


Collaborative approach to sport science and medicine

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Today's presentation

- OHPSI Program
- CSIO and ASO collaboration

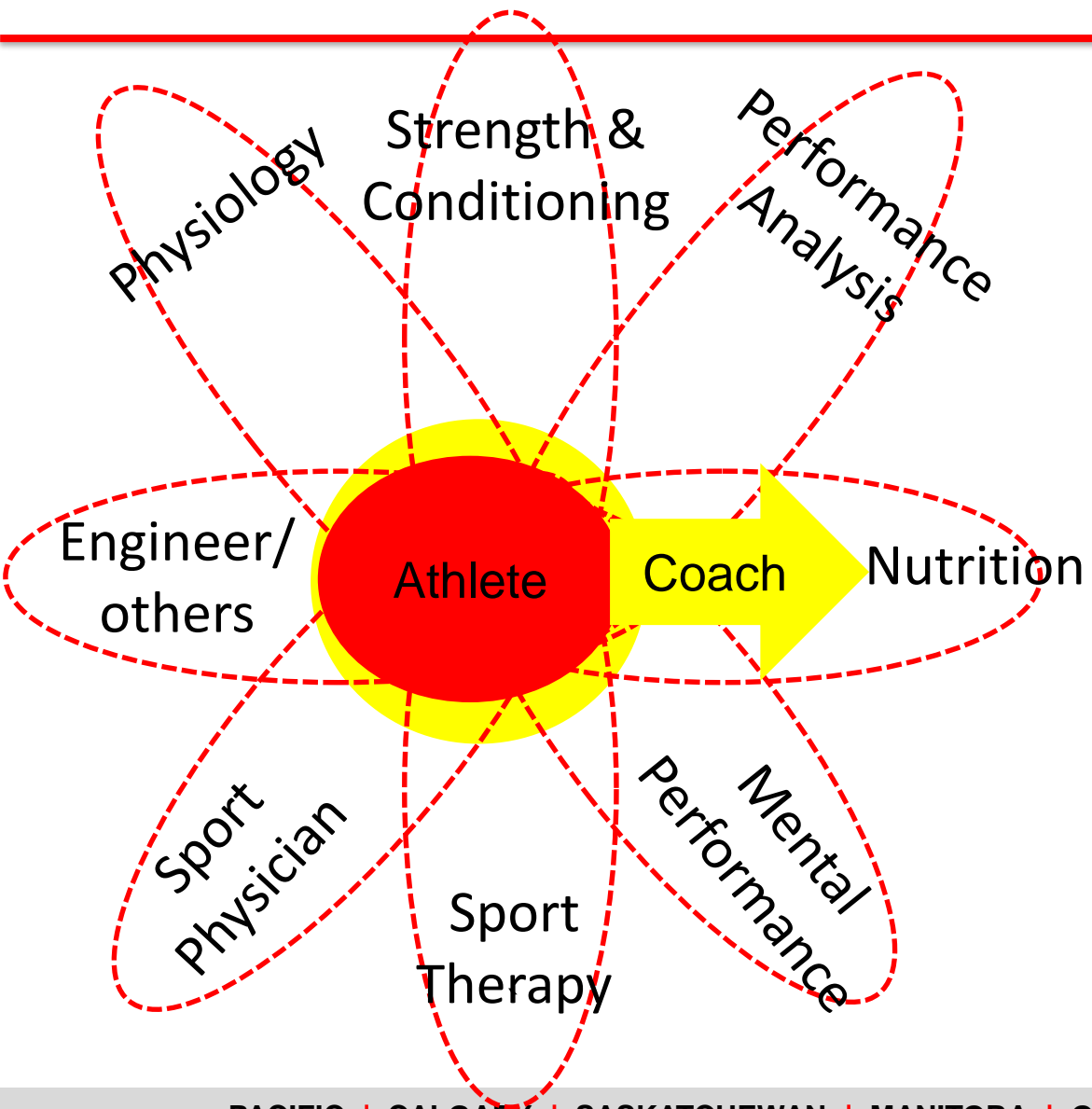


Ontario: A rich history
of alpine skiing

The uniqueness of 'dude' sports



Sport Science & Sport Medicine – Integrated Approach at CSIO



COPSI Network – 7 Locations



Partners:

- COPSI Network
- MTCS
- PSOs & NSOs
- Sport Canada
- Own the Podium
- Canadian Olympic Committee
- Canadian Paralympic Committee
- Coaches Association of Canada
- Coaches Association of Ontario

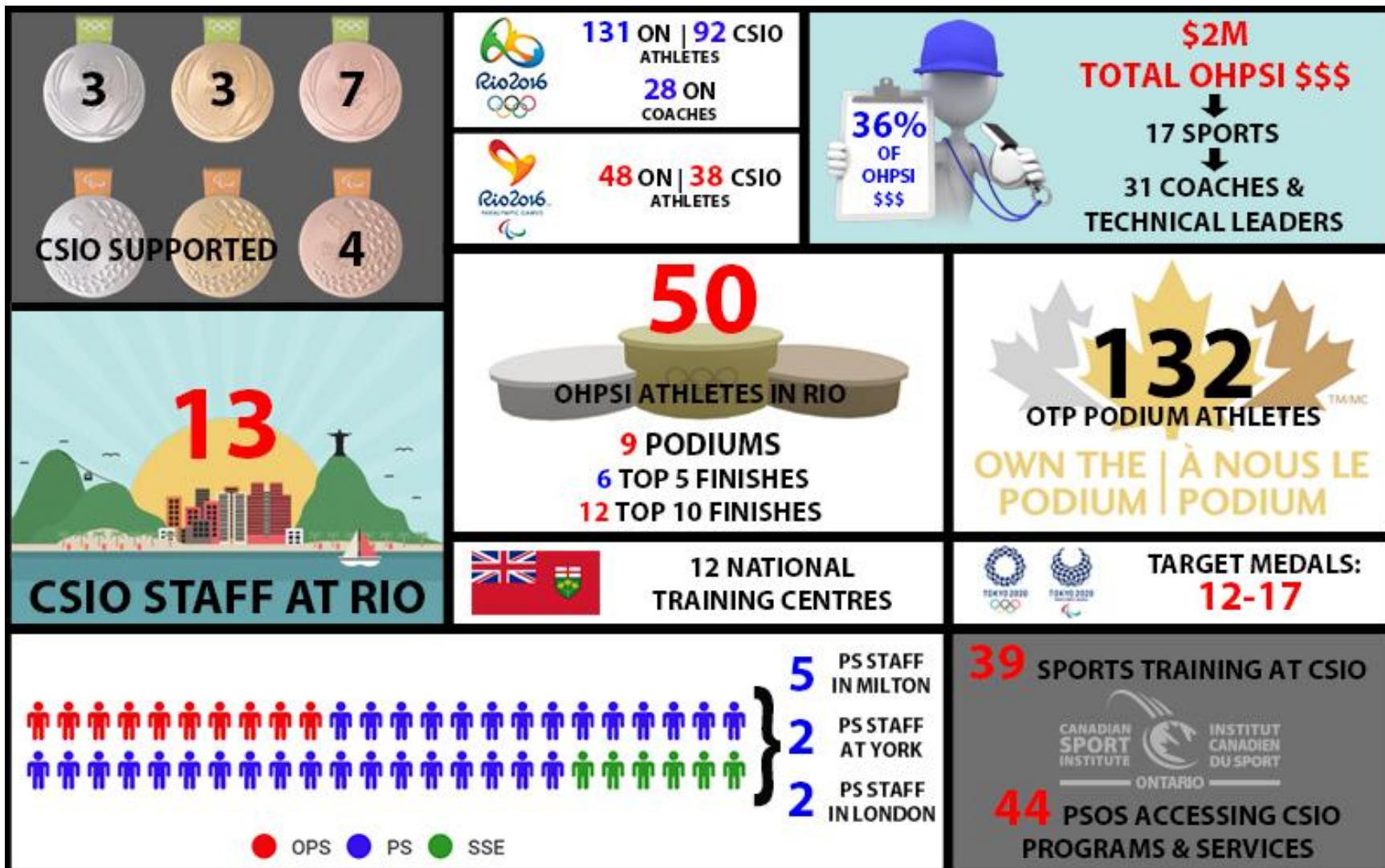
4 sport institutes /
3 sport centres across the country



RÉSEAU DES INSTITUTS DU SPORT
SPORT INSTITUTE NETWORK



CSIO Overview Impacts



Ontario High Performance Sport Initiative (OHPSI)

Definition:

“To provide high performance and aligned **pathway** enhancement that is athlete-centered and coach led with optimal support to transition Ontario athletes **towards the next stage** in their development, and ultimately contributing to future Olympic and Paralympic success”

“A strong Ontario results in a strong **CANADA**”

Podium Pathway

Podium Pathway in Canada

Centralized or Semi (Soft)-Centralized (possible multiple locations), Fully Supported Daily Training Environment. (Evidence toward Podium performances)

Podium Group

Centralized, Semi Centralized, Camp or Competition based (Mix of Podium Trending & Domestic Success)

Senior National Teams

Centralized, Semi Centralized, Camp or Competition based (Evidence of Podium Potential)

National Development Teams

Camp or Competition based (Mix of Podium Potential Domestic and Provincial Success)

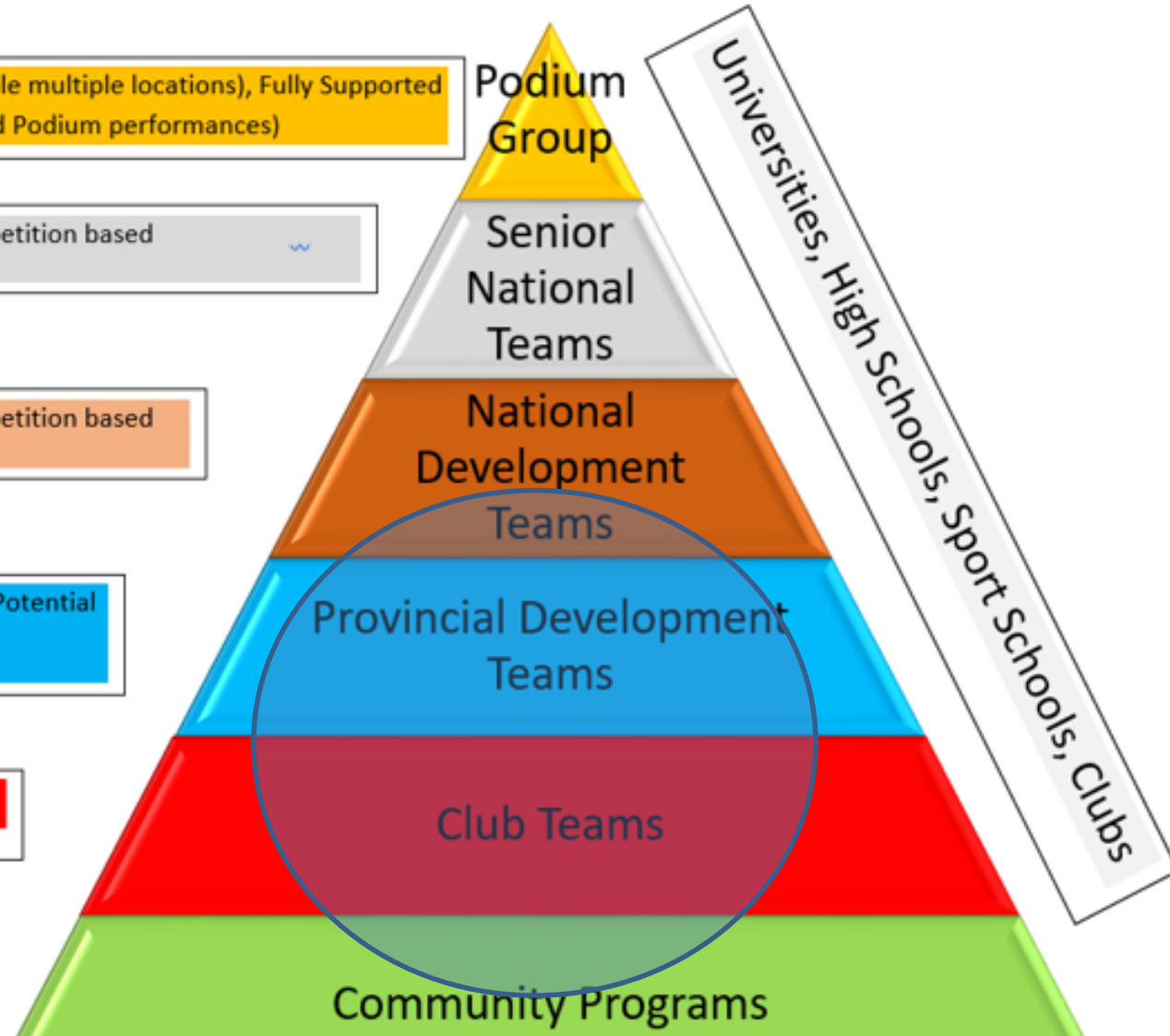
Provincial Development Teams

Underpins the entire system

Club Teams

Community Programs

Universities, High Schools, Sport Schools, Clubs



OHPSI BACKGROUND

- OHPSI was launched in 2010 with 10 sports.
- Expanded to 20 sports with enhanced investment in 2016
- Performance IMPACT (*along pathway, AAP status, Pan Am podiums, and Olympics!*)
- 50 OHPSI Supported Athletes in Rio = **9 Olympic Medals!** (6 top 5's, 12 top 10's)
- Olympic and Paralympic Integration



OHPSI Cornerstone objective

- Supporting an optimal “*daily training environment*” for Ontario athletes.
- Access to high performance sport programs, technical experts (full-time coaches and sport science/ medicine professionals),
- Enable Ontario athletes to train and achieve international podium performances

INVESTMENT INTO 3 KEY AREAS

INVESTMENT CATEGORIES

1. Coaching and Technical Leadership

In 2016/2017:

- 24 Full-time Coaches
- 7 Full-time Technical Leaders

2. Sport Science / Sport Medicine

3. Competition and Training Support



WATER RAMP



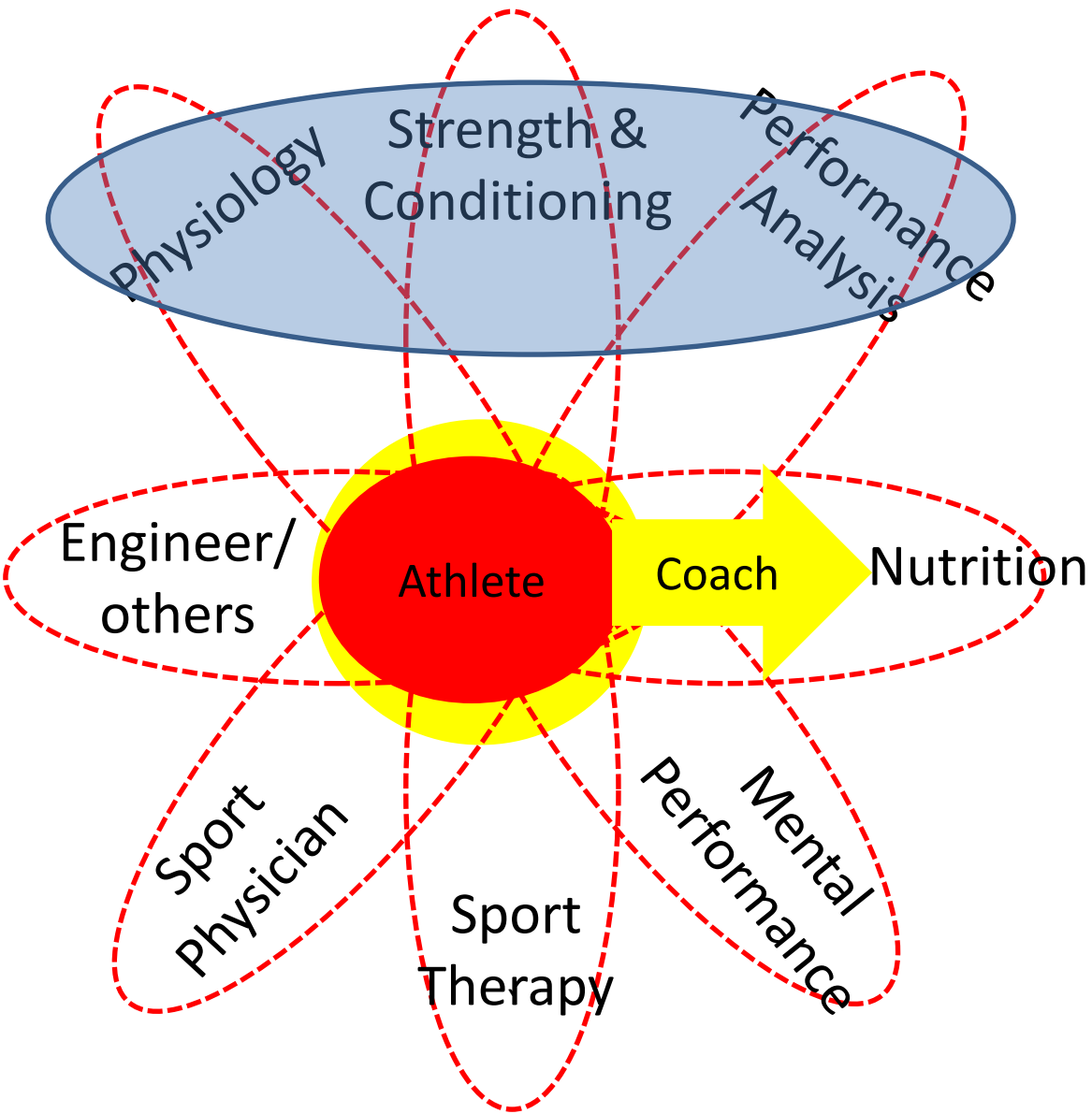
OHPSI Guiding Principles

INVESTMENT PRINCIPLES / OVER-ARCHING OBJECTIVES

- Investment vs. Grant
- Supplement /Enrich vs. Replacement Funding – concept of “augmented High Performance”
- NSO/PSO alignment is mandatory
- Coaching, well defined DTE, TAL, clear HP plans (defined sport specific KPI’s)



Sport Science & Sport Medicine – Integrated Approach at CSIO



Unique challenges

- Diversity of age and ability levels
- Decentralized locations
- Training philosophy
- Program/ DTE resourcing
- Injury

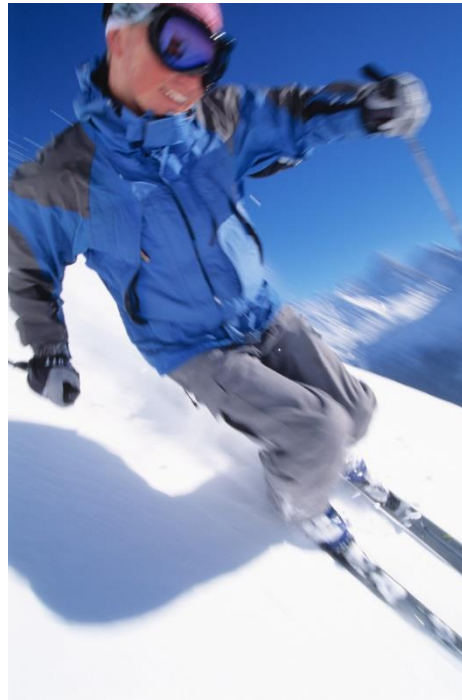


Process

Test (assessment)

Dryland training

Re -Test (assessment)



Testing protocols: why?

- Movement screen – capacity
- Broad/Pentajump - power
- Hex Jump Test - agility
- Boxjump – anaerobic capacity
- Shuttle test – aerobic capacity

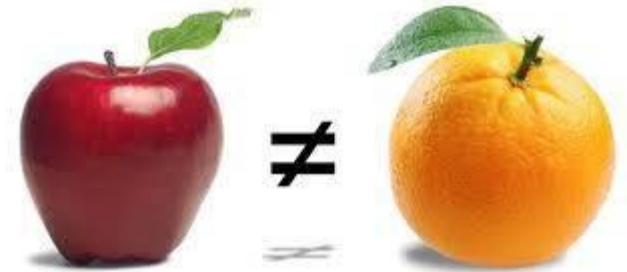


Progression: Aerobic and anaerobic capacity testing

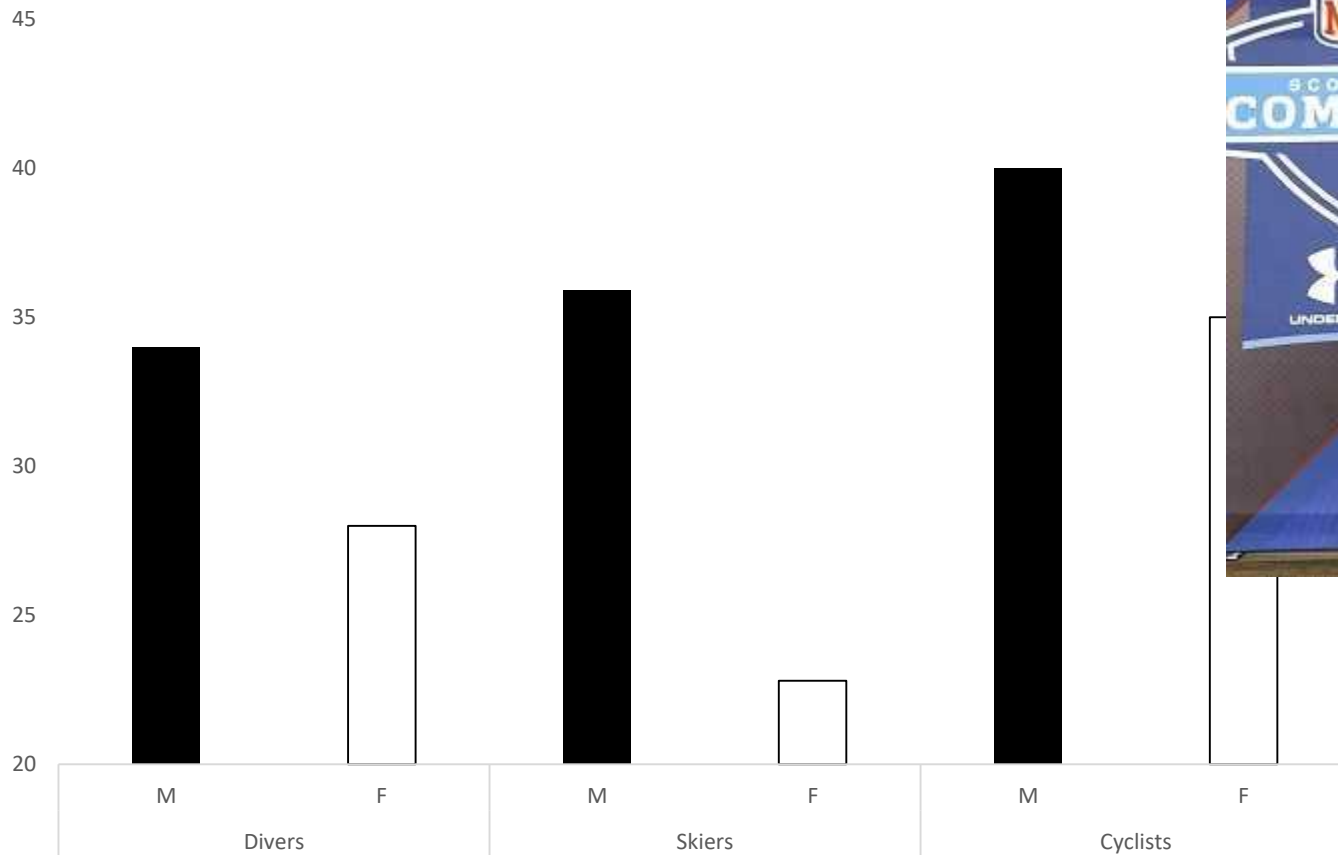
- Lactate threshold and maximal oxygen uptake (VO₂max)
- 60 and 90 sec all out bike test
- Ski specific strength testing
- Injury risk



Selective results



Countermovement Jump Height (cm)





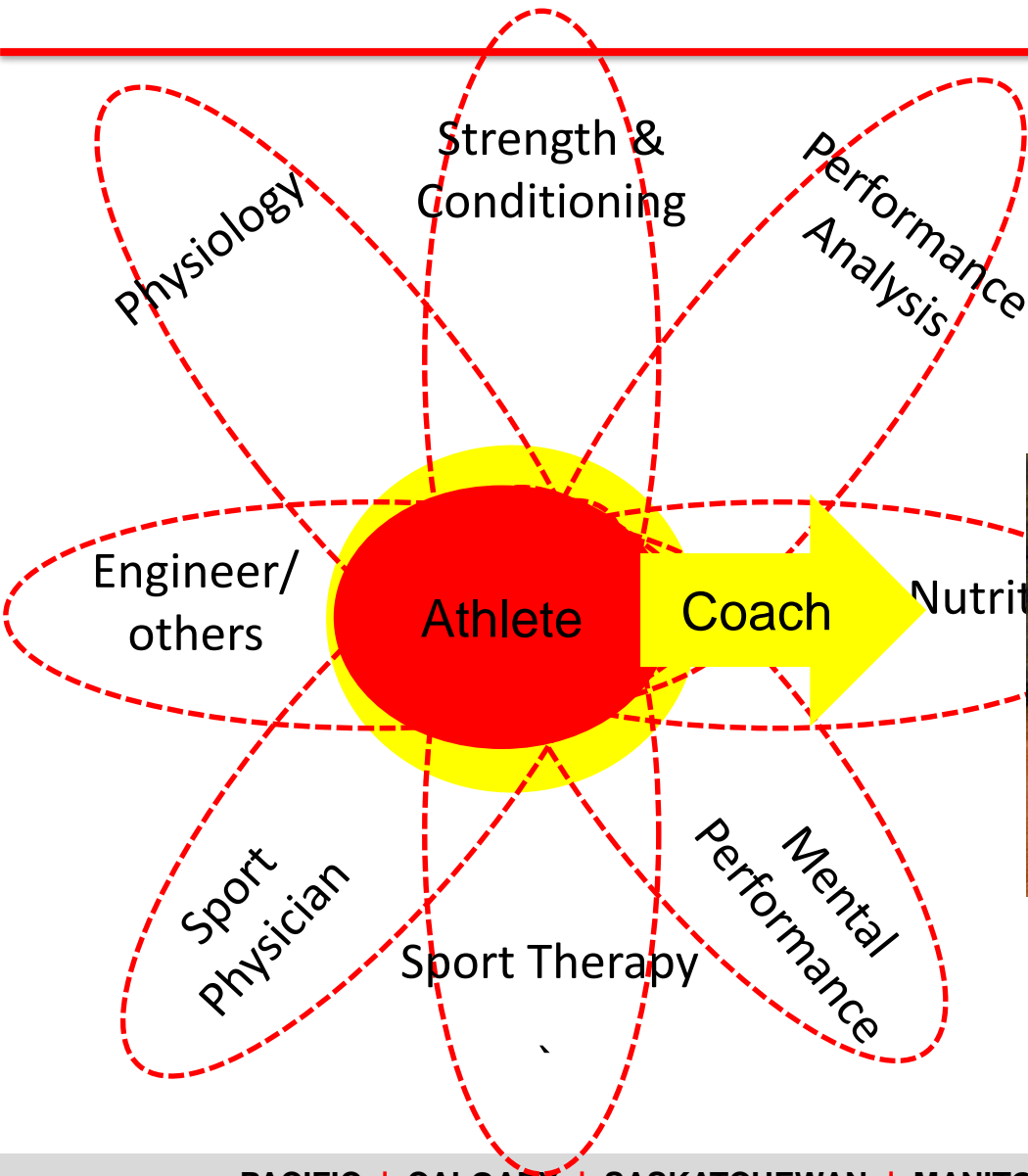
Progressions: Injury prevention

Symmetry of movement

Decentralized programming and monitoring



On hill preparation, performance and recovery



FACILITIES & DAILY TRAINING ENVIRONMENT

CSIO AT MATTAMY NATIONAL CYCLING CENTRE (MILTON VELODROME)

