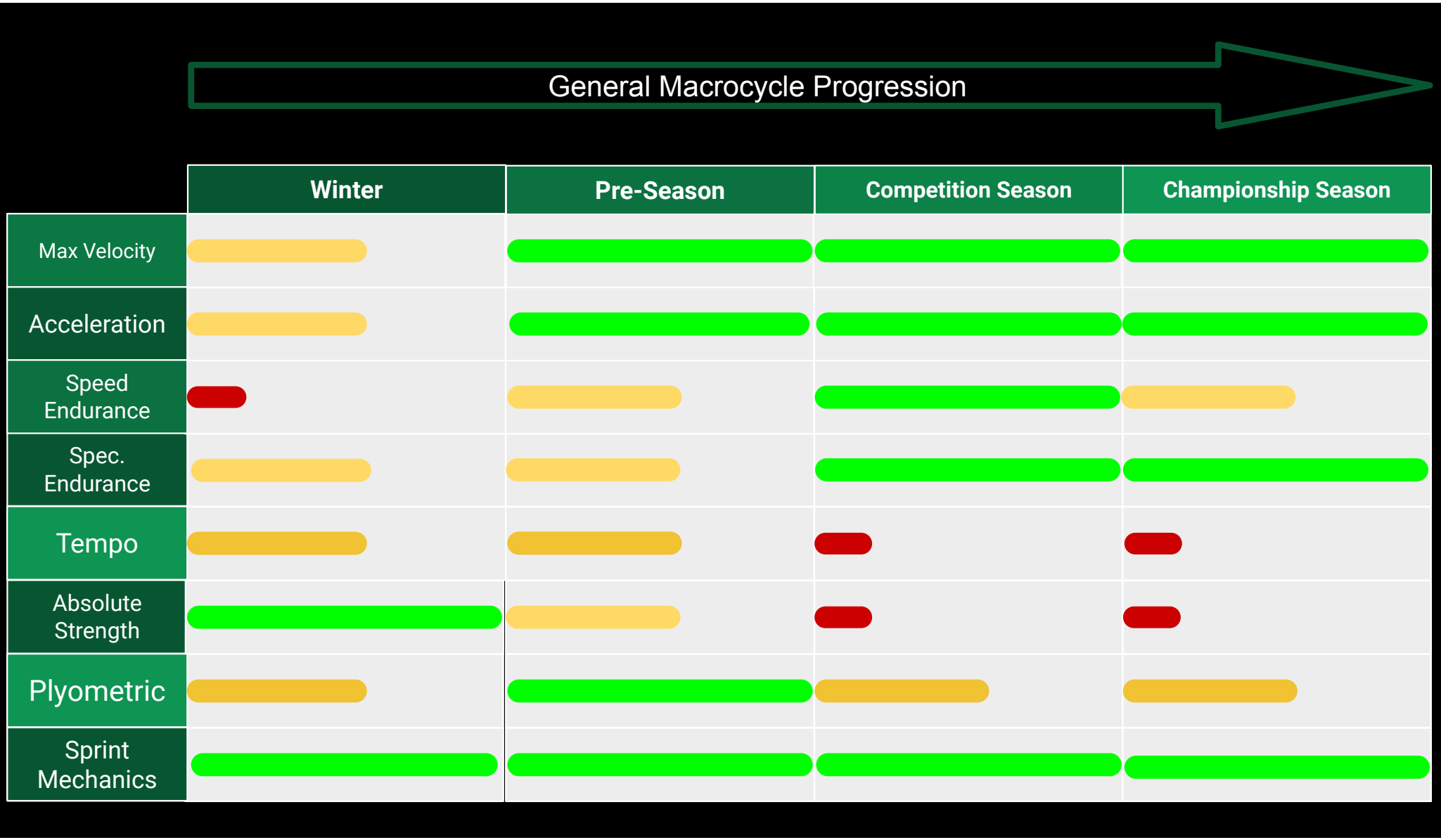
Vertical vs Horizontal

Olympic Lifts
Body Weight
Core Work
Upper Body?

Plyometric Training: Max force/shortest time



Easy	→	Difficult
Deep Rebound	→	Stiffer Response
Bilateral	→	Unilateral
Lower Intensity	→	Higher Intensity
Lower Volume	→	Higher Volume


General Macrocycle Progression
Winter
Pre-Season
Competition Season
Championship Season
Max Velocity
Acceleration
Speed Endurance
Spec. Endurance
Tempo
Absolute Strength
Plyometric
Sprint Mechanics

PRACTICE EXAMPLES: FOCUSED, CONCISE, COACH LED