



PARK

TO

PODIUM.



CANADA SNOWBOARD'S

LONG TERM ATHLETE
DEVELOPMENT PLAN

00

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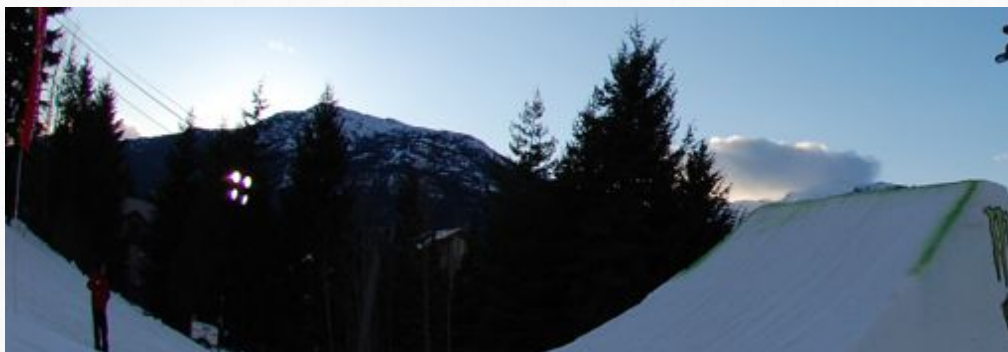
PARK TO PODIUM: Canada Snowboard's Long Term Athlete Development Plan

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FOREWORD



In sport, Canadians love two things:

- 1. Watching fellow Canadians step high on the podium and**
- 2. Being really good at what they do.**

The core to everything we do in sport is Long-Term Athlete Development (LTAD). It is a framework encompassing every element of snowboarding, with the rider as the central focus. LTAD seeks to enable Canadians to step regularly on top of international podiums; due to the system supporting them, not because of exceptional performances.

LTAD gives Canadian snowboarders the opportunity to identify support structure gaps. It also speaks to where we want to be, thus enabling us to adapt our infrastructure, and the program delivery, in order to provide the best opportunities to those who ride, whatever their motivation or stage of development. This may mean dramatically changing the way Canadian snowboarders do things.

The key benefits of LTAD are:

- ⚙ everyone will see where they fit and what their role is
- ⚙ coaches will have a guide in the design of annual plans and programs
- ⚙ the whole sport will be able to understand what they need to do
- ⚙ stakeholders will know how to make decisions that benefit the long-term development of athletes.

LTAD recognizes that clubs are central to the long-term development of riders, while there are a huge array of other stakeholders that all hold shares in our riders' success and enjoyment in snowboarding.

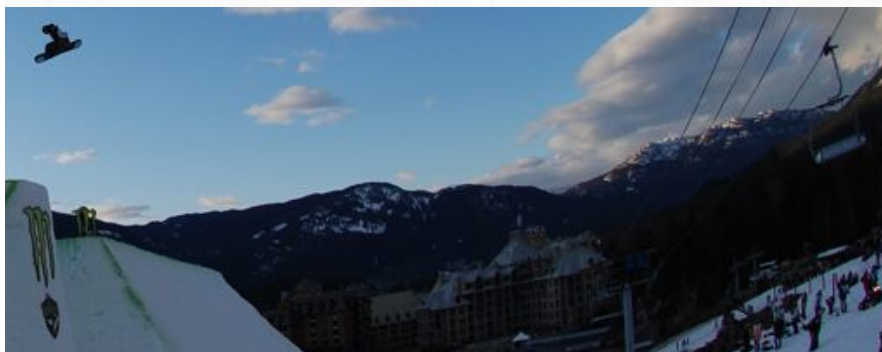
LTAD recognizes that the windows of trainability in developing athletes are central to the long-term improvement of snowboard performance. Training the right components at the right stage of development is crucial for the success of all athletes from beginning free riders to World Cup racers.

The competitive nature of sport implies that only a few riders will achieve the level to be in elite programs by the time they reach senior level. However, it should be remembered that LTAD is not just an elite model; rather it provides a solid foundation for all riders at all ages and levels, allowing long-term participation, enjoyment and achievement.

Let's celebrate the best and cheer on the rest!

Have fun,

Richard Way
Sport Canada LTAD Expert Group



INTRODUCTION

Scientific research has concluded that it takes 8 to 12 years of training talented athletes to achieve sporting excellence. This is also called the 10 years – 10,000 hour rule. For all those concerned with a rider's development, this averages over three hours of daily practice over a ten year period (this time will progressively increase from, for example, 1 hour per day for a ten year old to over six hours a day for a twenty year old).

The Long-Term Athlete Development (LTAD) explains how best to use the 10,000 hours depending on the athlete's age and stage. It provides guidance on what and when to train. It recommends the ratio of time spent competing vs. training vs. recovering. The aim of this LTAD plan is to outline to coaches, parents, clubs, and administrators in Canada what a long-term approach to training and preparation means. The plan gives detailed training and competition guidance that will be of assistance to snowboard stakeholders (clubs, resorts, schools) in planning their programs.

Adaptive Snowboarding for Athletes With A Disability: With approximately 14.3% of Canadians having a disability (Statistics Canada, 2006), it is crucial that all Canadians be provided with the opportunities to fully engage in physical activity. Adaptive activities, led by the initiative of the participants and with the increasing support of society, are a growing part of Canadian sport. Snowboarding is also a newcomer to the adaptive field. Snowboarders who have become disabled and others who live with a disability want to be a part of the sport, recreation, and lifestyle that is snowboarding.

Athletes With A Disability (AWAD) are applicable to everything in the able-bodied Snowboard model. The LTAD should be a starting point for ALL athletes and for this reason AWAD have been integrated into the able-bodied Snowboard LTAD with the addition of an eleventh key specific to AWAD.

Developmental (Biological) vs. Chronological Ages: Training and competition is **currently based on chronological age** – this means that although athletes can be 4 to 5 years apart by maturation levels, we continue to train them the same way. For example, two riders who are the same chronological age (13 years) could have a developmental age of 11 years and the other one of 15 years – 4 years apart.

Reasons for the LTAD?

There are many reasons for introducing a LTAD approach that will be highlighted within this framework.

Here are ten clear reasons for implementing a LTAD approach:

1. To establish a **clear** snowboard development **pathway**
2. To identify **gaps** in the current snowboard development pathway
3. To provide **solutions**
4. To act as a **change agent** to create proper planning, training, competition and recovery programs for developing Canadian snowboarders
5. To create a streamlined **efficient system**
6. To provide a **planning tool**, based on scientific research, for **coaches and administrators**
7. To provide awareness, education and action **planning for parents and clubs**
8. To improve **communication** between the four performance partners
9. To help athletes **win!**
10. To facilitate **lifelong enjoyment** in snowboarding

It is anticipated that the factors of LTAD will be used to review existing snowboard programs led by Canada-Snowboard (C-S) and provide the basis for any future initiatives. It is hoped that all snowboard stakeholders will use LTAD in a similar way. This will enable the snowboard community to work in collaboration in achieving the sport's goals and targets.



WHERE ARE **WE NOW?**

CANADIAN SPORTS COMMON ISSUES

This section of the plan provides the broad context that currently exists within snowboarding in Canada. It is not intended to cover all the strengths and weaknesses of our system, but merely to provide an overview of the current position on administration, lifestyle, implementation, coaching, training, competition, and facilities

ADMINISTRATORS

- Tradition based competition system interferes with athlete development
- Selection criteria and talent I.D. built around points chasing
- No integration between physical education in schools, community programs, and elite competitive programs
- Most knowledgeable coaches work at the elite level and least educated, least paid coaches at the developmental level where quality coaches are essential
- Lack of a bridge from mass participation to joining a club program
- A continually improving action plan is needed
- A C-S strategy plan built around LTAD as the core business is needed
- A facilitative strategy to accommodate all levels of athletes is needed
- Links with ski area owners for training and competition is needed
- Links with equipment providers is needed

COACHES

- Training methods and competition programs designed for male athletes are superimposed on female athletes
- More female coaches are needed
- Coaches largely neglect the critical periods of accelerated adaptation to training
- Preparation is geared to the short-term outcome – winning – and not to the process
- Coaches don't understand the benefits of holistic athlete development
- Lack of context specific competency
- Lack of certified coaches

PARENTS

- Parents are not educated about LTAD
- Fundamental movement skills and sport skills are not taught properly
- Costs of equipment, travel and facility use
- Emphasis on peaking by Friday
- Lack of involvement as club volunteers

CLUBS

- Developmental athletes over-compete and under-train
- Adult training and competition programs superimposed on developing athletes
- Chronological rather than developmental age used in training and competition planning
- Lack of a club accreditation program
- Lack of training facilities
- Lack of a bridge from school programs and clubs
- Programming for profit vs. development
- Lack of entry-level programs
- Lack of integration of club program with LTAD e.g. addressing the Learn to Ride stage effectively
- Lack of ability to recruit freeriders to club competition programs
- Over emphasis on points chasing in competition

CONSEQUENCES

- Injury
- Failure to reach optimal performance levels in international competitions
- Poor movement abilities
- Lack of proper fitness



CONSEQUENCES (CONTINUED)

- Poor skill development
- Bad habits developed from over-competing focused on winning
- Undeveloped and unrefined skills due to under- training
- Female athlete potential not reached due to male oriented programs
- Children not having fun as they participate in adult-based programs
- No systematic development of the next generation international athletes
- Athletes pulled in different directions by school, club, and provincial teams because of the structure of competition programs
- Remedial programs, implemented by provincial/national team coaches, counteract the shortcomings of athlete preparation
- Fluctuating performance due to lack of talent identification and a developmental pathway
- Athletes fail to reach their genetic potential and optimal performance level
- Athletes leave sport and want nothing to do with it later
- Training methods and competition programs designed for male athletes are superimposed on female athletes
- Coaches largely neglect the critical periods of accelerated adaptation to training
- Preparation is geared to the short-term outcome – winning – and not to the process
- Coaches don't understand the benefits of holistic athlete development
- Lack of context specific competency
- Uneven gender representation in leadership, athletes and volunteers

WHERE WOULD WE LIKE TO BE?

THE MISSION OF THE CANADA-SNOWBOARD LONG TERM ATHLETE DEVELOPMENT MODEL IS TO BE...

- The provider of opportunities from park to podium and the promoter of self-expression and individuality in the pursuit of personal excellence.
- A forum for all types and levels of snowboarding.
- To give the tools to assist PTSA's & Clubs to be the provider of programs, based on established principles of long-term athlete development, for all levels of snowboarding ability.
- Part of the plan for C-S to be committed to high performance excellence in World Cup, World Championship, and Olympic Winter Games competition.

In addition, Canada-Snowboard highlights targets for club development, provincial associations and coach education, the three main vehicles for delivering LTAD.

HOW ARE WE GOING TO GET THERE?

WE ARE GOING TO GET THERE THROUGH A **3-STEP PROCESS**.

11 LTAD KEYS

STEP 1

THE 11 KEY FACTORS INFLUENCING LTAD



The first step toward finding a solution is to understand the 11 key factors influencing any long-term athlete development plan, particularly as they relate to snowboarding in Canada. These are examples of:

- ⚙️ Training, competition and program guidance based on the growth and development of the rider including sensitive periods of trainability
- ⚙️ Generic principles of motor and skill development
- ⚙️ Guidance and tools to assist coaches, clubs, parents and administrators in delivering the LTAD towards achieving the Canada Snowboard's goals and targets.

It is recognized that currently there may only be a few clubs that can deliver all LTAD key factors, but like LTAD itself, this is a long-term approach that should assist clubs and training groups to work towards developing the right training environment for all in the sport to achieve their potential, whatever their aspirations.



STEP 2

THE 8 STAGE ATHLETE DEVELOPMENT MODEL

Success comes from a well planned training program over the long-term. Canada Snowboard has designed an eight stage Athlete Development Model (ADM) based on the LTAD work of Sport Canada's LTAD Expert Group. These eight stages are Active Start (AS), Fundamentals (FUN), Learn to Ride (L2R), Train to Train (T2T), Train to Compete (T2C), Learn to Win (L2W), Train to Win (T2W) and Active for Life (A4L). These stages from page 18 to 45 span the growth and strategic performance factors of an athlete over a 20 to 25 year period.

PRIORITY	STAGE 1 PLAY	STAGE 2 FUN	STAGE 3 SKILLS	STAGE 4 TRAIN	STAGE 5 COMPETE	STAGE 6 COMPETE	STAGE 7 WIN
STAGE 8	ENTER ACTIVE FOR LIFE AFTER ANY STAGE						
ALPINE	All: 0-6	Females: 6-8 Males: 6-9	Females: 8-11 Males: 9-12	Females: 11-15 Males: 12-16	Females: 15-18 Males: 16-19	Female 18-24	24+
SNOWBOARDCROSS						Male 19-25	25+
HALFPIPE					Females: 14-17 Males: 15-18	Female 18-23	23+
SLOPESTYLE						Male 19-24	24+
						Female 17-20	20+
						Male 18-21	21+
						Female 17-20	20+
						Male 18-21	21+

It must be noted that ages described are general guidelines. The individual tempo of development/maturation will influence how the athletes will reach the various long-term development milestones. However, they all will go through the same stages. Some early maturing athletes may have as much as a four-year physiological advantage over their late maturing peers. (Ross et al. 1977).



STEP 3

PUTTING IT ALL IN OPERATION

Implementing a long-term plan will take time, patience and a willingness to improve through change.

THINGS YOU CAN DO | Look for specific suggestions for each partner, at each stage in the snowboard system:

- COACHES
- PARENTS
- CLUBS
- ADMINISTRATORS

11 LTAD KEYS

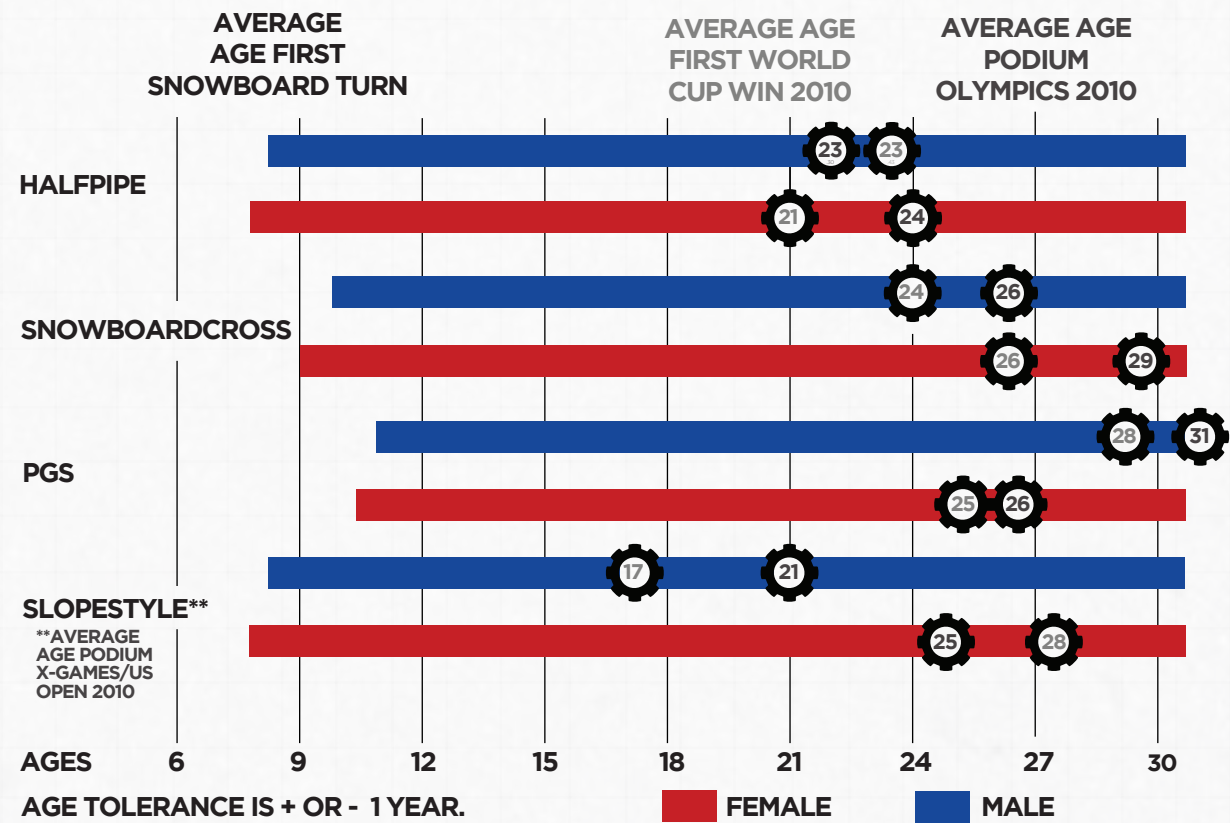
LTAD KEY 1

TEN YEAR RULE

Research has concluded that it takes a minimum of 10 years and 10,000 hours of deliberate training for a talented athlete to reach elite levels (Starkes & Ericsson, 2003). For an athlete and coach, this translates into slightly more than 3 hours of training or competition daily for 10 years.

A study of 85 snowboard Olympians in Torino had shown that less than 10% have started snowboarding before the age of 8 years old. Most have been snowboarding for 15 years, thus allowing 4 to 5 years to develop the fundamentals of snowboarding and 10 to 12 years of deliberate training.

OLYMPIC ATHLETE LEARN TO TURN PROFILE



RECOMMENDATION: It takes a long time to develop a champion; therefore it is important that we track their progression and not rush their development.

LTAD FUNDAMENTALS

KEY 2

FUNDamental movements and motor skills should be introduced through fun and games. FUNDamental sports skills should follow and include basic overall sports skills.

PHYSICAL LITERACY:

- Is the mastery of fundamental movement skills and fundamental sport skills
- Refers to competency in movement and sport skills
- Should be developed before the onset of the adolescent growth spurt
- Is essential in the development of any snowboarder

FUNDAMENTAL SNOWBOARD MOVEMENT SKILLS:

Acrobatics, agility, balance, climbing, cycling, co-ordination, diving, dribbling, hitting, hopping, jumping, kicking, kiteboarding, motocross, shooting, skating, swimming, speed, surfing, skiing, skateboarding, snowboarding, throwing, trampoline, wakeboarding, walking, windsurfing.

LTAD EARLY AND LATE SPECIALIZATION

KEY 3

Sports can be classified as either early or late specialization. Early specialization sports include artistic and acrobatic sports such as gymnastics, diving and figure skating. These differ from late specialization sports in that very complex skills are learned before maturation, since they cannot be fully mastered if taught after maturation.

SNOWBOARD RESEARCH (APPENDIX D) HAS SHOWN THAT THE FIRST WIN AGE FOR ATHLETES ON THE WORLD CUP CIRCUIT IS:

- Alpine:** 25 for males and 24 for females
- Snowboardcross:** 24 for males and 23 for females
- Freestyle:** 21 for males and females

As the sport evolves, trends seem to indicate that the average age of first victory remains over 20 years old. As a consequence, snowboarding can be classified as a late specialization sport. Specialization before the age of 13 is not recommended for late specialization sports as this has been shown to contribute to one dimensional preparation, injuries, physical and mental burnout and early retirement (Harsanyi, 1985).

A vital period for the development of motor coordination (skill window) in children is between the ages of eight and twelve (Balyi and Hamilton, 1995; Rushall, 1998; Viru et al., 1998). Snowboard sessions should emphasize the development of general, fundamental motor and technical skills and work towards building a snowboarder first and Snowboard specialist second. Below is a table of recommended training ratios per discipline, per stage.

DEVELOPMENTAL STAGES	STAGE 1 (AS)	STAGE 2 (FUN)	STAGE 3 (L2R)	STAGE 4 (T2T)	STAGE 5 (T2C)	STAGE 6 (L2W)	STAGE 7 (T2W)
RATIO OF FREERIDE:RACE:SBX:FS TRAINING VOLUME/YEAR							
PGS SKILLS	Ski/ Snow- board	Snowboard	3:2:2:2	3:3:1:1	5:10:1:1	3:10:1:10	1:3:0:0
SBX SKILLS				3:1:3:1	10:2:10:1	6:1:9:1	3:1:10:1
HP SKILLS				2:1:1:3	3:1:1:8	3:1:1:8	3:1:1:15
SLOPESTYLE SKILLS				2:1:1:3	3:1:1:8	3:1:1:8	3:1:1:15

RECOMMENDATION: Children should learn the fundamentals of all snowboard disciplines before specializing in any one.



LTAD KEY 4

DEVELOPMENTAL AGE

DEVELOPMENT refers to 'the interrelationship between growth and maturation in relation to the passage of time. The concept of development also includes the social, emotional, intellectual, and motor realms of the child.'

THERE ARE 5 TYPES OF AGES:

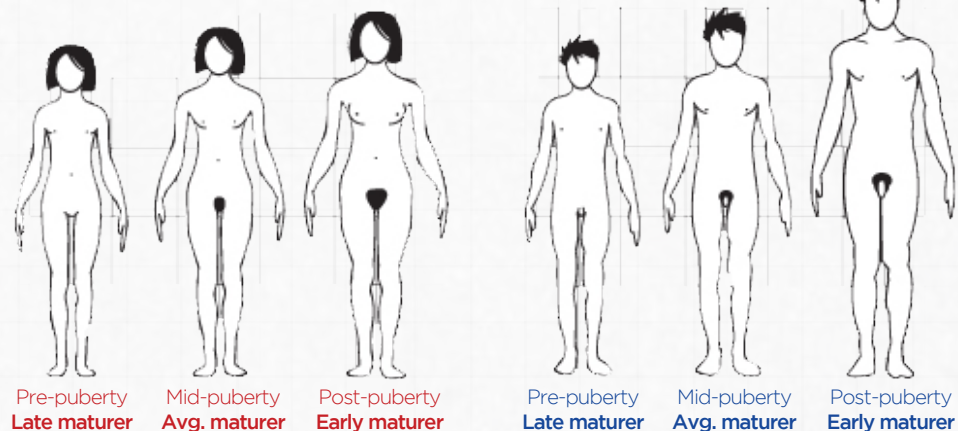
1. **Developmental or biological age:** The degree of physical, mental, cognitive, and emotional maturity.
2. **Chronological age:** The number of years and days elapsed since birth.
3. **Specific training age:** The number of planned, regular, serious seasons of training an athlete has experienced in a snowboard program.
4. **General training age:** The number of planned, regular, serious seasons of training an athlete has experienced in another sport program.
5. **Skeletal age:** The maturity of the skeleton determined by the degree of ossification of the bone structure, not in size, but in respect to shape and position to one another.

EARLY MATURERS VS. LATE MATURERS

Early maturers have a significant biological advantage over their competitors and have traditionally been selected over late maturers at an early age. Eventually late maturers catch up with early maturers, further confirming that all children and young athletes do not evolve at the same rate. Successful snowboard training programs tend to be those who take a long- term development approach with either early or late maturation considerations when the program is designed.

AGE: 12 Years

AGE: 14 Years



Adapted from 'Growing Up' by JM Tanner, Scientific American, 1973.

RECOMMENDATION: Snowboard program design must consider all five ages to ensure children and pre-pubertal teens are placed in appropriate training and competition situations.

WINDOWS OF OPPORTUNITY

WINDOWS OF ACCELERATED ADAPTATION TO SNOWBOARDING

"Long-Term Athlete Development is about achieving optimal training, competition and recovery throughout an athlete's career, particularly in relation to the important maturation years of young people." **Balyi (2002)**

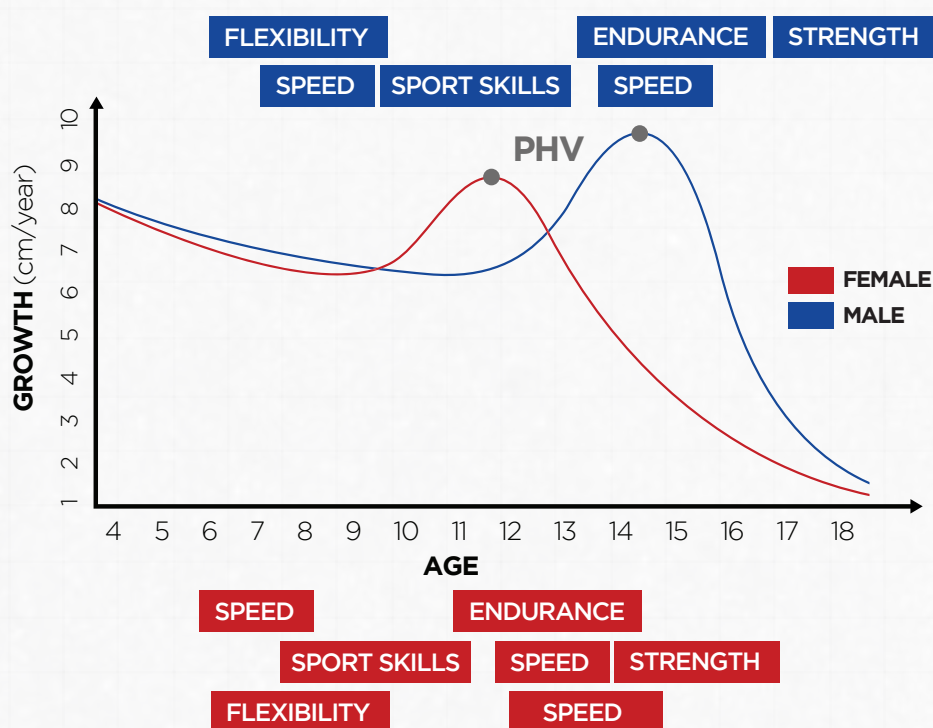
Research shows that certain critical periods in the life of a young person are particularly sensitive to trainability. If these periods, called 'windows of opportunity' are ignored, the riders may never reach their full genetic potential. It is vital that coaches, parents and club administrators are aware of these critical periods of "accelerated adaptation" so that they become fully exploited. These windows are composed around the 5 S's of training and performance: **Stamina** (Endurance), **Strength**, **Speed**, **Skill**, and **Suppleness** (Flexibility) (Dick, 1985).

OPTIMAL WINDOWS OF TRAINABILITY FOR PHYSICAL DEVELOPMENT (ADAPTED FROM BALYI AND WAY, 2006)

Peak Height Velocity (PHV) is the maximum rate of growth in stature during the growth spurt. The age of the maximum velocity of growth is called the age at PHV. The most intense period of growth for girls occurs between 11 to 14 years; while for boys it is between 12 to 16 years.

Adaptation refers to a morphological response or change in the body after a training stimulus that may happen at any age.

Trainability refers to a faster adaptation of a stimulus during growth, development and maturation of young athletes. There is a high degree of variation in the trainability of athletes, depending on genetic and environmental factors.



RECOMMENDATION: From the beginning (onset of PHV) to the end of puberty (PHV), young athletes should be exposed to specific types of training. This period of rapid growth will be characterized by training remodeling and adaptation.



LTAD KEY 6

PHYSICAL, TECHNICAL, TACTICAL AND PSYCHOLOGICAL DEVELOPMENT

Each aspect of an athlete's development evolves at a different rate, so training, competition and recovery programs should adapt to their experience because no one athlete fits perfectly within each stage during their progression.

Dan, 19 years old, is very fit from years of skateboarding, wakeboarding and has been working out twice a week in a gym. He is in university and has been snowboarding for 6 years. His only competitive experience comes from hockey which he quit at the age of 15. He now wants to compete in SBX and joins the University snowboard team. How do the LTAD principles work for him?

The following misaligned stages provide a guideline on how to adapt the psychological, physical, environmental and technical skill development characteristics for Dan.

MIS-ALIGNED PERFORMANCE FACTORS

DAN, 19 YEARS OLD

CHRONOLOGICAL AGE	STAGE 2 FUN- damentals (FUN)	STAGE 3 Learn to Ride (L2R)	STAGE 4 Train to Train (T2T)	STAGE 5 Train to Compete (T2C)	STAGE 6 Learn to Win (L2W)	STAGE 7 Train to Win (T2W)
PSYCHOLOGY	FUN PLAY	L2R SAMPLE	T2T SPECIALIZE	T2C INVESTING	L2W MASTERY	T2W
SKILL (TECHNICAL)	FUN INTRODUCE	L2R DEVELOP	T2T STABILIZE	T2C OPTIMIZE	L2W MAXIMIZE	T2W
COMPETITION (TACTICAL)	FUN SNOW SCHOOL	L2R C-S RIDERS	T2T FIS	T2C NOR-AM	L2W WORLD CUP	T2W OLYMPIC
PHYSICAL	FUN PHYSICAL LITERACY FUNDAMENTAL MOVEMENT SKILLS	L2R FUNDAMENTAL SPORT SKILLS	T2T FIT TO TRAIN	T2C FIT TO PERFORM	L2W FIT TO WIN	T2W

RECOMMENDATION: An athlete will always be placed in a stage according to his technical abilities; all other performance factors need to be adjusted accordingly.



LTAD KEY 7

PERIODIZATION

Periodization is where the science of training meets the art of coaching. It's about sequencing the right activities at the right time to achieve success in an annual or long-term plan.

Periodization:

- ⚙ Manipulates volume, intensity and frequency of training
- ⚙ Considers training, competition and recovery strategies
- ⚙ Includes all factors contributing to snowboard performance
- ⚙ Intends for athletes to peak their athletic performance one or multiple times in a year

THE FIVE BLOCKS OF TRAINING AND COMPETITION		DURATION
MACRO CYCLE	Length of a single training or competition season	4 to 12 months
PERIOD	Preparation/Competition/Transition	1 to 8 months
PHASE	General / Specific / Pre-competition / Competition / Transition	3 to 10 weeks
MESO CYCLE	Conditioning / General preparation / Specific preparation / Maintenance / Pre-competition / Competition / Tapering / Recovery / Transition	2 to 6 weeks
MICRO CYCLE	The smallest training cycle before daily training sessions	1 week

Periodization takes form in an annual training plan: example see **Appendix C**.

Years with one competition peak will be single periodized while years with two competitions peaks for will be double periodized, and so on...

RECOMMENDATION: The National Coaching Certification Program (NCCP) Comp. Dev. Multi-sport modules (www.coach.ca) provide complete information regarding annual planning and periodization.

LTAD KEY 8

CALENDAR PLANNING FOR COMPETITION

The system of competition makes or breaks athletes.

Once training programs have been designed around growth and development principles, teams will need a competition environment to facilitate performance. Optimal competition calendar planning allows for the strategic development of physical capacities or other critical performance factors to foster success and continued participation.

Full samples of Yearly Training Plans by stage are available at www.canadasnowboard.ca

RECOMMENDED RATIOS OF TRAINING AND COMPETING PER STAGE	STAGE 3 (L2R)	STAGE 4 (T2T)	STAGE 5 (T2C)	STAGE 6 (L2W)	STAGE 7 (T2W)
% RATIO - Train and Freeride/Comp and simulation	85/15	75/25	70/30	70/30	60/40
# days on snow per year	40	50 to 70	70 to 100	100+	150+
# days in competition simulation	3	5 to 7	8 to 11	13 to 20	30 to 40
# days in competition	3	6 to 8	8 to 11	8 to 13	10 to 15



LTAD KEY 8 CONTINUED

A few gaps in the existing situation are identified below, with proposed solutions:

SITUATION-A: Points based talent identification, athlete recruitment initiatives or team selection policies in the T2T and T2C stages accentuate the “peaking by Friday” points chasing approach.

SOLUTION-A: Design coach driven selection strategies by targeting specific events.

SITUATION-B: Gaps in the system are defined by too little or too many competitive opportunities.

SOLUTION-B: Alignment, communication and shared leadership amongst administrators.

SITUATION-C: Adult formats are superimposed on kids inhibiting deliberate LTAD practices.

SOLUTION-C: Building “age-stage” appropriate facilities and contextual competition venues.

SITUATION-D: A high ratio of events to training activity delays optimal skill development.

SOLUTION-D: Strategizing the number of starts for athletes with a long-term vision.

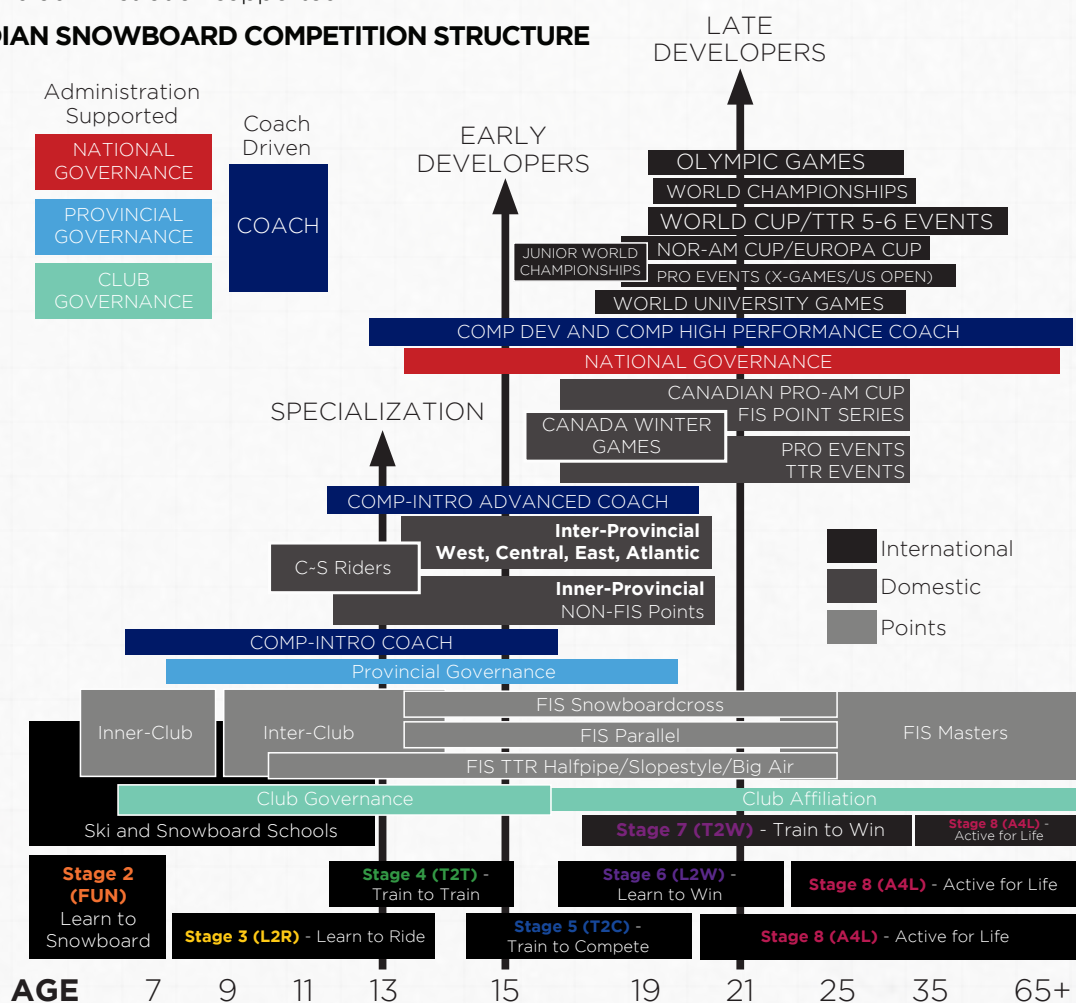
RECOMMENDATION: The current system of competition is based on tradition. National, provincial, club and ski area administrators and coaches need to review their existing schedule from the entry to the elite level and provide the best possible development pathway for athletes.

LTAD KEY 9

SYSTEM ALIGNMENT AND INTEGRATION

The process of designing and implementing the Canada-Snowboard LTAD plan is athlete centered, coach driven and administration supported.

CANADIAN SNOWBOARD COMPETITION STRUCTURE



RECOMMENDATION: All performance partners need to have a clear understanding of their roles and responsibilities.

LTAD KEY 10

KAIZEN

The concept of continuous improvement, which permeates LTAD, is drawn from the respected Japanese industrial philosophy known as Kaizen.

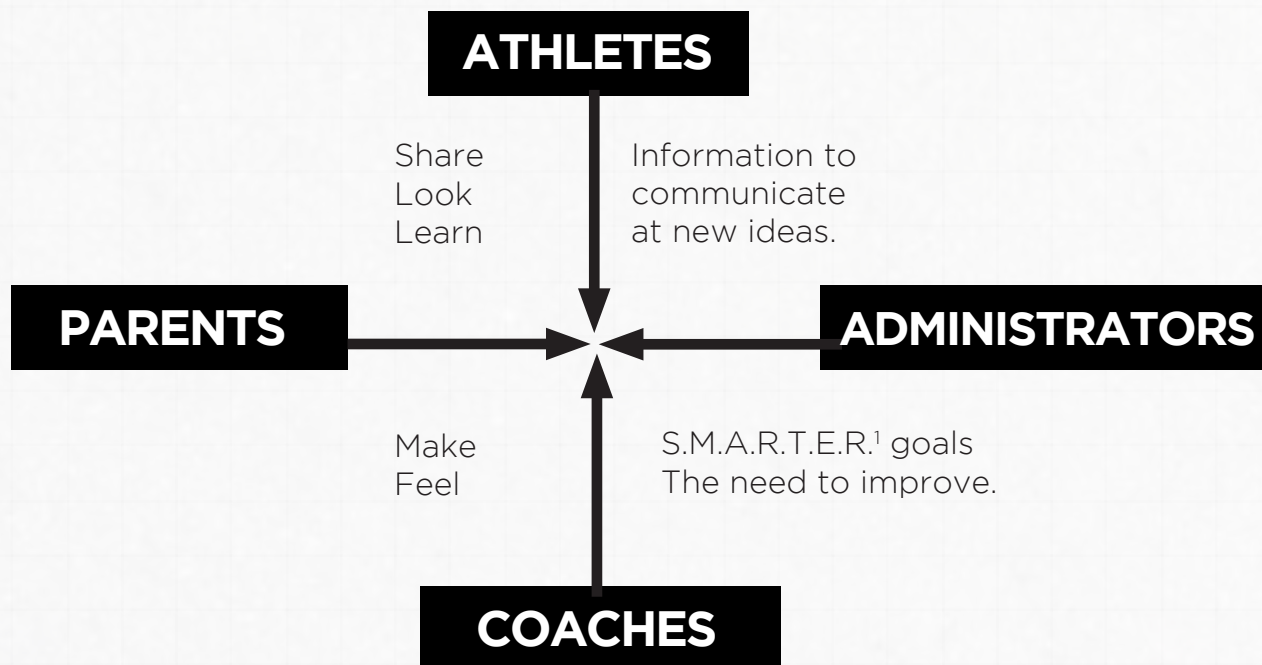
KAI = CHANGE

ZEN = GOOD

KAIZEN = CONTINUOUS IMPROVEMENT

The current LTAD plan will change as the four partners of performance work in partnership.

THE 4 PARTNERS OF PERFORMANCE



¹ Specific | Measurable | Achievable | Realistic | Time-based | Evaluated | Revised

RECOMMENDATION: Initiatives based on the LTAD framework always take into consideration latest developments in science, sport and culture.

LTAD KEY 11

ADAPTING THE 10 KEYS FOR ATHLETES WITH A DISABILITY

While there are many similarities between Athletes With A Disability (AWAD) and able-bodied athletes, there are some differences that change the LTAD process.

THE TEN-YEAR RULE – Exactly how long it takes to become an elite level adaptive snowboarder varies with the nature of the disability, and varies considerably with the pre-injury sporting experience and expertise of trained athletes who acquire a disability.

THE FUNDAMENTALS – The physical literacy skills needed by children with a disability vary greatly depending on the nature and extent of their disability. It should include all skills learned by able-bodied children (modified as required) as well as additional skills required for effective use of assistive devices.

SPECIALIZATION – It is critically important that people with congenital or acquired physical or intellectual disabilities be exposed to the full range of FUNdamentals before specializing in the sport of their choice, such as snowboarding.

DEVELOPMENTAL AGE – Some congenital disabilities are known to influence childhood and adolescent development and the timing of puberty. Because of the variations in the timing of puberty (and therefore peak height velocity), it is likely that there will also be variations in the ages at which optimum periods of trainability occur. The mental age (a measure of intellectual development) also needs to be considered when working with athletes with an intellectual disability.

TRAINABILITY – Due to the absence of information on periods of optimum trainability for AWAD, it is suggested that for children with a congenital disability the ages be adjusted based on the observed age of puberty.

PHYSICAL, MENTAL, COGNITIVE, AND EMOTIONAL DEVELOPMENT – Sport can play an important role in helping individuals with a physical or intellectual disability to develop a new, positive self-image as well as enhance their self-concept. When working with athletes with an intellectual disability it is particularly important to consider the athlete's mental and developmental age rather than their chronological age.

PERIODIZATION – Since a disability may reduce functional muscle mass, fatigue in AWAD should be carefully monitored, and rest and recovery periods should be adjusted accordingly.

CALENDAR PLANNING FOR COMPETITION – Effective competition for AWAD in all classifications needs to be matched to the athletes' stage of development. This can be a challenge when there are few athletes in a particular sport or classification/division within that sport.

SYSTEM ALIGNMENT AND INTEGRATION – The snowboard LTAD focuses on the development of both able-bodied and disabled snowboarding athletes by aligning and integrating the many components involved in providing optimum benefits for all snowboarding athletes in Canada.

CONTINUOUS IMPROVEMENT – Evaluating new information on sport for AWAD, selecting what information will be used, and then integrating it into programs and services must be an active, ongoing process, tied to the concept of continuous improvement.

AWAD pass through the same stages as able-bodied athletes, although the ages and rate of progress may differ.

The eight stages of the able-bodied snowboard LTAD represent the "normal" range of ages at each stage for non-disabled individuals. Individuals with a disability, particularly those with an acquired disability, may pass through the stages at significantly different rates and at greater speeds since their experience before acquiring a disability (rather than chronological age) become an important factor. Since people become disabled at any age, no ages have been assigned to the Awareness stage (for AWAD) in Active Start. The life-long importance of an Active Start for kids with a congenital disability cannot be overemphasized.

Athletes who retire from adaptive snowboarding competition need to be encouraged to remain involved in adaptive snowboarding as a coach, instructor, official, program volunteer or mentor.

Note: Specific disabilities may advance or slow development for any given chronological age.

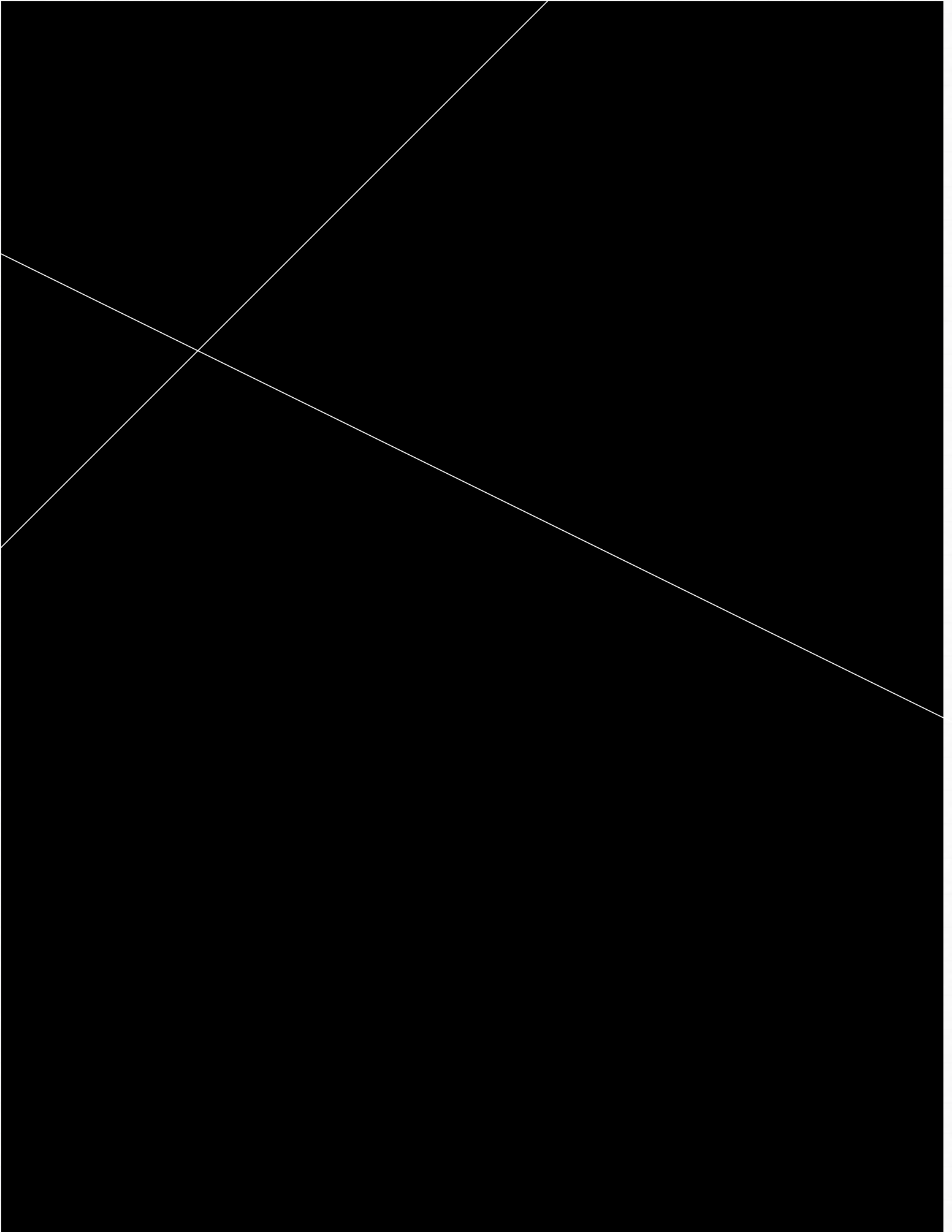
After an athlete acquires a disability the athlete should return to the Active Start (Awareness) stage for athletes with a disability.



CANADIAN PARA-SNOWBOARD TEAM MEMBERS

- 1. John Leslie**
- Lower leg amputee riding with a prosthetic leg
- 2. Tyler Mosher**
- Incomplete paraplegic (standing)
- 3. Ian Lockey**
- Incomplete paraplegic (standing)

RECOMMENDATIONS: AWAD are applicable to everything in the able-bodied snowboard LTAD model, and for that reason this model should be a starting point for ALL athletes. The 11th key is, therefore, only concerned with additional factors that need to be considered when working with AWAD in snowboarding.





8 STAGES OF LTAD FRAMEWORK

01

ACTIVE START

AGES 0 - 6

02

FUNDAMENTALS

AGES 6 - 9

03

LEARN TO RIDE

AGES 8 - 12

04

TRAIN TO TRAIN

AGES 12+

05

TRAIN TO COMPETE

AGES 14-16+

06

LEARN TO WIN

AGES 17-18+

07

TRAIN TO WIN

AGES 20-24+

08

ACTIVE FOR LIFE

ANY AGES

STAGE 1

ACTIVE START



SKILL: crawling, walking, swimming, running, skiing, snowboarding

CHRONOLOGICAL AGE:

0 to 6 -- infants and toddlers

PROGRAM: swimming, gymnastics, athletics, skiing, snowboarding
(5 pillars of physical literacy)

STIMULATE COOPERATIVE PARTNERSHIPS BETWEEN:

- ⚙️ summer & winter sport programs
- ⚙️ parents & ski schools
- ⚙️ ski schools /snowboard clubs



GENERAL DESCRIPTION This is where a child learns how to have fun!

Since physical activity is essential for healthy child development, the key is to encourage basic movement skills because they do not just happen as a child grows older, but develop depending on each child's heredity, environment and activity experiences.

Starting in infancy, parents need to provide infants, toddlers and preschoolers with opportunities to participate in daily activity that promotes movement. Building a well structured environment combining the five pillars of physical literacy -- skiing, athletics, swimming, gymnastics and snowboarding -- enables the child to move effortlessly into the FUNdamentals stage.

ADAPTIVE SNOWBOARDING Opportunity for athletes with a disability.

ATHLETES WITH A CONGENITAL DISABILITY: Because people with a disability tend to be less active than their peers, ensure that activities are gender-neutral and inclusive so that active living is equally valued and promoted for ALL people.

AWARENESS FOR ATHLETES WITH AN ACQUIRED DISABILITY (AWAD):

Sport opportunities for people with a disability are not always well known and someone who acquires a disability may have no knowledge of what sports are available. Sports need to develop awareness plans to make their offerings known to prospective AWAD.

LTAD WINDOW OF OPPORTUNITY (PHYSIOLOGICAL DEVELOPMENT)

Initiation of basic human movement skills: running, jumping, kicking, throwing, catching, swimming, sliding, etc....

PARTNERS: PARENTS

PHYSICAL DEVELOPMENT

MASTERING OF FUNDAMENTAL MOTOR SKILLS

Focus on gross motor skills with large muscle groups through unstructured activity.

Provide organized physical activity for at least 30 minutes a day for toddlers and at least 60 minutes a day for preschoolers.

The **gross motor skills** from the 5 pillar sports provide the base for all other sports:

- running, jumping, throwing
- bouncing, rolling, flipping, spinning
- balance and buoyancy as the foundation for all surf related sports
- gliding, sliding, sledding, tobogganing, Crazy Carpet, etc.



5 PILLARS OF SPORT LITERACY

Skiing Learn to Ski **Swimming** Learn to Swim
Athletics Learn to Run **Gymnastics** Learn to Jump
Snowboarding Learn to Snowboard

PSYCHOLOGICAL DEVELOPMENT

PHYSICAL ACTIVITY IS ESSENTIAL FOR HEALTHY CHILD DEVELOPMENT

Among its benefits, physical activity enhances:

- development of brain functions, social skills, emotions, attitudes and imagination
- confidence and positive self-esteem
- stress reduction by high quality of sleep

Design activities that help children to feel competent and comfortable participating in a variety of fun and challenging sports and activities.

Ensure that games for young children are non-competitive and focus on participation.

LIFESTYLE

ACTIVE, SAFE AND FUN

- not sedentary for more than 60 minutes except when sleeping
- proper fitting protective gear
- non-competitive amusing activities and sports
- exploration of risk and limits in safe environments

STAGE 2

FUNDAMENTALS



SKILL: Learning to snowboard, basic sport movement skills

CHRONOLOGICAL AGE:

Girls 6 to 8 and Boys 6 to 9 -- late childhood

PROGRAM: Clubs, recreation centres, entry level snowboard programs

GENERAL DESCRIPTION

This is where a child learns physical literacy: Interrelation of movement skills and sport skills.

The FUNdamentals stage should be structured and fun! The emphasis is on developing basic fundamental sport skills in a fun and positive social environment.

Speed, power and endurance are developed using sports and games. In addition, children should be introduced to decision-making skills and simple rules and ethics of sports.

There should be well-structured programs with proper progressions that are monitored regularly by trained educators, coaches and parents.





LTAD WINDOW OF ACCELERATED ADAPTATION TO SNOWBOARDING: (PHYSIOLOGICAL DEVELOPMENT)

Beginning of phase

1st window of opportunity for
speed development:

Girls 6 to 8 | Boys 7 to 9

Entire phase

- suppleness/flexibility
- movement skills

INSTRUCTOR: Ski and
snowboard, diving,
skateboard, gymnastics
(5 pillars of snowboard literacy)

KEY AREAS OF FOCUS:

- ⚙ learn to snowboard
- ⚙ maximize first speed
window

ADAPTIVE SNOWBOARDING OPPORTUNITY FOR ATHLETES WITH A DISABILITY

Ensure that disability equipment is size, weight and design
appropriate.

TO DO (ACTION PLAN):

- ⚙ Link ski and snowboard schools with clubs
- ⚙ Link ski clubs with snowboard clubs
- ⚙ Increase number of entry level coaches



PARTNERS: PARENTS

PSYCHOLOGICAL DEVELOPMENT

DEVELOP REASONING SKILLS THROUGH SPORTS AND ACTIVITIES

Provide opportunities for activities and sports that:

- are FUN, positive and motivating
- are exploratory and allow for self-discovery
- build confidence with a high rate of success
- promotes individual and group participation
- have a 'no excuse atmosphere'
- introduce children to simple rules and moral dilemmas

Ensure that games for young children are non-competitive and focus on participation.



RECOMMENDATIONS

(FUN)



PARTNERS: PARENTS

PHYSICAL DEVELOPMENT

MASTERING OF FUNDAMENTAL MOVEMENT SKILLS

At this stage motor patterns become more refined and balance skills improve as the inner ear gradually matures. No gender differences are apparent and physical activity should still be done through games and sports play. Provide opportunities for preferred and supportive physical activity at least 4 times a week.

Patterning **ambidextrous sports for refined motor skills:**

- athletics, gymnastics, waterpolo, handball and diving for developing the ABCs: agility, balance, coordination, speed and suppleness
- soccer, hockey, tennis, volleyball, basketball, baseball etc. for developing catching, passing, dribbling, kicking, striking
- biking/BMX, dancing, skiing, motorcross, etc. for developing skill, speed, balance, coordination



Initiation to **asymmetric sports for gross motor skills;**

skateboarding, snowboarding, skating, surfing, sliding for:

- snowboard movement skills in 3 planes of balance (fore and aft, lateral, rotational)
- front foot and back foot control

Initiation to **physical training** through games and play with simple rules that focus on technique, for and fun with:

- circuit training: medicine ball, Swiss ball, own body weight strength exercises

5 pillars of snowboard literacy:

- snowboarding
- skateboarding
- athletics
- gymnastics
- diving

PARTNERS: PARENTS

LIFESTYLE

FUN, ADVENTURE, SOCIAL AND PLAY

The kids learn:

- to have fun practicing four to six of the recommended sports
- how to eat in a healthy way starting the day with a breakfast and avoiding fast-food abuse
- how to keep the body warm with proper winter wear
- on-hill basic safety
- to wear a helmet as soon as they start doing impact sports



RECOMMENDATIONS

(FUN)

PARTNERS: PARENTS & COACHES

TECHNICAL DEVELOPMENT

LEARN TO TURN

Learn to snowboard with the Canadian Association of Snowboard Instructors (CASI) snowboard professionals.

AIR AND SPEED

General **snowboarding** and **skateboarding** skills: stance (variety), balance, timing, coordination and speed control.

React and respond to varying:

- terrain through turn shape
- terrain through stance changes
- speeds for jumps
- height of jumps
- condition through pressure control
- visibility by adjusting:
 - 1) take off
 - 2) in the air
 - 3) landing and reaction



WINDOW OF OPPORTUNITY FOR:

- learning other languages
- learning music



STAGE 3

LEARN TO RIDE



SKILL: Fundamental snowboard skills

CHRONOLOGICAL AGE:

Girls 8 to 11 and Boys 9 to 12 -- late childhood and early puberty

SCHOOL: Elementary school

PROGRAM: Club, Inter-club, C~S Riders, Ski and Snowboard school

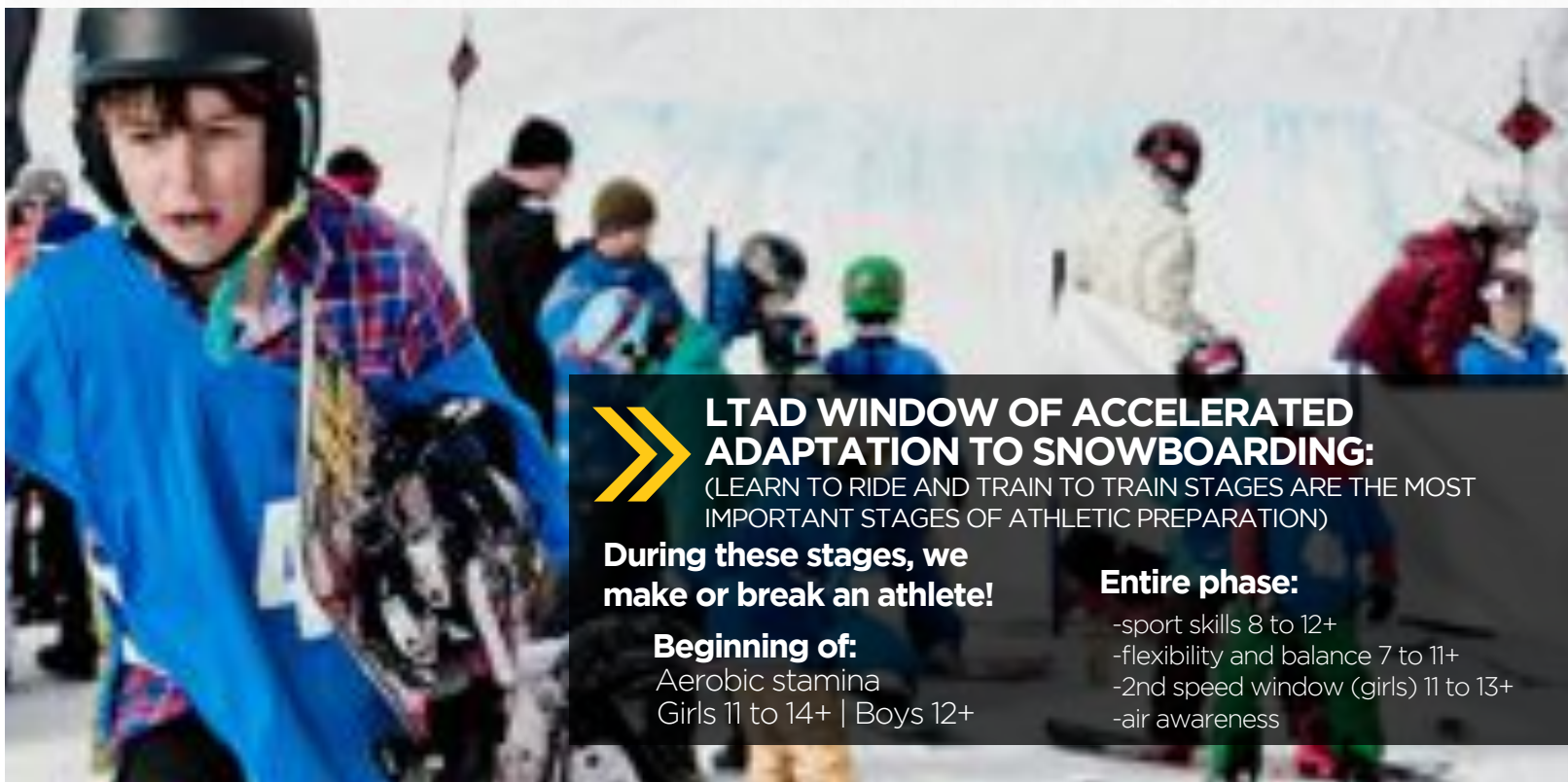
COACH: Comp Intro coach or Level 2-3 snowboard instructor

TIME ON SNOW: 40 days

GENERAL DESCRIPTION

Introducing snowboarders to all four Olympic disciplines ensures a holistic skill development. This will allow the competitor to identify what they like while creating a great multi-skill foundation. Inter club, local shop/sponsor and C~S Riders events are introduced for fun, but are not the main focus. This is where the competitive spirit in athletes of the future is born.





LTAD WINDOW OF ACCELERATED ADAPTATION TO SNOWBOARDING:

(LEARN TO RIDE AND TRAIN TO TRAIN STAGES ARE THE MOST IMPORTANT STAGES OF ATHLETIC PREPARATION)

During these stages, we make or break an athlete!

Beginning of:

Aerobic stamina
Girls 11 to 14+ | Boys 12+

Entire phase:

- sport skills 8 to 12+
- flexibility and balance 7 to 11+
- 2nd speed window (girls) 11 to 13+
- air awareness

ON SNOW RATIO: 3

Freeride, 2GS, 2 Park, 2 Pipe

PRIORITY: FUN

KEY AREAS OF FOCUS:

- ⚙️ keep track of growth spurt
- ⚙️ build turning and air skills with speed

ADAPTIVE SNOWBOARDING

OPPORTUNITY FOR ATHLETES WITH A DISABILITY

- ⚙️ Introduce AWAD to adaptive snowboarding equipment such as athletic sport prosthesis, outriggers and sit-snowboards
- ⚙️ Body-sized and skill-level appropriate equipment remains important



TO DO (ACTION PLAN):

- ⚙️ Integrate C-S Riders program
- ⚙️ Increase quality of club programming
- ⚙️ Align club and Provincial Snowboard Organization (PSO) structures

PARTNERS: PARENTS & COACHES

PSYCHOLOGICAL DEVELOPMENT

THE SAMPLING STAGE

Provide opportunities for activities and sports that focus on fun, pleasure and socialization

- **S.M.A.R.T.E.R**¹ goal setting and process oriented:
 - long-term goals: dreams
 - short team goals: based on skill development
- **Team Spirit**: learn how to relate to different groups of peers
- **Concentration**: discover new abilities to concentrate
- **Visualisation**: transfer of video and snowboard/skateboard video game scenarios to real life
- **3 important psychological skills to develop**:
 1. **Deliberate effort**: the ability to deliver effort and enjoy the feeling of the effort during the activity itself
 2. **Responsibility**: the ability to associate joy with effort and 'competition'

3. **Success**: the ability to take risk and accept failure as a normal occurrence of sport development

The central goal is to come out of the sampling stage of athlete development with a participant who begins to understand



WINDOW OF OPPORTUNITY FOR:

- learning other languages
- learning music



LATE CHILDHOOD AND EARLY PUBERTY RECOMMENDATIONS

(L2R)



PARTNERS: PARENTS & COACHES

PHYSICAL DEVELOPMENT

MASTERING OF FUNDAMENTAL SPORT SKILLS

Narrow focus to a minimum of 3 sports. At this stage, children are developmentally ready to acquire the general sports and snowboard skills that are the cornerstones of all athletic development.

Maintenance and refinement of **ambidextrous sports**.

Patterning **gliding sports**. Participation in sports that require similar movement patterns: skate, wake, wind, kite and surf.

Initiate monthly **data mining**:

- keeping track of growth spurts before PHV by regularly measuring the height of children and looking for a sudden height increase
- growth spurts of girls and boys last approximately 12 months

Introduce general fitness framework early in stage:

1. Warm up
2. Rhythm and Co-ordination runs: ex. turn shape, multi-discipline events, king of the hill...
3. Spatial Awareness: ex. air time runs, how many direction changes can you do in a run
4. Rest and Recovery: ex. lunch, fuel breaks, sleep

5. Reaction time and Agility: ex. games in park, tree runs etc.

6. Focus on skill and execution

7. Cool down with short stretch and muscle rebalance because of the rapid growth of bones, tendons, ligaments and muscles

Further in stage, as above, with the following:

8. More speed work: ex. race your buddy...
9. Explosive strength: starts, cartwheels...
10. Landings without arm drags: focus on good landings with good leg power...
11. More stretching at the end of training sessions
12. Monitor volume, quality, intensity and duration of sessions

LIFESTYLE

FUN, ADVENTURE, SOCIAL, MUSIC AND ART

Introduce the rider to:

- other cultural and lifestyle habits
- warm-up and cool down supervised sessions
- the importance of staying hydrated, especially during physical activities
- the general rules and ethics involved in skiing and snowboarding
- proper fit and use of sporting and protective gear
- the importance of school and education
- a healthy diet high in calcium and vitamin D
- eye and skin protection
- a healthy lifestyle including daily physical activity and sports

¹ Specific, Measurable, Achievable, Realistic, Timely, Evaluate, Re-do



LATE CHILDHOOD AND EARLY PUBERTY RECOMMENDATIONS

(L2R)

PARTNERS: COACHES

TECHNICAL DEVELOPMENT

SPEED

Ride Anywhere | Gross motor skills acquisition:
Stance - Balance - Timing - Coordination

- Learning to find balance and stability:**
 - The **neutral position** as the most stable position.
 - Initiation of turn with **hips inside of turn** followed by knee movement and feet.
 - **Equal weight** on both legs, less and front foot pivot towards middle of this stage.
 - **Up-unweighting** movement coordinated with arms.
 - The J shape and C shape of a turn.
- Developing consistency** by demonstrating various shapes and sizes of turns and air.
- Consolidating stability** over changing snow, features, steepness, light and weather.

AIR

Dry land: Trampoline and diving instruction with certified coaches **1) take off 2) in the air 3) landing and reaction**

Halfpipe (18' and smaller):

- drop in both walls on the uphill edge
- balanced body position across the flat bottom
- take off and land on uphill edge
- demonstrate a variety of grabs with gradual amplitude

Parks, jumps and rails:

- switch take off
- remain balanced on take-off, during air and landing
- gap jumps
- spin switch and regular
- slide intermediate rails and boxes
- demonstrate a variety of grabs

Manoeuvre based:

Spin around vertical axis:

- 360° -540° rotations
- cab spins
- straight airs
- air to fakie
- alley oops

Grab all spins:

- front and back hand
- toe and heel edge
- front and back side wall
- switch and regular

TRAINING AND COMPETITIVE ENVIRONMENT

Single periodization to follow seasonal club schedule and regional snow coverage:

- **40 days on snow:** 6 days in competition or simulation
- **Training ratio:** 85% training and freeriding/15% competition ratio
- **On snow quantity and intensity:** 1 to 3 sessions/week with low intensity
- **Complimentary sports:** 4 to 6 sessions/week
- **Average duration of sessions:** 90 to 120 minutes
- **Competition format:** hybrid event/skills event
- **Competition goals:** fun with air speed sense through a variety of challenges
- **Competition venues:** inner/inter club jams, C-S Riders, Junior Jam's (all disciplines)

STAGE 4

TRAIN TO TRAIN



SKILL: Building the physical engine

CHRONOLOGICAL AGE:

Girls ~11 to 15 and Boys ~12 to 16 -- early and late puberty

TRAINING AGE: 2 to 4 years

SCHOOL: 1st to 5th year high school, Grade 5 SNOWPASS

COMPETITION: Club, C-S Riders, Provincial/Territorial, FIS and Non FIS regional events

COACH: Comp Intro and Comp Intro Advanced

ON SNOW: Beginning of specialization; Racing, SBX, Free-style

GENERAL DESCRIPTION

Good training habits are formed, on and off the snow. There should be an emphasis on strength conditioning, linked to the beginning of peak height velocity (PHV). See **LTAD key 5**.

There should be greater individualization of fitness and on snow technical training. The focus should still be on training rather than competing so it is important that activities consist predominantly of high volume, low intensity workloads. Training volume should increase as athletes progress through this stage.





LTAD WINDOW OF ACCELERATED ADAPTATION TO SNOWBOARDING: (PHYSIOLOGICAL DEVELOPMENT)

ENTIRE PHASE

- Strength for girls is 1 to 2 months after peak of PHV -- 13 to 17 years old
- Strength for boys is 12 to 18 months after peak of PHV -- 14 to 18 years old
- The endurance window is between 11 and 15 years old
- The 2nd speed window for boys is between 13 and 16 years old

GROWTH SPURT IS THE REFERENCE POINT FOR LTAD WINDOWS AND PROGRAM DESIGN. BEGINNING OF PHV.

BOYS: Growth of pubic hair.

GIRLS: Beginning of menstruation.

TIME ON SNOW: 50 to 70 days

PRIORITY: Training

KEY AREAS OF FOCUS:

- ⚙ specialization
- ⚙ high volume, low intensity



TO DO (ACTION PLAN):

- ⚙ Implement athlete tracking system
- ⚙ Create national curriculum for sport schools
- ⚙ Implement regional competition series: Atlantic, East, Central, West

PARTNERS: PARENTS, COACHES & CLUBS

PSYCHOLOGICAL DEVELOPMENT

THE SPECIALIZING STAGE

Provide training and competition opportunities that focus performance on a preferred discipline.

Mental skills introduced in the Sampling stage of athlete development should continue to be practiced, refined, and incorporated into many types of situations such as practice, dry-land training, before, and during competitions.

The athlete should:

- take personal responsibility for training, preparation, performance and recovery
- bring consistent effort to training and competitions
- get involved with coaches in decision making (drills, exercises, training plan, etc.)
- identify "what works" in the ideal performance state



- be coachable: accept constructive criticism and work with other coaches and athletes
- continue basic mental skills development: goal setting, imagery and self-awareness
- be introduced to the idea of self-reflection after training or competitions
- have a training diary

EARLY PUBERTY/ ADOLESCENCE AND LATE PUBERTY RECOMMENDATIONS (T2T)



PARTNERS: PARENTS, COACHES & CLUBS

PHYSICAL DEVELOPMENT

STABILIZATION AND FOUNDATION BUILDING

During this stage, we make or break an athlete. Proper monitoring of physiological adaptation to training is essential!

Continue monthly data mining for PHV. Average age for girls reaching PHV is 12 and for boys 14. PHV is the reference point to begin a weight training program.

Refer to LTAD strength window.

Learn:

- to train in a gym
- basic training exercises for core strength and injury prevention

Maintenance of complimentary sports for:

- skill
- speed
- endurance (aerobic capacity)
- lifestyle

INTRODUCE SPECIFIC FITNESS FRAMEWORK

Early in stage, dry-land focus on the following:

1. Introduce free weights
2. Injury prevention exercises: high reps/low intensity focusing on execution
3. Core and stabilizer strength
4. Explosive arm and leg power
5. Maximize speed development

6. Introduction to physical testing (field test) and mini-functional assessments (twice/year)

INITIATE FIT TO TRAIN

Further in stage:

7. Max strength (women and early developer men)
8. Strength endurance
9. Power/Speed endurance (snowboardcross, alpine)
10. Build a level of fitness that allows the athlete to maintain high volume & high quality training
11. On snow training develops training endurance
12. Maximize stamina/aerobic capacity trainability window, for recovery, regeneration and training capacity
13. Monitor training for high volume, low intensity sessions

PARTNERS: COACHES & CLUBS

LIFESTYLE

SMOKE FREE ENVIRONMENT/DRUG-FREE SPORT

Optimize training and education in:

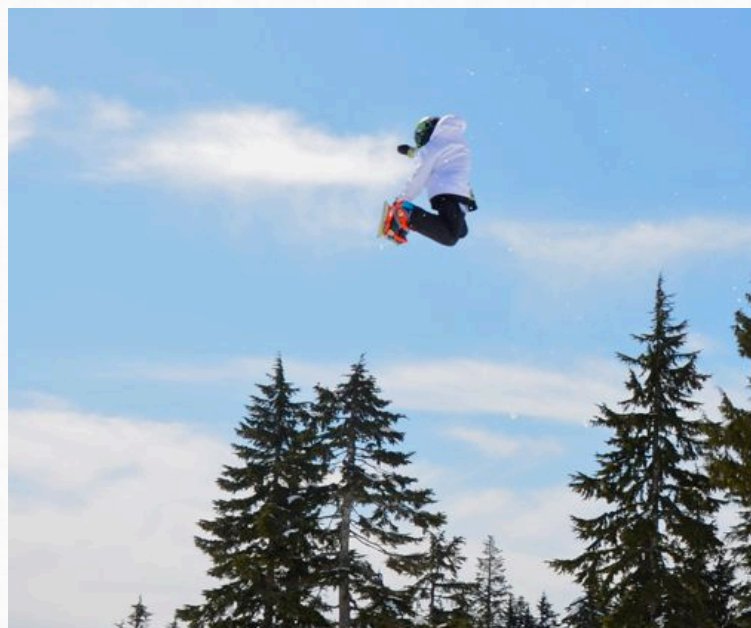
- cultural and lifestyle habits
- smoke-free environment
- drug-free sport
- safe sex practices
- wearing a helmet while snowboarding
- proper nutrition and hydration
- self-management
- taking responsibility for actions
- respect for others
- The Alpine Responsibility Code
- caring and maintenance of equipment

PARTNERS: COACHES & CLUBS

TRAINING AND COMPETITIVE ENVIRONMENT

Single periodization to follow regional snow coverage:

- **50 to 70 days on snow:** 40 to 55 days in training and freeriding; 10 to 15 days in competition or simulation
- **Training/Comp Ratio:** 75% training and freeriding/25% competition
- **On snow quantity and intensity:** 4 to 6 sessions/week with low intensity
- **Complimentary sports:** 2 to 4 sessions/week
- **Average duration of sessions:** 120 to 180 minutes
- **Competition format:** hybrid event/skills event, FIS or Pro with adult formats
- **Competition goals:** enjoyment/building towards provincial team selection
- **Competition venues:** C-S Riders, regional rail and slopestyle jams and comps, provincial games, provincial championship, FIS races and Junior Nationals



SNOWBOARD SPECIFICATIONS

(T2T)

PARTNERS: COACHES & CLUBS

TECHNICAL DEVELOPMENT

SPEED | Freeride Everywhere | Refined motor skills

acquisition: Steering - Edging - Pressure - Carving

1. **Learn** with increased speed:

- **Ankle** movements
- **Mid-weighting** movements
- Creating maximum pressure at **beginning** of a turn
- **Managing** imbalance and instability with speed, while freeriding
- The C shape and Race shape of a turn

2. **Develop** and adjust, moving from understanding to demonstrating:

- Steering with **both legs** using lower body to create turn with a quiet upper body
- Edge grip using lower body angles
- **Sequencing of joints** and movements
- Creating and **releasing pressure**
- "On the fly" decision making skills for terrain adaptation

3. **Consolidate** turn shapes and **tactics** in varied conditions:

- Keeping the centre of mass in the **inside** of the turn
- All the **gross motor skills** from stage 3
- Using instability to own advantage

AIR | SKILL BASED

Halfpipe | All stage 3 skills in the **SUPER PIPE** plus:

- uphill edge on take off and landing
- clear vision of take off
- clear vision in air
- clear vision on landing
- carving flat bottom with speed
- maintain speed from wall to wall
- line choice
- control pressure in the transition
- spin downhill and uphill with grab
- fluid switch riding in pipe
- pipe amplitude > 3 to 5 feet out (women <2 feet men)
- **high landing on transition
- all grabs: regular and switch
- with style
- air-to-fakie

Slopestyle | All stage 3 skills plus:

- stability on take off, during air and landing of jumps
- show a variety of different grabs off different features
- develop air sense
- spin in all 4 directions for men and women (fronstide, backside, switch frontside (cab), switch backside)
- off-axis spins
- a variety of tricks on intermediate rails
- large jumps 180° - 720°
- small jumps: 720°+

All airs and tricks with grabs.

Top performer | Straight airs > 4 to 6 feet with consistent amplitude all the way down the pipe | 4 directions spin in pipe:

- 540° > 4 to 6 feet
- 720°+ > 4 to 6 feet

STAGE 5

TRAIN TO COMPETE



SKILL: Optimizing the physical engine

CHRONOLOGICAL AGE:

Freestyle 14+, SBX 16+ and
Alpine 16+ -- Late adolescence
and early adulthood

TRAINING AGE: 4 to 6 years

SCHOOL: High School, College,
CEGEP and University

PRIORITY: Training & Competing

COMPETITION: Provincial team
and high performance clubs,
training centres



GENERAL DESCRIPTION

Training volume remains high while intensity increases with the importance of competitions.

The emphasis should be on developing individual strengths and minimizing weaknesses through modeling and nurturing physical, technical and tactical skills based around specific event demands.

Here you will find the quintessential top performer on a provincial team.





LTAD WINDOW OF ACCELERATED ADAPTATION TO SNOWBOARDING (PHYSIOLOGICAL DEVELOPMENT)

Growth spurt is reference point for program (early phase):

- speed window #2 for boys
- strength window for boys is 12 to 18 months after peak of PHV
- strength window for girls is 1 to 2 months after peak of PHV

COACH: Comp Intro Advanced
certified, Comp Dev coach,
sport science team

TIME ON SNOW: 70-100 days

KEY AREAS OF FOCUS:

- ⚙️ versatility and strategy for competitions
- ⚙️ single and double periodization yearly plans



TO DO (ACTION PLAN):

- ⚙️ build World Cup standard on-snow facilities
- ⚙️ standardize physical testing protocol
- ⚙️ ensure appropriate competition opportunities are available

PARTNERS: PARENTS, COACHES & ADMINISTRATORS

PSYCHOLOGICAL DEVELOPMENT

THE INVESTING STAGE

Learn to value competitions and putting performance first.

The athlete should:

- consistently give 100% effort
- revise mental skills such as imagery and visualization
- develop activation and relaxation skills
- develop positive self-talk and confidence
- integrate mental skills in daily activities
- gradually learn to self-coach and actively participate in their own development
- reflect during post training and post competition to enhance future performances
- work with coaches in a more collaborative manner
- be introduced to:



- media training
- distraction management (re-focusing skills)
- decision making

Athletes in this stage are learning to achieve balance with other important roles such as schools, university, part-time jobs, family etc. They must be highly regulated in regards to their recovery activities to effectively meet the heavy demands of training and competition.

LATE PUBERTY/ADOLESCENCE AND EARLY ADULT RECOMMENDATIONS (T2C)



PARTNERS: PARENTS, COACHES & ADMINISTRATORS

PHYSICAL DEVELOPMENT

ENTER FIT TO PERFORM

Developing maximum strength gain through the use of advanced weight lifting techniques.

Learn:

- Olympic lifting techniques
- Plyometric training
- Discipline specific exercises

Develop:

- Lower body and core stabilization
- Max strength
- Functional hypertrophy
- Anaerobic endurance
- Speed strength
- Periodized training programs

Maintenance of complimentary sports.

The goal is to have enough fitness to manage the rigors of competition and training without injuries or burnout:

1. Introduction to technology based training equipment
2. Well periodized training program, integrating physical training through conditioning camps, fall dry-land and in-season maintenance
3. Work with strength coach and individualized training plan
4. Recognizing and preventing overtraining

5. Physical testing: 2 field tests/year -- results play a major role in planning the training and competition season

6. Specific well planned methods of regeneration/recovery are identified and implemented

7. Begin double periodization yearly plans

PARTNERS: COACHES

LIFESTYLE

The science and education of competing

Educate athlete in:

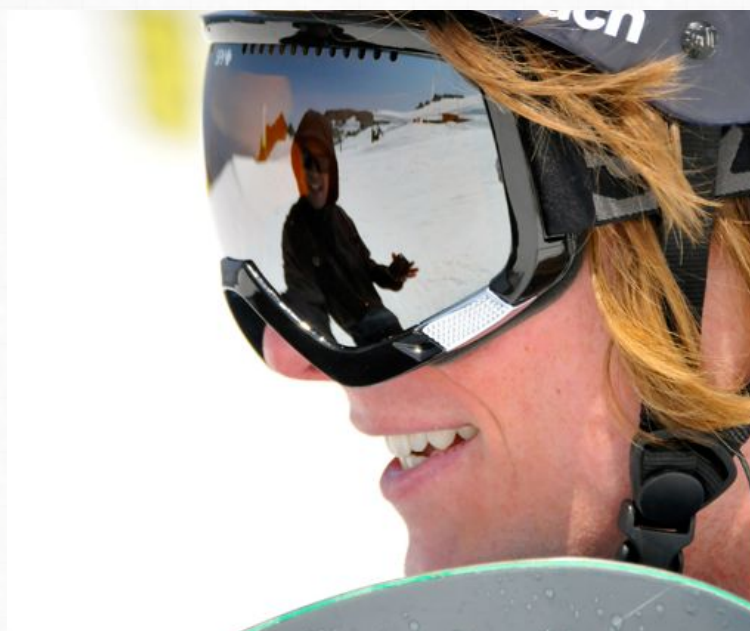
- recovery and regeneration principles
- injury prevention training and behaviour
- tapering and peaking strategies
- adapting to new training and competition environments with relocation to new training centres
- prioritization and yearly planning
- lifelong skills of fair-play, dedication, integrity, leadership, time management, organization, pursuit of excellence, teamwork and health awareness
- travel organization and smooth adaptation to other countries and cultures
- being a team player during training and travel
- choosing proper performance gear
- maximizing board performance with specific tuning

PARTNERS: COACHES & ADMINISTRATORS

TRAINING AND COMPETITIVE ENVIRONMENT

SINGLE & DOUBLE PERIODIZED YEARLY PLAN:

- **70 to 100 days on snow:** 55 to 75 days in training and freeriding | 15 to 20 days in competition or simulation
- **Training/Comp/Recovery Ratio:** 70% training and freeriding/30% competition/recovery
- **Quantity and intensity:** 6 to 9 sessions per week with high intensity
- **Complimentary sports:** 1 to 2 sessions per week
- **Average duration of sessions:** 120 to 180 minutes
- **Competition format:** adult formats
- **Competition goals:** put performance first
- **Competition venues:** Pro, FIS, Provincial Championships, Continental Tour, Canada Games, Junior Nationals, Junior World Championships and Nationals



SNOWBOARD SPECIFICATIONS

(T2C)

PARTNERS: COACHES

TECHNICAL DEVELOPMENT

SPEED

Carve everywhere

All stage 4 recommendations plus switch carving on intermediate slopes and:

1. **Learn** and pattern the transferability of performance from training to the competition arena:
 - to create early pressure in a turn
 - to maintain pressure longer throughout a turn
 - to take advantage of imbalance and manage instability with speed and fluidity
 - to use minimal effort for maximum gain
2. **Develop**, control and perform smoothly:
 - race turn shapes
 - snowboardcross airs
 - self-analysis of technical performance
 - passing and line gain tactics
3. **Consolidate** the skills racers have, by the sequencing of skills from platform of support to movement to edging to pressure and to the release:
 - all the refined motor skills from stage 4
 - the speed at which the movement sequence is performed
 - the transfer of speed from one turn to the next
4. **Improvise** turn shapes and tactics in various competition situations:
 - recover line from errors
 - "on-the-fly" decision making in competition

AIR | Super pipe and Slopestyle

Skills for Judging criteria's

All stage 4 skills plus:

- flat base take-off
- patience on the take-off
- early grab after first 1/4 spin
- long grab until last 1/4 spin
- increase and maintain speed
- decision making and line adjustment
- spin on multiple axis

FIS judging considerations:

Key criteria:

- | | |
|--------------|----------------------|
| - amplitude | Supporting criteria: |
| - difficulty | - pipe use |
| - execution | - risk |
| - variety | - progression |
| | - combination |

Manoeuvres for competition points

Halfpipe | Early stage in a Super pipe women <2 feet than men

| all tricks grabbed, switch and regular, with style:

- frontside & backside spins and large straight airs
- alley oop
- switch spins & manoeuvres
- spins on various axes: vertical/flat spins, misty/mcwtwist, rodeo/chuck, corked & double corked

Exit stage (*varying competition runs*)

- straight airs > 10 to 12 feet
- 540°, 720°, 900° > 6 to 8 feet
- start 900°
- gaining consistency with 1080° spins/double cork rotations
- varying competition runs

Slopestyle | All tricks grabbed, switch and regular, with style:

- a variety of tricks on advanced rails and large jumps
- consistent spins over 720 degrees on a variety of axes
- gaining consistency with 1080 spins and/or double cork rotations

STAGE 6

LEARN TO WIN



SKILL: Event specific fitness

CHRONOLOGICAL AGE:

HP 17+, SBX 18+ and Alpine 19+ -- early adulthood

TRAINING AGE: 6 to 8 years

SCHOOL: University or trade

PRIORITY: Competing

GENERAL DESCRIPTION

Training volume remains high while intensity increases with the importance of competitions.

The emphasis should be on developing individual strengths and minimizing weaknesses through modeling and nurturing physical, technical and tactical skills based around specific event demands.

COMPETITION: High Performance Provincial and National Programs (HPP)





COACH: Comp Dev, Comp High Performance, NCCP Level 4-5 & Advanced Coaching Diploma, P.E.T.1

TIME ON SNOW: 100+ days

FIT TO PERFORM

SPECIFIC INDIVIDUAL TRAINING PROGRAM BASED ON:

- ⚙️ 6 “S’s” of physical training: **S**tamina (endurance), **S**trength, **S**peed, **S**kil, **S**uppleness (flexibility) and **S**tability
- ⚙️ 7 “C’s” of psychological training: **C**ohesion (team spirit), **C**ontrol (emotions), **C**oncentration, **C**entre (goal setting), **C**ondition (ideal performance state), **C**ritical reflection, **C**onfidence
- ⚙️ Discipline specific tactical skills

KEY AREAS OF FOCUS:

- ⚙️ build a winning strategy
- ⚙️ individual needs
- ⚙️ prevent overtraining with planned recovery



TO DO (ACTION PLAN):

- ⚙️ Provide quality on-snow summer training
- ⚙️ Orientation to inter-continental events

PARTNERS: ADMINISTRATORS &
PERFORMANCE ENHANCEMENT TEAM

PSYCHOLOGICAL DEVELOPMENT

THE MASTERY STAGE

High knowledge level of self and sport. Individuals at the Mastery stage of athlete development usually have great perspectives. Great perspective means having:

1. **Identity:** knowing who you are
2. **Solid Values:** a clarified and determined set of values
3. **True Support:** sources of unconditional support

The athlete should:

- be clear about life after sport so that they can fully embrace their athletic career
- be confident, motivated and highly competitive
- have the constant desire to improve their performance
- be open to new horizons, different coaches and coaching methods



- be creative and innovative
- prepare and implement pre-competition and competition plans
- learn to interact with a team of coaches, science professionals and media

Athletes at the Mastery stage know “what works” for them. They have personalized mental skills that they are comfortable with.

RECOMMENDATIONS

(L2W)



PARTNERS: ADMINISTRATORS &
PERFORMANCE ENHANCEMENT TEAM

PHYSICAL DEVELOPMENT

Athlete and coach learn to work with a full time Performance Enhancement Team (PET) to optimize individual needs.

Introduce:

- discipline specific testing HP, SBX, PGS, slopestyle
- monitor overtraining symptoms
- full integration of sport psychology
- detailed recovery and regeneration techniques are integrated into training and competition

Develop:

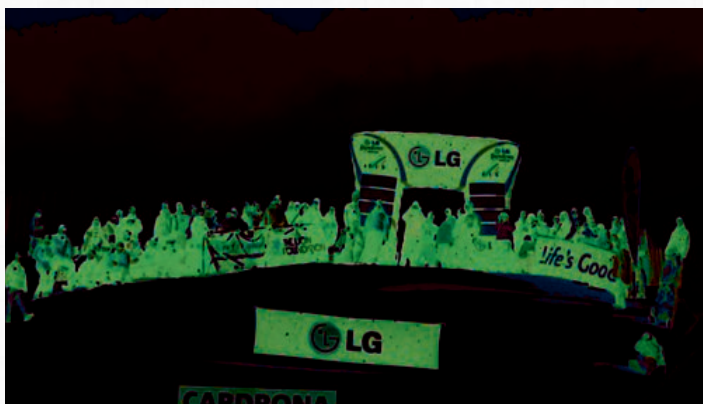
- functional hypertrophy
- max strength through Olympic lifting and traditional free weights
- speed and power through plyometric training and Olympic lifting

Maintain: stage 5 to Fit to Perform recommendations.

FIT TO WIN

Goal is to have muscular balance and strength that allows the athlete to focus on detailed event/individual specific performance. Athlete is not playing fitness “catch-up”, or battling ongoing nagging injuries:

1. Recognizing and preventing overtraining
2. Lab and field tests: 3 times per year
3. Functional evaluations: 1 to 2 times per year
4. Blood test: 2 times per year (pre and post season)



PARTNERS: COACHES

LIFESTYLE

- Lifestyle is set for success
- Athlete has acquired all skills necessary to compete with success

- Maximize ancillary capacities of competing, knowing:

- How to warm up and cool down
- How to stretch and when to stretch
- How to optimize nutrition and hydration
- How to use mental preparation
- The importance of regeneration and recovery
- How and when to taper and peak with self-monitoring
- How to plan pre-competition, competition and post competition routines
- How to maximize board performance with specific tuning
- How to travel

PARTNERS: COACHES & ADMINISTRATORS

TRAINING AND COMPETITIVE ENVIRONMENT

Double periodized multi year plan:

- **100 to 150 days on snow:** 70-110 days in training and freeriding, 21-33 days in competition or simulation
- **Training/Comp/Recovery ratio:** 70% training and freeriding/30% competition/recovery
- **Quantity and intensity:** 9 to 12 sessions per week with high intensity
- **Complimentary sports:** As needed
- **Average duration of sessions:** 120 to 180 minutes
- **Competition format:** Adult formats
- **Competition goals:** Winning Continental Cup events and qualify for finals on World Cup
- **Competition venues:** Pro, Provincial Championships, Continental Tour, Nationals, World University Games, World Cup and World Championships



SNOWBOARD SPECIFICATIONS

(L2W)

PARTNERS: COACHES

TECHNICAL DEVELOPMENT

SPEED

Crossing the finish line first

1. Develop, pattern and refine:
 - Acceleration skills
 - Remedial technical progression strategies
2. Consolidate in all training and competing situations:
 - Race tactics
 - Competition strategies
 - Critical reflection on past decisions
3. Improve:
 - Novel movements
 - Tactics

AIR | Super pipe and Slopestyle Skills for a podium + all SPEED skills

All stage 5 skills plus:

- Flat base take-off
- Control speed, on demand
- Consistency in tricks
- Variation in tricks -- different grabs, different tweaks and corks
- Linking top stage 5 skills (9-9 instead of 5-9)
- Full commitment to desired amplitude
- Ability to spot landing
- Control in air -- aerial awareness -- speed up slow down rotation in relation to where one is in the skill or on the jump

- maintain speed from one trick to the other
- adapt and improvise 'on the fly'

Slopestyle Skills Men | all done on 50-55ft (15-17m) (takeoff to knuckle) | air time could be 65+ ft.

Entry: 2 different double cork 9's or 4 way flat 9's | rodeo 7's

Exit: 2 different double cork 10's | double cork 12 or flat 12 | rodeo 9's

Rails: spin in or spin out or both | held slides throughout the rail | variety of tricks switch and regular

Slopestyle Skills Women | all done on 50-55ft (15-17m) (take-off to knuckle) | air time could be 65+ ft.

Entry: 1 switch 5 | 4 way 180's | 3 way 360s

Exit: 2 way 5's | 17 | 1 invert

Rails: sliding sideways 90 degrees to the rail | held slides throughout the rail | variety of tricks, switch and regular | spins into or out of rails

Halfpipe Men:

Entry: 2 different 900's | variations of 540's and 7's in all 4 directions

Exit: front or cab 1080 | 9 to 9 combo | 1 Double cork

Halfpipe Women:

Entry: 5 to 5 combo | FS 720

Exit: 7 to 7 combo | FS 900 | at least 1 inverted spin

STAGE 7

TRAIN TO WIN & WINNING FOR LIVING



SKILL: Event specific fitness

CHRONOLOGICAL AGE:

HP: 20+, SBX: 22+, Alpine: 24+

TRAINING AGE: 8 to 12 years

COMPETITION: World Cup, World Championship, Olympic teams

GENERAL DESCRIPTION Sport as Career

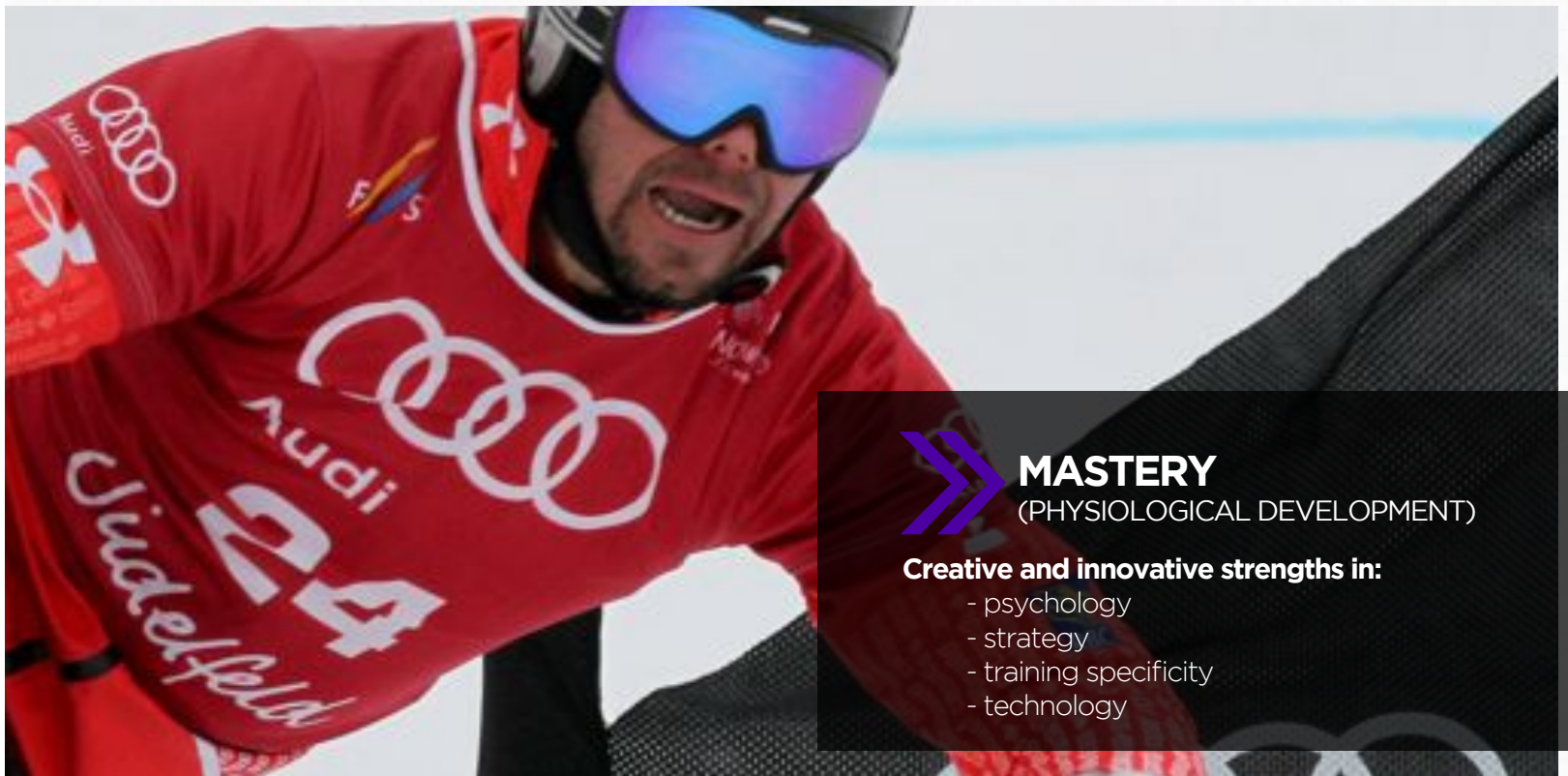
New movements are composed and designed from personal interpretation.

This stage is identical in formulation to Learn to Win, except athletes have gained the experience of competing in pressure situations at the highest possible level and are ready to win big again and again!

Athletes now focus on the preservation of high quality consistent performances and injury prevention strategies to be “winning for a living”.

Here you will find the quintessential top performer on the Olympic team.





MASTERY (PHYSIOLOGICAL DEVELOPMENT)

Creative and innovative strengths in:

- psychology
- strategy
- training specificity
- technology

COACH: National team coach,
Comp High Performance,
NCCP level 4-5, P.E.T.

TIME ON SNOW: 150+ days

PRIORITY: Winning

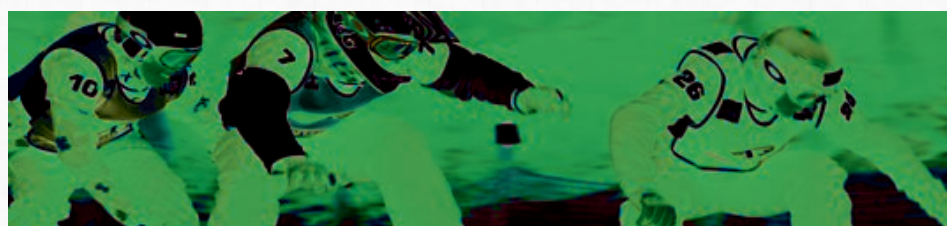


KEY AREAS OF FOCUS:

- ⚙ optimal preparation for high importance competitions
- ⚙ winning

TO DO (ACTION PLAN):

- ⚙ Establish a European based training centre
- ⚙ Comprehensive P.E.T. support
- ⚙ Full time coaching team per discipline





RECOMMENDATIONS

(L2W)



PARTNERS: ADMINISTRATORS &
PERFORMANCE ENHANCEMENT TEAM & COACH

PHYSICAL DEVELOPMENT

Maintain stage **FIT TO PERFORM** and
FIT TO WIN recommendations.

PSYCHOLOGICAL DEVELOPMENT

THE MASTERY STAGE

Winning for a living

Athletes at this stage should be mature enough to deliver an optimal performance on demand. Some characteristics of multiple champions include:

- Self-confidence, motivation (intrinsic) and competitiveness
- Independent
- Willing to learn new ways of doing things and always trying to improve
- Creative and innovative
- Strong work ethic and mentally tough
- Focused on the “big picture” (perspective)

PARTNERS: COACHES

LIFESTYLE

Lifestyle is set to win: Athlete has acquired all skills necessary to Win for a Living

Maximize ancillary capacities in a sporting career, considering:

- Interpersonal skills
- Leadership
- Problem solving
- Critical thinking
- Ethical behavior
- Education
- Equipment and technology
- Financial stability



PARTNERS: COACHES & ADMINISTRATORS

TRAINING AND COMPETITIVE ENVIRONMENT

Multiple periodization with quadrennial plan + February peak day

Training environment mimicking competition environment:

- **150+ days on snow:** 100 days in training and freeriding, 50 days in competition or simulation
- **Training/Comp/Recovery volume:** 60% training and freeriding/40% competition/recovery
- **Quantity and intensity:** 10 to 12 sessions per week with high intensity
- **Complimentary sports:** As needed
- **Average duration of sessions:** 120 to 180 minutes
- **Competition format:** Adult formats
- **Competition goals:** Multiple World Cup wins + WCH win + OWG win
- **Competition venues:** Add Olympic Winter Games



SNOWBOARD SPECIFICATIONS

(L2W)

PARTNERS: COACHES

TECHNICAL DEVELOPMENT

SPEED

Composing new movements

1. Consistency in competition:
 - Quality of execution
 - Performance statistics
2. Consolidate under pressure:
 - Line choice
 - Acceleration skills
 - Decision making
3. Compose and design a new reference model from personal interpretation of:
 - Technique
 - Tactics
 - Strategies

AIR | Super pipe

Skills for a medal + all SPEED skills

Slopestyle Skills | All done on 55-55ft (15-17m) (Takeoff to Knuckle). Air time could be 65+ ft. | **All stage 6 skills plus:**

Men | Entry: 2 different double cork 10's | Double cork OR Flat 12 | Rodeo 9's

Olympic or X games Winning Run:

Triple Cork+Double Cork 12 (or Flat 12) + Double Cork 10

Rails: Spin in or spin out or both | Held slides throughout the rail | Variety of tricks switch and regular

Women | Entry: 2 way 540's | 1 720 | 1 invert

Olympic or X games Winning Run:

Double invert + 5 + 7

Rails: Sliding Sideways 90 degree to the rail | Held slides throughout the rail | Variety of tricks switch and regular | Spins into OR out of rails

Halfpipe Men | Entry: Front or cab 1080, 9 to 9 combo, 1 'Double cork

Top performers: 1260 (flat or doublecork) | 10 to 10 combo (flat or doublecork) | min amplitude: 14feet

2010 Olympic winning run (Shaun White): BS air> FS doublecork 1080 > Cab doublecork 1080 > FS 540 > BS doublecork 1260

2012 X games winning run (Shaun White): BS air> FS doublecork 1080 > Cab doublecork 1080 > FS 540 > BS doublecork 1260 > FS doublecork 1260

2012 US open winning run (Shaun White): BS air> FS doublecork 1080 > Cab doublecork 1080 > FS 540 > BS doublecork 1260

Halfpipe Women | Entry: 7 to 7 combo, FS 900, at least 1 inverted spin.

Top performers: FS 1080, Backside 900, 9 to 9 combo, 3+ tricks combo, amplitude 8 feet +

2010 Olympic winning run (Torah Bright): BS 360 > switch McTwist 720 > BS 540 > air to fakie > inverted cab 720

2012 X games Winning Run (Kelly Clark): FS air > BS 540 > FS 1080 > Cab 720 > FS 540

2012 US open winning run (Elena Hight): BS air> FS 720 > Cab 720 > FS 900 > BS 900 > alley-oop BS rodeo 540

STAGE 8

ACTIVE FOR LIFE



SKILL: Any skill level/physical literacy

AGE: Any age, immediately after leaving the competition arena or after stage 3

COMPETITION: Retirement/transfer to another sport/FIS masters

GENERAL DESCRIPTION

At this stage, the participant moves from competitive sport to lifelong physical activity and sport participation through age group competitions or simply recreational enjoyment.

PSYCHOLOGICAL AREAS OF DEVELOPMENT

Move from competitive sport to recreational activities.

Modeling ancillary capacities in life:

- Interpersonal skills
- Leadership
- Problem solving
- Critical thinking
- Ethical behaviour
- Financial stability





PHYSICAL AREAS OF DEVELOPMENT

Smooth transition from heavy training loads to active living:

- minimum of 60 minutes moderate daily activity or 30 minutes of intense activity for adults 3X/week
- social sport participation

COACH: Any

TIME ON SNOW:

Riders choice

PRIORITY: Healthy lifestyle

TRANSFER OF KNOWLEDGE

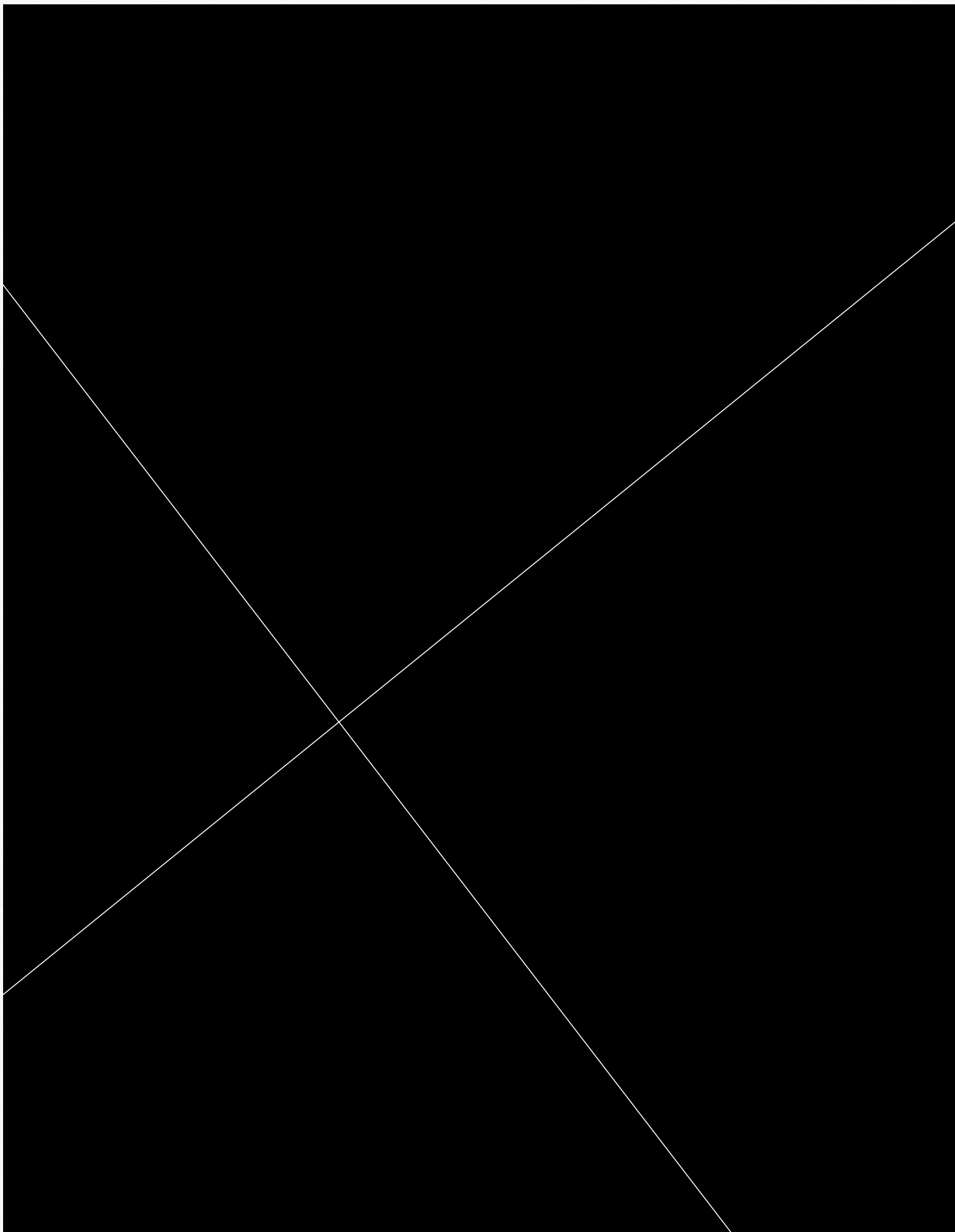
Progressively redirect athlete's career and:

- move to sports careers
- volunteer
- become a pro rider
- get involved in coaching
- judge competitions
- learn to become a ski/snowboard patrol or guide
- become a snowboard or ski teacher
- work in event organisation
- work in media: written, broadcasting, video etc.
- work in sport administration: club, regional, provincial, national, international
- take a position in the Industry: research and development, sales, marketing etc.
- become part of mountain staff
- complete education

ACTION PLAN:

- ⚙ ensure opportunities for ongoing participation as officials, coaches, leaders and through masters competitions





WE ARE COMPETITION



1 PURPOSE OF COMPETITION REVIEW



Canada-Snowboard is working toward creating competition and events that are aligned with each stage of our LTAD model. Working with our partners in development of snowboard athletes in Canada, the competition review is intended to:

- Create an LTAD aligned competition structure and pathway that is accessible to, understood and supported by the Canada-Snowboard membership .
- Eliminate identified gaps and shortcomings in the current athlete development system.
- Provide a document to communicate with all performance partners to ensure the system of competition is a catalyst to strong snowboard programs in Canada.

MANDATE AND PROCESS

Between April and September 2011, Canada-Snowboard held three meetings to achieve the following goal: to create a clear and cohesive pathway easily understood and accessible by all snowboard athletes that can be delivered by Canada-Snowboard, the P/TSA's and other performance partners.

Additionally, the competition review document is intended to also create a greater Canada-wide understanding of the type of competition that is appropriate for athletes at various stages of development. Clear communication will assist athletes, parents, coaches and others to select and participate in developmentally appropriate events. Using a comprehensive communication strategy, there will be a strong understanding by the membership regarding the need to change our current competition structure in order to address the gaps in our system .

These meetings included many different partners including: coaches, administrators, sponsors and industry support, event managers, officials, judges, parents, PTSA and Canada Snowboard staff. Meetings were held in British Columbia, Alberta, and Quebec to ensure that, all regions could be represented.

Canada-Snowboard and the PTSA's recognize that together we can achieve the identified goals. Yet the key of this project lies in its delivery – doing what we say we are going to do. In order for this to happen, Canada-Snowboard is taking a strong leadership role in this. However it is critically important that PTSA's work with Canada-Snowboard and together this project can be successful.

Progress to date with group: building a community, supporting the excellence pathway while celebrating all stages of development (providing structure, creating an updated LTAD, framework), open and timely communication (reducing gaps, confusion, building trust).

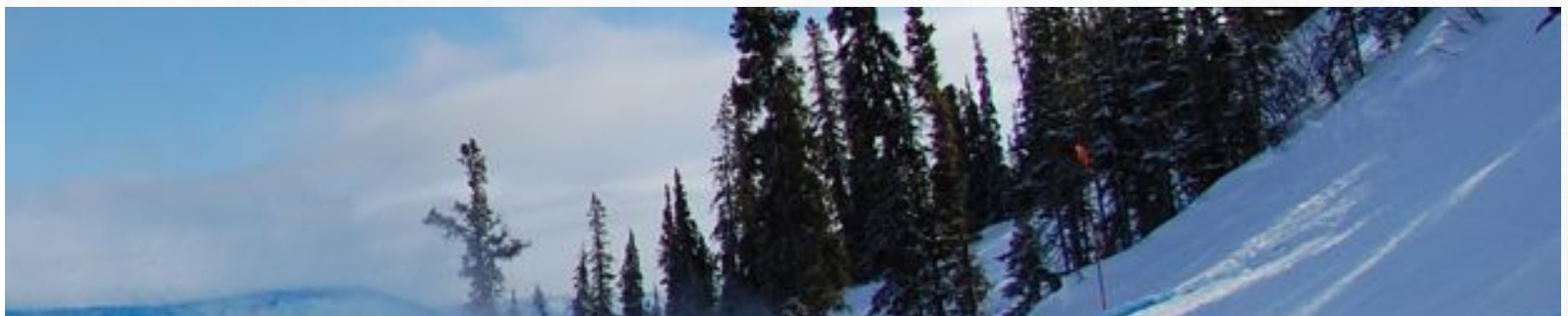




2 GENERAL OUTCOMES

- An ideal athlete competition structure and pathway for all disciplines and LTAD stages.
- Creation of a realistic, clear athlete competition pathway that can be implemented in all regions.
- Events that are athlete centred based on LTAD.
- Determine where the Canadian Nationals fit, at what stage and what does it look like?
- An outline of the format for each stage of competition and the event's objectives.
- Solid Relationships built with PTSA's, industry partners, coaches.
- User friendly tools for athletes, coaches, administrators and parents.

During Meeting #1, the following model would be the basic competition pathway. Each stage identifies event types suitable for the athlete to compete in, ensuring a meaningful and developmentally appropriate experience.



3 RESPONSIBILITIES



- ⚙ Canada-Snowboard will release event guidelines and communication pieces surrounding the recommendations from the LTAD Competition Alignment meetings.
- ⚙ PTSA's responsible for implementing recommendations for stage 3-5.
- ⚙ Canada-Snowboard and their event partners responsible for implementing recommendations for stage 5-7 (when/where applicable).
- ⚙ All CSCP trained coaches will receive communication and be responsible for suggesting appropriate competitions based on their athletes LTAD stage.



4 WHY C-S NEEDS A COMPETITION REVIEW

a. Issues and constraints (athletes, PTSA's, NSO's, etc)

- Cost of hosting large events, travel and training, technology, etc.
- Timing conflict with events in the US (stage 4+)
- Short season in which to fit many events
- Lack of courses to use for training
- Limited number of super pipe's.
- Limited number of SBX tracks

b. Gaps in the current Canadian Snowboard System

- National Snowboard Team (NST) identified the following gaps:

- o Do not have established sport academies
- o Dry land technologies
- o European-based housing for NST teams
- o Depth in talent pool
- o Lack of glacier access
- o Junior team support
- o Equipment (Alpine)
- o Lack of Halfpipe facilities
- o Low numbers in T2C & L2W participation but athletes are highly targeted
- o Number of next generation of NST athletes (L2W) is low
- o Athletes stay in Stage 5 too long and is an indication that they are not ready for National Team

- P/TSA's discussed the following gaps:

- o Provincial & regional level events are not occurring in all regions for all disciplines
- o Stage 4 athletes do not have events to attend so they are quickly pushed to stage 5 events

- o Freestyle snowboarding has a large gap between attending a stage 4 provincial event and jumping to a stage 5 event
- o Snowboardcross often has a large gap in the style/quality of courses from stage 4 to 5 due to the variance in builder knowledge/experience at this level
- o Competition Selection: having many athletes attend stage 5/6 events but few performances
Coaches have 2 athletes that should be there but travel with 10 because they can

c. Suggested solutions to the gaps

- Implement stage 4 provincial events in every region for all disciplines
- Implement an eastern and western final for use as a stepping stone from stage 4 to stage 5
 - o Provinces support each other and work to attend these events to ensure true representation and assure good level of competition
- Implement a system to train snowboard cross builders and shapers along with sizing/course standards to use as a guideline
- Ensure the quality of training and competition opportunities for athletes at stage 4 and 5 so that when the athletes reach the NST, they are well prepared and Canada has a large pool of stage 5 competitors to choose from
- Ensure all coaches have the understanding that athletes need to be performing within their stage. Need to have accessibility for the stage 4 events so they have somewhere to go.



5 IDEAL ASPECTS OF COMPETITION BY STAGE (3-7)

a. The test

One of the key messages during the Canada-Snowboard Competition Alignment process was to ensure that events are purposeful, meaningful and fair. Each event must test the identified capacities (physical, technical, tactical) within each stage, as outlined in the Canada Snowboard LTAD Overview document. This will strongly encourage coaches and athletes to focus their training on the Canada Snowboard “curriculum”.

Each snowboard event should provide an opportunity for athletes to test their technical and tactical skills in a competitive environment based on what they need to master before moving to the next stage. Events will normally have multiple age categories and take place on courses and facilities that allow for participation by athletes of varied experience and skill. Athletes at the stage 4 level and higher will have access to 4+ events for their stage per season in their discipline, in most regions.

b. How it is fair, meaningful & developmentally appropriate

Every snowboard event in Canada needs to ask this question before running an event: How are we making this event fair, meaningful and developmentally appropriate? This should be a guiding question that helps to ensure the events are fun for the athletes. Making an event fair means implementing well understood rules and guidelines that allow the athletes to have fun and learn in a safe environment. A meaningful event has a purpose and is designed to have athletes work towards a goal (ie. Skill development, competitive experience, etc). A developmentally appropriate event follows the LTAD recommendations by stage outlined below and does not put adult expectations onto children.

c. Stage specific event recommendations (including format recommendations) on the following pages:





STAGE 3 LEARN TO RIDE

EVENT OBJECTIVES

At this stage, events should focus on building and testing skills. Building efficiency and success by having multiple categories with more kids on podiums, creates a sense of accomplishment and motivation to continue the path to competitive snowboarding. Often, these events are the first competitions for athletes, and while the focus is on skill development, the event should be a fun, and positive experience. Athletes should have an opportunity to meet new friends and test their snowboard skills in a semi-structured competition environment. Simple features on the course should encourage creativity and growth. Athletes should be able to learn the benefits of being coached, being in a program, and entering competitions to monitor their own improvement. Athletes should be learning to train in a variety of snow conditions.

Events at this stage are non-FIS events, non-TTR events as well as TTR 1 to 2 stars. Events should be dynamic to create a progressive environment with different feature options for a wide range of skill level and experience in this stage.

THE ATHLETE

AGES 5-16

Age Categories would Ideally be split as follows, as well as given a name that is consistent across the country.

7 and under. No Name

8-9, Prospects

10-11, Up and Comers

12-14, Youth

15-19, Junior

- Multi-sport participation
- Participates in ALL disciplines in snowboard.
- Can include athletes with a disability
- Get School Programs Involved

SKILL BASED GOALS

1. Speed management
2. Air stability
3. Refining gross movement Skills
4. Balance on rails/features
5. Managing instability
6. Navigating extra-small to small park & SBX features.





COACHES

NCCP QUALIFICATION COACHES working through A and B and completing portfolio.

- During practice, focus should be on developing skills identified above.
- Coaches should be demonstrating to parents and athletes the value of having a coach for skill development and competition success. Pushing safety, proper progression and knowledgeable training.
- Keeping training fun and creative.
- Helping athletes build confidence with their skills.
- During competition, coach should monitor individual development and improvement – not the win-loss record.

Ages 5-16

COURSE STRUCTURE

**Easily navigated racecourse with rhythmical pattern of course setting.
Small to extra small jumps and/or rails for freestyle courses.**

COURSE SPECS:

- Multiple feature options; small (3-5 foot jump and medium (10-15+) with minimal impact risk
- With box/rail features (buried box + more advanced rail features)
- Being Dynamic to the demand of the region, incorporating a stage 4 category
- Course built on green run or easy blue run, half the length of full course. (6-8% of inclination)

HALFPIPE. Getting kids back in them. Use them where available to run events as either mini-pipe, full-size pipe or pipe-style formats. Second option is building quarterpipes and incorporating them as part of courses. They are cheap, easy, fun, no pipe-cutter needed.

In an event with a quarter or Halfpipe feature, coaching and competition should be based around building fundamentals and progressively increasing amplitude before focusing on tricks.

GS and alpine gates in event courses are encouraged.

Course built on green run or easy blue run, half the length of full course. (8-10% inclination)

ATHLETES WITH A DISABILITY

Small adaptations to racetracks or freestyle features to allow athletes to be successful.

STAGE 3 LEARN TO RIDE

THE SEASON

16 – 20 weeks in length

Competition participation is recommended after 4 weeks of practice.

2 x 3 Hour Sessions of Training sessions per week

1 event/month with the culmination of the season in late March or April (depending on conditions)

EVENT DAY

Morning should include substantial training time while being coached. To get familiar with the course, have fun and build confidence.

Athletes should have 6-8+ training runs and 2 competition runs in a day.



EVENT LOGISTICS

FACILITY: For stage 3 events, the facility can be any location that is accessible to a large number of snowboarders new to the competition pathway, including small clubs or staged as individual local events. These are meant to be inclusive and accessible. Safety is always a key focus whether held at an individual club or at a resort.

Ideally, the recommendation is that the course be built in close proximity to the bottom of the hill or in an area that parents can watch the event without riding the chairlift or using ski equipment. Increasing visibility is key.

EVENT STRUCTURE: (See Riders Handbook). Stage 3 events require minimal structure but should provide a taste of competition environment. Event should be dynamic enough to meet the needs of athlete's skill levels, facility capabilities and participation numbers. There should be a priority on having fun in a progressive competition environment.

The event schedule should include training time as the focus for the morning of the event to facilitate progression for new competitors. On-site coaches arranged by organizers for ALL competitors should facilitate this part of the event.

COURSE STRUCTURE: For an event of this calibre, the technical aspects of the event should include an easily navigated race course with rhythmical pattern of course setting. There should be small to extra small jumps and/or rails for freestyle courses. These simple features should encourage creativity and growth. Event organizers are encouraged to include GS and alpine gates to event courses.

ATHLETES WITH A DISABILITY: Stage 3 events should be inclusive for athletes with disability. This can be achieved with small adaptations to racetracks or freestyle features to allow athletes with disability to be successful and create a desire to participate in future events.

SEASON EVENT CALENDAR: Although training is the focus for athletes at this stage, there should be as many events as possible in each province (ex. one per resort) to ensure that athletes across the province have the opportunity to participate in at least one event. Ideally, athletes should choose approx 4 events/season for example, one in January, February, March, and April to test their training and gain from the experience. Larger population base areas can hold multiple events annually. Athletes should only have to travel to these events if one is not held in their local area. For a province capable of hosting multiple events, they should be held ideally once every four weeks.

OTHER

INDUSTRY INVOLVEMENT: Event organizers can approach local sponsors for small prizes and/or food. For Canada-Snowboard Riders events, a prizing package from Canada-Snowboard is included. Organizers are encouraged to also approach local sponsors to become involved. Samples or demo tents can be included but not essential. Pairing C-S Riders events with club / tour events benefits both the C-S Riders program and the event organizer.

OTHER: Stage 3 events should be very 'FUN' based to create a positive experience around competitive snowboarding while testing the identified skills and abilities for this stage.

YEARLY TRAINING PLAN: Athletes in stage 3 have three main phases to their year - initial adaptation (cross-training), main adaptation (pre-season) and the winter season where the athlete is on-snow. During the initial adaptation phase the focus of training is on developing general athleticism through participation in other sports. This shifts to a focus on sport specific pre-season training in the fall through things like trampoline and dry land training programs for snowboarding. In the winter, the athlete should be focused on having fun and accessing a high volume of freeriding and low intensity training opportunities. They should access 3-4 competitions spread out through the season with no focus on results.

Stage 3. More information is included in Appendix 1 and a detailed yearly plan is available at www.canadasnowboard.ca





STAGE 4 TRAIN TO TRAIN

EVENT OBJECTIVES

This is the start of the excellence pathway and where Canada-Snowboard begins to identify talent. It is a developmental stepping-stone. These events are more structured and challenge the athlete to have well developed technical skills and mental preparation in order to compete effectively. Athletes consistently winning at stage 4 events should be encouraged to compete in a stage 5 event, both in terms of skill preparation and mental preparation. Athletes at this stage should be training in all snow and weather conditions and learning to compete in a variety of situations.

Events should offer opportunities for success in achieving goals, improving ranking and non-monetary prizing. While these events add a competitive element not present in stage 3 events, they should still be based on the experience and the FUN!

Events may be small industry events (rail jams, etc.), school run events, PTSA run events, FIS or non-FIS regional events, PTSA events, TTR 1 -3 stars. Examples include provincial wide events (i.e. Ontario Winter Games) and Eastern/Western region events.

It was identified that this is a critical stage ensuring that athletes have necessary abilities before moving to a stage 5 event. When athletes are missing the consolidation of basic stage 4 skills, they will struggle with executing stage 5 skills and may get trapped at this level (hit a skill plateau). It is also more difficult to take an athlete competing at stage 5 and move them back down to learn stage 4 skills so again, gaining the necessary abilities in stage 4 is crucial.

THE ATHLETE

Athletes may still be engaging in multiple disciplines but should have selected a primary event.

Age categories should include:

Possible U12 category (Prospects/Up and comers)

12-14, Youth

15-19, Junior

Open

Athletes with a disability should be encouraged to participate.





THE ATHLETE **continued**

FREESTYLE SKILLS

Perform varied maneuvers on small and medium features

1. Ability to enter and exit features regular and switch.
2. Ability to maneuver body position on a rail/box feature using both frontside and backside rotation (ie. Able to both boardslide and frontside or variation of).
3. Able to vary the entrance into a rail/box feature – lipslides and front/back side approaches.
4. Ability to spin 180+ onto and off of features in four directions.
5. Ability to spin 360+ in four directions on jump features and in halfpipe.
6. Air stability with style (ability to grab/tweak/vary body position) on jumps
7. Air out of halfpipe with grabs

Perform basic maneuvers on large features.

SPEED SKILLS

- Speed management
- Timing of gross motor movements refined.
- Symmetry in turn shape.
- Riding varied terrain with speed.
- SBX – ability to navigate small and medium course features at speed.
- Develop basic tactics.

COACHES

NCCP Qualification: Competition Introduction Certified and Competition Introduction Advanced.

Coaches will be able to observe environmental training benchmarks and take advantage of opportunities to mentor athletes.

Educational opportunities may be offered on equipment technology.

STAGE 4 TRAIN TO TRAIN

THE SEASON

16-20 weeks in length

Practice/Training time is focus.

4-6 training sessions per week (1 session is approximately 2 hours).

EVENT DAY

FUN based skills competitions (eg. amplitude competition, best trick)

Should have at least 4 training runs and 2-3 competitions runs a day.

EVENT LOGISTICS

The format should support multiple opportunities for competitions (i.e. best of 3 run formats) and multiple heats to reduce waiting times. Events should provide long practice sessions with multiple coaches present to assist athletes. Training time should be allotted during the event to facilitate progression for all competitors and create a positive experience around competitive snowboarding.

GENERAL TIME RECOMMENDATION:

8:00-9:00 AM – Registration

9:00-12:00 PM – Open training with support (coach/judge)

12:00-3:00 PM – Event with multiple runs/heats

3:00-3:45 PM – Finals

4:30 till Finish – Awards

FACILITY: Events for this LTAD stage can take place at resorts, small to large. See FIS ICR 2012 (<http://www.canadasnowboard.ca/en/dev/docs/>) for up to date course expectations for all disciplines.

COMPETITION LEVEL: At this stage, SBX event should stand alone, separate from C-S riders events. Events may be small industry events (rail jams, etc.), school run events, FIS or non-FIS regional events, PTSA events, TTR 1-3 stars. Examples include provincial wide events (i.e. Ontario Winter Games) and Eastern/Western region events.

ATHLETES WITH A DISABILITY: Events should include an adaptive category. Organizers should review Para-Snowboard guidelines (<http://www.canadasnowboard.ca/en/dev/parasnowboard/>) for course guidelines and language use.

FREESTYLE EVENT RECOMMENDATIONS: Events should provide long practice sessions with multiple coaches present to assist athletes. The format should support multiple opportunities for competitions (i.e. best of 3 run formats) and multiple heats to reduce waiting times. U12, U16, U19 and Open judging can be completed as 'open' (male and female rankings with no account for age) and then the results are sorted to award prizes based on the age categories. Age categories should be taken into account for prizeing only. Use the International Judges Commission (IJC) format.

HALFPIPE EVENT RECOMMENDATIONS: Competition must be enjoyable and maintain an appropriately challenging level of riding. Event organizers are encouraged to run jam formats.

- Jam formats are encouraged as they keep participants moving. Heats should be 45min-1hr in duration and should be composed of randomly selected participants
- Other formats may include heats of 15 participants by age category.
- Tests should include proper edging in amplitude competition and evaluation of positioning across transitions
- FUN based skills competitions where athletes try to achieve a particular trick, height, or combination of are HIGHLY recommended for a period of time (eg 10-11:30 or 2:30 - 4:00) in a competition day. This will encourage more skill development. Athlete should see this as FUN and it will allow for areas of opportunity and growth for Athletes, Coaches, and Competition Delivery partners alike.

COURSE RECOMMENDATIONS: Pipes can range from 12-22 ft – any pipe will do and it is not necessary to have a super pipe. The introduction of mini-pipe competitions will foster half-pipe participation and lead to increasing full pipe competitions to develop competitive athletes.

EVENT LOGISTICS **continued**

SLOPESTYLE EVENT RECOMMENDATIONS: Heats should include no more than 30 participants. Event organizers are welcome to explore alternative competition formats and look for ways allow athletes to test their skills without consequence. Event formats may include 3 feature jams, best trick competition, flatland events, spin/huck events or may take multiple days for different abilities/stages.

An example jam format for a small course (3 features with hiking) would consist of 45 min-1 hr maximum per heat for ages 13 years +, and 30-45 min maximum for U12. A larger course with lift would require a starter with interval drops.

- **COURSE RECOMMENDATIONS:** Courses must be built using the Smart Style system (or comparable). The Smart Style system is a park safety system that includes signage for jumps noting their size (small/medium/large/x-large). Courses should offer variation between events and have a minimum of one jump and three additional features. Jump sizes should range from a minimum of 10 feet (small) to 30 feet (large) with varied features between as well as offer line options (minimum of 2).

See the IJC manual and coordinate between event organizers, coaches and judges for alternate formats. Remember that athletes must keep moving as much as possible.

SBX EVENT RECOMMENDATIONS: Event organizers are encouraged to use these events to introduce athletes to a 4x4 race format. All participants should be guaranteed a minimum of two runs (bottom two riders go again against other 3/4th place riders) and races should include Last Chance Qualifiers (LCQ). FIS rules should be used. Slingshot and Banked Slalom events are other format options.

- **COURSE RECOMMENDATIONS:** SBX courses should be built by builders with knowledge of LTAD/rider standards. Courses should be designed to manage speed with multiple options where necessary. The terrain is important and must be varied so there can be a variety in the set. Table top jumps should be built into stage 4 SBX level events as all tabletop. They should not include step-ups and minimum widths should be established at 6-12 meters. Berms should be about 10 meters in radius (60-180 degrees).

ALPINE EVENT RECOMMENDATIONS: Events offered earlier in the season are suggested to focus on singles GS courses to allow athletes to prepare for competition on a doubles PGS course later in the season.

- **GS RECOMMENDATIONS:** Ideal format consists of 3 runs with the best 2 combined for total score. Offering athletes two events in a day with a minor reset between is recommended. Race run should last 30-45 seconds when possible.
- **PGS RECOMMENDATIONS:** The length of the PGS course should aim towards FIS standards, however as there is currently no minimum standard for non-FIS events, the terrain and run will dictate the shape of the course build while aiming for a 30+ second run. Course should emphasis varied turn shapes while making the course tighter than a Stage 3 run. Courses should be on an “easier” blue run or “harder” green run.

SEASON EVENT CALENDAR: Events should occur at minimum one per discipline per province. Ideally each province/territory can hold two or more per season. These should take place every 3 to 4 weeks from January to April. Athletes should only have to travel if there isn't an event offered in their local area.

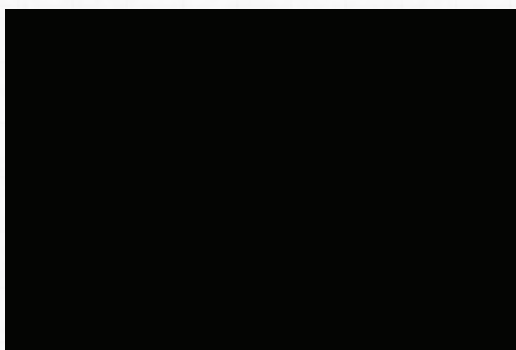
INDUSTRY INVOLVEMENT: Event organizers may procure local and provincial sponsorship in the form of non-monetary prizeing. They may offer space for industry to have a presence at the event.

Since events at this stage are targeted primarily at minor aged athletes, brands that tailor to adult only audiences should be avoided when possible.

OTHER: Events should still be ‘FUN’ based but should provide the structure needed to create goal-orientated training.

YEARLY TRAINING PLAN: Athletes in stage 4 have chosen snowboarding as one of their main 2-3 sports and are looking at a training season in snowboarding of 8-10 months a year. During the initial adaptation phase (May-June), athletes are participating in complementary sports such as skateboarding, trampoline, wakeboarding, surfing as well as sports that build solid energy systems such as soccer, lacrosse, basketball. From July to November, athletes should be participating in structured strength training designed for their primary snowboard discipline along with cross training through a mix of participation in complementary sports.

Stage 4 Detailed Yearly Training Plan is available at www.canadasnowboard.ca.



STAGE 5 TRAIN TO COMPETE

EVENT OBJECTIVES

National events that bring together the top level development athletes from across the country. These events are structured in order for athletes to test their competition abilities in an environment that replicates stage 6 level events. At these events, athletes are able to perform manoeuvres/skills that are competitive with the next stage of competition. The difference is in the execution and consistency of these higher-level manoeuvres/skills.

Events can be marquee industry events (Freestyle: Showdown over the city, Shield, Shakedown, Flaunt it, Snow Crown) and/or WC, JR Worlds, NorAM, Rev Tour (Freestyle), Speed Nationals.

Generally, athletes should be selected to attend these events by their PTSA and will have experience competing in a stage 4 competition series beforehand.

ATHLETE FOCUS:

- Style Athletes may start specializing in one discipline (HP, SS, BA) but should still compete in all 3.
- Speed athletes at this stage have chosen to specialize in either snowboardcross or alpine (PSL/PGS) and athletes may cross over to banked slalom events.
- Age categories; Open, Junior (15-19) and Youth (12-14) (for early maturing athletes).
- Athletes should be prepared to compete and perform in any snow and weather conditions at this stage.

FREESTYLE SKILLS:

- Coaches should be reviewing the skills of the average stage 6 athlete and working with their stage 5 athletes to learn and work towards this level of manoeuvre.
- The top performing stage 5 athletes will be beginning to perform the same manoeuvres seen as stage 6 athletes. The difference with stage 6 athletes is these skills are consolidated and the athletes are able to add variations to the skills and perform them consistently.
- Athletes at this stage are working on tactics and competition preparation (mental preparation, etc).

SPEED SKILLS:

- Athletes should be working on the ability to have speed generation in courses.
- Ability to perform on full sized (NorAM level) snowboardcross features
- Full length courses for all speed disciplines.
- Athletes at this stage are working on tactics and competition preparation (mental preparation, etc).

COACHES FOCUS: Coaches can utilize these events as an identification tool for benchmarking, identifying weaknesses and strengths as well as tests of training. These events can also be used as an opportunity to become evaluated and certified. Stage 5 events provide the chance to further develop strategies surrounding technical, tactical and physiological development of athletes from a yearly training and competition perspective. Key Stage 5 events can be used for equipment testing and trying different waxes in courses and conditions.





EVENT LOGISTICS

FACILITY: Events should take place at medium to large resorts capable of delivering a professional looking, built and executed competition. See FIS ICR 2012 (<http://www.canadasnowboard.ca/en/dev/docs/>) for up to date course expectations for all disciplines.

COURSE STRUCTURE: All stage 5 courses should be built around national standardization of approximate feature sizes. While courses may not be as long as World Cup courses, they should require skill and speed moving towards this level as speed and skill are athlete priorities. Quality and size of features is very important to assist these athletes in getting them to the next step.

FREESTYLE:

Course structure should follow FIS/TTR regulations for this level of event.

Pipe; a 22 foot pipe is necessary for this stage

Slopestyle/Big Air

courses should have a minimum of 2 jumps and 3 other features (rails)

Jumps need to have a minimum of 40 ft to clear

Options should be available for rails and boxes

SPEED:

Courses should follow FIS regulation for pitch, feature size and course length.

SBX courses should be built by builders with knowledge of LTAD/rider standards. Courses should be designed to manage speed with multiple options where necessary. The terrain is important and must be varied so there can be a variety in the set. Technical Features should be large to extra large and include Wu-Tang, Large Berms, Rollers, Large Jumps, Hips Etc. Course should last 50-60 sec.

COMPETITION FORMATS: The format needs to prepare athletes for stage 6 level events. Refer to stage 6 level events such as; US Open, Grand Prix, World Cups, World Championships, for competition schedule and structure. Athletes should have a travel day scheduled. These events can be dual sanctioned TTR (4-5 star) and FIS for freestyle and should all be FIS sanctioned for speed. Qualifications can be included within the event to not limit the field. Organizers are strongly encouraged to include training camps prior to events.

- Competition formats should follow FIS/TTR regulations for this stage.
- Pre-qualifier/qualifiers/semi-finals/finals (if athletes field permits)
- 2 runs best of (for qualifiers/semi-final) with the option of a 3 run final
- Split into heats
- When time allows, finals should consider the largest field possible (most inclusive) so athletes have lots of competitive opportunity.





EVENT LOGISTICS **continued**

FREESTYLE EVENTS: Events should provide sufficient practice sessions with multiple coaches present to assist athletes. The format should support multiple opportunities for competitions (i.e. best of 3 run formats) and multiple heats to reduce waiting times. Judging can be completed as 'open' (Male and Female rankings with no account for age) and then the results are sorted to award prizes based on the age categories. Age categories should be taken into account for prizing only. Use the IJC format.

HALFPIPE EVENT RECOMMENDATIONS: Competition must be enjoyable and maintain an appropriately challenging level of riding. Event organizers are encouraged run or Jam formats.

- Jam formats are encouraged as they keep participants moving. Heats should be 45min-1hr in duration and should be composed of randomly selected participants
- Other formats may include heats of 15 participants by age category.
- Tests should include proper edging in amplitude competition and evaluation of positioning across transitions

SLOPESTYLE EVENTS: Heats should include no more than 30 participants. Event organizers are encouraged to explore additional training opportunities and look for ways allow athletes to broaden their skills without consequence such as with air bag sessions.

See the IJC manual and coordinate between event organizers, coaches and judges for alternate formats. Remember that athletes must keep moving as much as possible.

COMPETITION LEVEL: Competitions should be at the level of CWG, TTR 3-4 Star (ideally 4 star), Nationals, Provincial Finals (FIS / Non-FIS), NORAM Cups, Rev Tour

ATHLETES WITH A DISABILITY: Events should include an adaptive category. Organizers should review Para-Snowboard guidelines (<http://www.canadasnowboard.ca/en/dev/parasnowboard/>) for course guidelines and language use.

SEASON EVENT CALENDAR: Hosting of events will vary greatly by province with larger provinces hosting 2-3 events approximately one month apart per season and smaller provinces hosting 1. This means that athletes from smaller regions would travel to bigger regions at this level of competition. Athletes may occasionally travel internationally.

INDUSTRY INVOLVEMENT: Events are encouraged to engage in large partnerships both at the local, provincial and National level. Athlete lounge with water and snacks need to be made available. Tuning room. Competition village with industry partners is encouraged.

OTHER: Events should still be 'FUN' based but should provide the structure needed to create goal-orientated training. Quality of hosting and competition should be top notch.

YEARLY TRAINING PLAN: Athletes at this stage require a 10-12 month training plan designed for their snowboard discipline.

Stage 5. More information is available in Appendix 3 and a detailed yearly training plan is available at www.canadasnowboard.ca

GENERAL TIME RECOMMENDATION:

Day 1- ALL DAY (9:00-15:00) registrations | open practice
Team Captains meeting | **15:00-16:00**

Day 2- 8:00-9:00 | registrations

9:30-10:15 | women's practice

10:15-10:30 | course maintenance

10:30-11:30 | women's qualifiers

11:30-11:45 | course maintenance

11:45-12:45 | men's practice

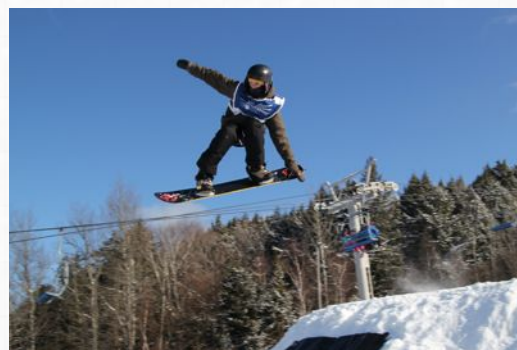
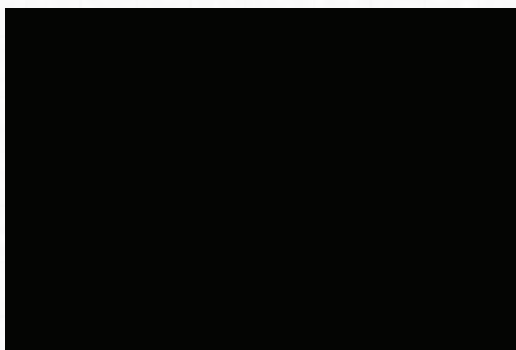
12:45-13:00 | course maintenance

13:00-14:00 | men's qualifiers

14:00-14:30 | men's and women's finals practice

14:30-14:45 | course maintenance

14:45-15:30 | men's and women's finals



NATIONAL CHAMPIONSHIP

The focus of the National Championships should be a well organized and fun event that gives training opportunities and identifies Canada's next generation of top riders. The following were outlined by the LTAD Competition Alignment. Working Group as the priority for the national championships:

1. Fun, well organized event (venue/training, timing of event, etc)
2. Talent ID and training opportunities
3. Participation of athletes (Talent ID, inclusive, JR category)
4. Great to have all athletes (speed/style) together if possible with good venues.
5. Want National team there but not the focus of the competition.
6. Opportunities to compete against provincial top riders

FREESTYLE FORMAT & EVENT IDEAS:

Open type format.

Open pre-qualification day.

Through provincial association qualifiers, persons chosen directly to semi finals.

Through provincial association qualifiers, each PTSA is awarded a number of quotas to access open qualifications eg: 60 quotas distributed throughout for PTSA, 40 quotas for open (general public).

Invited riders including National Team direct to semi finals.

Junior Nationals (13-19 and Under 12) with age groups prizing (under 12, and Open)

Build in side events, eg night rail jam.

NATIONAL CHAMPIONSHIPS SCHEDULING:

Monday/Tuesday – practice, on competition prepared venues.

Wednesday – Open Qualifiers for pipe and slope

Thursday – Semi Final Halfpipe

Friday – Semi Final Slopestyle | Night- junior

Sat – Junior AM | Afternoon – Halfpipe Finals

Sun – Slopestyle Finals

SPEED FORMAT AND EVENT IDEAS:

Priority to have National team riders there.

Big trophy.

Prizing monies

Open Nationals for SBX & PGS

Noram Sanctioned Event

14 and under (13 & 14), FIS Junior Nationals (15-19) & Open.

Inclusion of Para-Snowboard Events.

NATIONAL CHAMPIONSHIPS SCHEDULING:

SBX training Camp (2 days)

SBX JR event (1 day)

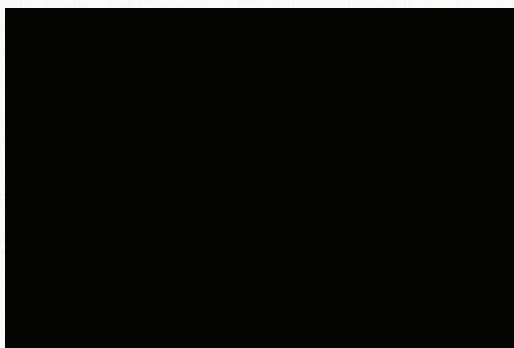
SR SBX event (1 day)

PARA SBX events (2 days)

Alpine Training Camp (2 days)

JR PGS (1 day)

SR PGS (1 day)



STAGE 6 LEARN TO WIN

WHAT IS THE OBJECTIVE AND FOCUS OF A COMPETITION AT THIS LEVEL?

- Determine who the best athletes are
- Provide international competitive experience
- Provide personal exposure
- Provide source of income for athletes

WHAT ARE THE TECHNICAL / PARTICIPATION ASPECTS OF AN EVENT OF THIS CALIBER?

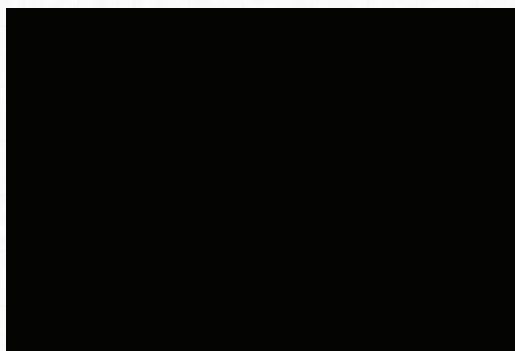
- 22 ' Superpipes
- L-XL Slopestyle courses with creative features and layouts
- Snowboardcross - Berms, Rollers, Large Jumps, Hips
- PGS - Full Course
- Require speed courses with different line options to test decision making
- Event participation should be large enough to develop significant competition and pressure level

WHAT SHOULD ATHLETES GET OUT OF AN EVENT AT THIS STAGE?

- Opportunity to build an identity in the industry
- Opportunity to win prize money (at industry events)
- Experience competing in a high pressure situation
- Taste of winning and success before making a living as a professional
- Opportunity to define the sport through innovation and progression
- Use training strategies to succeed in a competition setting including:
 - All technical skills, Mental skills, Line choice and strategies, Equipment and wax choice and strategies, Mental skills,
- Amplitude
- Tricks diversity (number of rotations, axis rotation, take off stance), Run strategies
- Test their physical capacity and endurance
- Build and create confidence

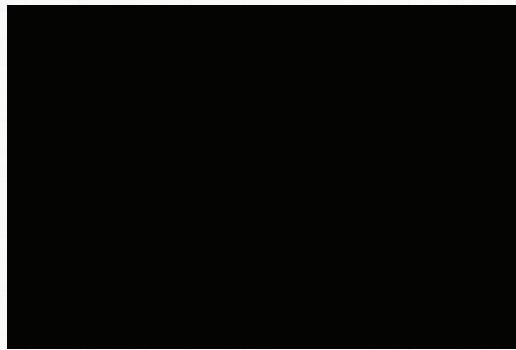
WHAT SHOULD A COACH GET OUT OF AN EVENT AT THIS STAGE?

- Identification tool for benchmarking
- Identification tool for weaknesses
- Culmination test of training and development for future training
- Opportunity for coaches to define their own methods and style of equipment, environment, physical psychological, technical, tactical and approaches



Agenda 2-10

IDEALLY, WHAT TYPE OF FACILITY SHOULD THE EVENT TAKE PLACE?	<ul style="list-style-type: none"> Large Resorts capable of delivering a professional looking, built and executed competition
WHAT LEVEL OF FIS / TTR IS APPROPRIATE AT THIS STAGE?	<ul style="list-style-type: none"> International Continental Cups World Cups Grand-Prix TTR 4-5 stars (NZ Open, CANO, Shakedown)
HOW STRUCTURED DOES THE EVENT NEED TO BE?	<ul style="list-style-type: none"> Very. Should be competitions of the highest caliber with large audience, media coverage and exposure
DO ATHLETES NEED TO TRAVEL TO THESE EVENTS?	<ul style="list-style-type: none"> Yes, regionally, nationally and internationally, often on a circuit or specific competition travel route We need to ensure that all athletes have equal and fair opportunities to attend events at the stage 6 level
FOR A PROVINCE CAPABLE OF HOSTING MULTIPLE EVENTS AT THIS STAGE, WHAT IS THE IDEAL TIME PERIOD BETWEEN EVENTS?	<ul style="list-style-type: none"> At least 1 Month Apart
FOR ATHLETES WITH A DISABILITY, IS THERE ANY ASPECTS ABOVE THAT SHOULD BE MODIFIED TO CREATE A SUCCESSFUL EVENT?	<ul style="list-style-type: none"> Speed events only at this level
ADDITIONAL COMMENTS TO MAKE AN EVENT AT THIS STAGE SUCCESSFUL	<ul style="list-style-type: none"> Need to quality of events is kept top notch and the level of competition is appropriate for stage 7 identified athletes Quality of facility and event need to be world class, including sponsorship, exposure, industry recognition, and media coverage Events should include prize money and have an exhibition surrounding the events
INDUSTRY INVOLVEMENT	<ul style="list-style-type: none"> Industry driven events Huge recognition and acceptance World class sponsors



STAGE 7 TRAIN TO WIN

WHAT IS THE OBJECTIVE AND FOCUS OF A COMPETITION AT THIS LEVEL?

- To win at an international level and show Canada to the world
- Benchmarking for best athletes worldwide
- Provide personal exposure
- Provide source of income for athletes
- Create an industry leading, high-exposure event

WHAT ARE THE TECHNICAL / PARTICIPATION ASPECTS OF AN EVENT OF THIS CALIBER?

- HP must be 22ft
- Jumps should be Large - XL+
- Rails should be L-XL+
- Continuous changes in course at all events. Two options on large features.
- Event participation should be large enough to develop significant competition and pressure level

WHAT SHOULD ATHLETES GET OUT OF AN EVENT AT THIS STAGE?

- Experience competing in a high pressure situation
- Taste of winning and success before making a living as a professional
- Opportunity to define the sport through innovation and progression
- Use training strategies to succeed in a competition setting including:
- All technical skills, Mental skills, Line choice and strategies, Equipment and wax choice and strategies
- Freestyle: Mental skills, Amplitude, Tricks diversity (number of rotations, axis rotation, take off stance), Run strategies

WHAT SHOULD A COACH GET OUT OF AN EVENT AT THIS STAGE?

- Identification tool for benchmarking
- Identification tool for weaknesses
- Culmination test of training and development for future training
- Equipment
- Environment, Physical, Psychological, Technical & Tactical Approaches
- Benchmarking against world best coaches
- Coaches are there to guide the athletes and they are not there to gain experience.

HOW MANY OF THESE EVENTS SHOULD BE HELD ANNUALLY PER PROVINCE?

- Canada host 1-2 per discipline a year



81-2 299A

IDEALLY, WHAT TYPE OF FACILITY SHOULD THE EVENT TAKE PLACE?	<ul style="list-style-type: none"> Large Resorts Capable of delivering a professional looking, built and executed competition.
WHAT LEVEL OF FIS / TTR IS APPROPRIATE AT THIS STAGE?	<ul style="list-style-type: none"> World Cups Grand-Prix X-Games TTR 5-6 stars Olympics World Championships
HOW STRUCTURED DOES THE EVENT NEED TO BE?	<ul style="list-style-type: none"> Very. Should be competitions of the highest caliber with large audience, media coverage and exposure
DO ATHLETES NEED TO TRAVEL TO THESE EVENTS?	<ul style="list-style-type: none"> Yes, regionally, nationally and internationally, often on a circuit or specific competition travel route
FOR A PROVINCE CAPABLE OF HOSTING MULTIPLE EVENTS AT THIS STAGE, WHAT IS THE IDEAL TIME PERIOD BETWEEN EVENTS?	<ul style="list-style-type: none"> At least 1 Month Apart
FOR ATHLETES WITH A DISABILITY, IS THERE ANY ASPECTS ABOVE THAT SHOULD BE MODIFIED TO CREATE A SUCCESSFUL EVENT?	<ul style="list-style-type: none"> Speed events only at this level
ADDITIONAL COMMENTS TO MAKE AN EVENT AT THIS STAGE SUCCESSFUL	<ul style="list-style-type: none"> Need to ensure the quality of events is kept top notch and the level of competition is appropriate for stage 7 identified athletes. Quality of facility and event need to be world class, including exposure and media coverage
INDUSTRY INVOLVEMENT	<ul style="list-style-type: none"> Professional Industry driven events. Industry involvement is paramount at these events

6 MULTI SPORT GAMES



a. Canada Winter Games

A meeting was held in February 2011 during the Halifax Canada Winter Games to work on better aligning the CWG's within snowboard's competition structure. The following outlines the decisions made during this meeting:

SANCTIONING

CWG should be FIS/TTR sanctioned to assist in bringing top athletes to event.

WHAT STAGE SHOULD THE CWG BE TAILORED TO?

- Total agreement for Stage 5 (Train to Compete) target for all athletes.
- Current situation is approximately 30% of athletes are true Stage 5.
- Goal for 2015 is to have 80% of athletes as true stage 5 athletes.
- Top level athletes at event should be at similar level to National Development team riders (ie. almost ready to make this step).

WHAT CAN WE DO TO IMPROVE THE EVENT?

- Awareness of event (needs more clout in the industry)
- Coordinated Scheduling so athletes don't miss other large events
- Educated Programming in each province
- Affordable, thoughtful planning.
- Continue referencing the event (ie. 2007 CWG Winner ____).
- Slopestyle as a discipline for 2015.
- Use the freestyle points system relevant at the time (ie. TTR, FIS, Canadian Ranking, etc).
- Give PTSA boards more information on the importance of the event. How to educate parents, how to maximize funding.
- Increase National media coverage within snowboarding (ie. Canada-Snowboard press releases, website, PUSH magazine, Snowboard Canada Mag/Web...). Media coverage makes event worth it for some athletes so work to increase exposure

b. Provincial Sport Games

Although briefly discussed at these meetings, provinces that have snowboarding included in their Provincial Sport Games should be working to ensure it is delivered as a stage 4 event and is a good stepping stone to the Canada Winter Games (stage 5) as the athletes next multi sport experience.

Do you have a Smart Idea to improve Canada-Snowboard Events and competition alignment?

We would love to hear from you, please email:

Dustin Heise Director, Sport Development: dustin@canadasnowboard.ca



7 COMPETITION SEASON PLANNING & PERIODIZATION MODEL

a. LTAD Calendar Tool

Canada-Snowboard will compile yearly and list online, all stage 3 to 5 events being delivered across the country. This listing will be organized based on an events target LTAD stage in order to help parents, athletes and coaches ensure competitors are attending appropriate events in their area.

This tool will be released in the fall of each upcoming season and events will be added as needed.

<http://www.canadasnowboard.ca/en/events/domestic/>

b. Annual competition calendar

The discussion was to ensure events are not conflicting and once events are established, having them remain on the same weekend year to year to create an annual competition calendar that can be used year to year.

8 RANKING TOOL



The National Freestyle Program has released a slopestyle and a halfpipe ranking tool which will be used moving forward: <http://www.canadasnowboard.ca/en/freestyle/rankings/>

Each of the large provinces will be allowed one marquee event that is included on the ranking to allow them to have athletes attend enough events to gain points. The top four events for each athlete are used for overall ranking. The ranking tool lists a selection of events for stage 5-7 athletes and assigns them a value for the ranking.

This ranking tool enables Canada to have a unified national ranking tool that includes athletes participating in TTR and FIS competitions at the LTAD Stage 5-7 level.

Most provinces have Provincial Series ranking lists based on their PTSA events for all disciplines. These lists give stage 4 athletes the opportunity to be ranked amongst their peers and offers coaches a means of identifying talent.

For stage 5+ speed athletes, the FIS point ranking tool is used (see www.fis-ski.com).



9 COMMUNICATING AND IMPLEMENTING THE NEW COMPETITION MODEL

- Website will contain full versions of all documents.
- Coaching Resources to support the appropriate yearly training plan will be available to all coaches to provide easy access to templates and examples for developing YTP's to meet the needs of their athletes by stage.
- Facebook will contain weekly updates on key pieces.
- One page information sheets are required for the athlete pathway with a possible illustration.
- One pager to be communicated for each stage for use by coaches.

APPENDIX A

SNOWBOARD: LONG-TERM ATHLETE DEVELOPMENT PROGRAM (LTAD) SUGGESTED DEVELOPMENT OF PERFORMANCE FACTORS

DEVELOPMENTAL STAGES	STAGE 1 ACTIVE START (AS)	STAGE 2 FUNDAMENTALS (FUN)	STAGE 3 LEARN TO RIDE (L2R)	STAGE 4 TRAIN TO TRAIN (T2T)	STAGE 5 TRAIN TO COMPETE (T2C)	STAGE 6 LEARN TO WIN (L2W)	STAGE 7 TRAIN TO WIN (T2W)
CHRONOLOGICAL AGES: ALPINE	Boys 0-5 Girls 0-5	Boys 6-9 Girls 6-8	Boys 9-12+ Girls 8-10	Boys 12-16 Girls 11-15	16+	19+	24+
CHRONOLOGICAL AGES: SNOWBOARD CROSS					16+	18+	22+
CHRONOLOGICAL AGES: FREESTYLE AND HALFPIPE					14+	17+	20+
NEW NCCP/CSCP	Snow School	Snow School	Comp INTRO Coach CASI Instruction	Comp INTRO Advanced (L2)	Comp DEV (L3)	Comp DEV (L3)	Comp HP (L4)
PERIODIZATION	none	Simple	Simple	Simple	Simple or Double	Double	Multiple
TRAINING VS. COMP VS. RECOVERY RATIO	none	90/10	85/15	75/25	70/30	70/30	60/40
LOCAL AND REGIONAL COMPS		clubs					
PROVINCIAL COMPS							
NATIONAL COMPS							
INTERNATIONAL COMPS/WORLD CUP/JUNIOR CHAMPIONSHIPS				Juniors			
WORLD CHAMPIONSHIPS/OLYMPICS							
GLOBAL TRAINING ORIENTATION	Basic movement skills ABCs	Basic snow sliding sports + consolidation of ABCs	All Basic Snowboard skills	Develop Training habits	Consolidate training habits	Competition = part of yearly planned training	Competition = part of yearly planned training
SPECIFIC TRAINING ORIENTATION	Fun and pleasure	Fun and pleasure	Experience races in multiple snowboard disciplines	Begin competition in team environment	Advanced mental skills	International competitions, specific to one or multiple disciplines	High performance, specific year round physical training
ENERGY SYSTEMS							
AEROBIC ENDURANCE			D		P/C	P/C	M
AEROBIC POWER				D	P/C	P/C	M
ANAEROBIC ENDURANCE AND POWER				D	D	P/C	M
SPEED		D	D	D	P/C	P/C	M
APPROXIMATE VOLUME (H/YEAR)	0	20	35	50	50	20	20
MUSCULAR DEVELOPMENT							
STRENGTH-ENDURANCE		D	D	D	P/C	P/C	M
HYPERTROPHY				D	D	D	M
MAXIMAL STRENGTH			D	D	D	D	M
POWER-SPEED/POWER-SPEED ENDURANCE			D	D	D	P/C	M
FLEXIBILITY		D	D	P/C	P/C	P/C	M
APPROXIMATE VOLUME (H/YEAR)	0	10	50	75	125	175	150
MOTOR SKILLS							
REACTION SPEED	D	D	D	D	P/C	P/C	P/C
AGILITY	D	D	D	D	P/C	P/C	P/C
MOBILITY	D	D	D	D	P/C	P/C	P/C
COORDINATION	D	D	D	D	P/C	P/C	P/C
SPATIAL ORIENTATION	D	D	D	D	P/C	P/C	P/C
RHYTHM	D	D	D	D	P/C	P/C	P/C
MOTOR BALANCE	D	D	D	D	P/C	P/C	P/C
APPROXIMATE VOLUME (H/YEAR)	60	75	100	75	10	10	10
SNOWBOARD SKILLS							
FUNDAMENTAL, BASIC SKILLS (LA GLISSE)	L	L	D	D	P/C	P/C	P/C
FUNDAMENTAL, ADVANCED SKILLS		L	L	D	D	P/C	P/C
DISCIPLINE SPECIFIC SKILLS (PIPE, GS, SBX)		L	D	D	D	C	C
TACTICAL SKILLS		L	L	D	D	C	C
APPROXIMATE VOLUME (H/YEAR)	0	40	120	200	280	400	500
OTHER SPORT SKILLS							
MULTI-SPORT SKILLS/OTHER SPORTS (PERSONAL CHOICE)	50	75	75	75	50	50	50
APPROXIMATE VOLUME (H/YEAR)	40	75	100	100	50	40	30
SPORTS PSYCHOLOGY							
TEAM SPIRIT		L	D	D	P/C	P/C	P/C
EMOTIONS: ACTIVATION/RELAXATION/MOTIVATION			L	L/D	D	P/C	P/C
CONCENTRATION: VISUALIZATION/FOCUS			L	L/D	D	P/C	P/C
GOAL SETTING: S.M.A.R.T.E.R.			L	L/D	D	P/C	P/C
I.P.S.: PRE-COMPETITIONS AND COMPETITION PLAN			L	L/D	D	P/C	P/C
CRITICAL REFLECTION			L	L/D	D	P/C	P/C
APPROXIMATE VOLUME (H/YEAR)	0	15	25	35	50	70	100
TOTAL TRAINING VOLUME (H/YEAR)	100	235	430	535	535	715	810
COMPETITION VOLUME	0	15	35	45	60	80	20
TOTAL VOLUME (H/YEAR)	100	250	465	580	595	795	930

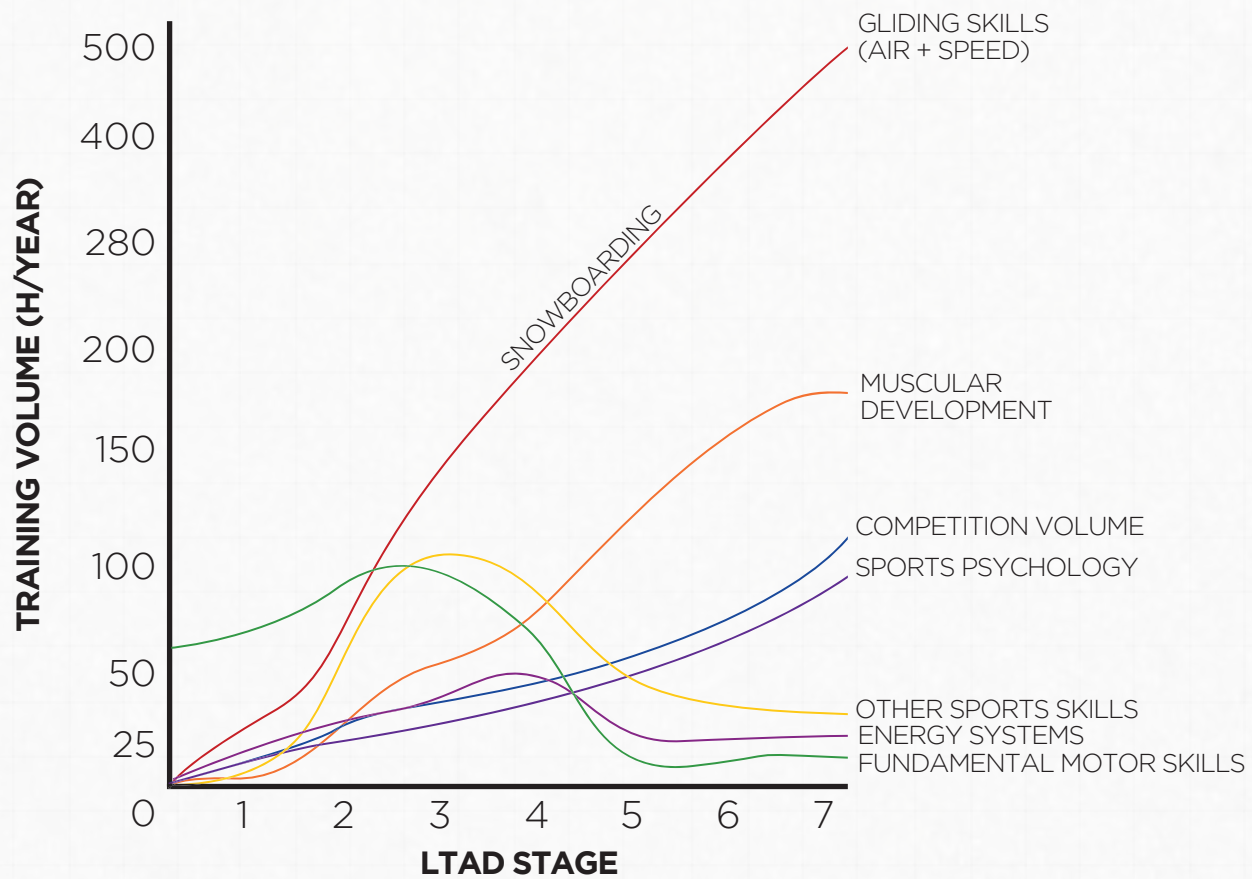
LEGEND
HIGH IMPORTANCE
CONSIDERABLE IMPORTANCE
MODERATE IMPORTANCE

LEARN	L
DEVELOP	D
CONSOLIDATE	C
PERFECT	P

INTEGRATE	I
MAINTAIN	M
RECUPERATE	R

SUGGESTED TRAINING VOLUMES PER STAGE

APPENDIX B



APPENDIX C

SAMPLE ANNUAL SNOWBOARD TRAINING PLAN

Plans are available for each stage at www.canadasnowboard.ca

ATHLETE	DAN: 2005-2006 / AGE: 19 / DISCIPLINE: SBX/Provincial Team																													
LTAD Stage	Stage 5: Train to Compete																													
# Days on snow	90																													
Performance Goals	Make top 10 Canadian Nationals																													
Training Priorities	Plyometric, Maximal strength, Speed-strength endurance, speed and carving, park and pipe skills, pre-competition and competition plan																													
Months	May			June			July			August			September			October			November											
WEEKS	May 16-22	May 23-29	May 30-June 5			June 6-12	June 13-19	June 20-26	June 27-July 3	July 4-10	July 11-17	July 18-24	July 25-31	August 1-17	August 8-14	August 15-21	August 22-28	August 29-Sept 4	Sept 5-11	Sept 12-18	Sept 19-25	Sept 26-Oct 2	Oct 3-8	Oct 9-16	Oct 17-23	Oct 24-30	Oct 31-Nov 6	Nov 7-13	Nov 14-20	
IMPORTANCE OF COMPETITIONS (1; 3; 5)																														
TRAINING CAMPS								Glacier: BC						Chili																
PHYSICAL TESTING																														
MEDICAL EVALUATION																														
TECHNICAL/TACTICAL EVALUATION																														
PSYCHOLOGICAL EVALUATION																														
MACROCYCLE	1 Macrocycle																													
PERIOD	Preparation																													
PHASE	General #1						Specific #1			General #2			Specific #2				General #3						Specific #3							
MESOCYCLES	Conditioning				GP #1		Spec. Prep #1			GP #2			Spec. Prep #2				General Prep #3				GP #4		Spec. Prep #3			Tapering #1				
MICROCYCLES	1	2	3	4	1	2	1	2	3	1	2	3	1	2	3	4	1	2	3	4	1	2	1	2	1	2	3	1	2	
ENERGY SYSTEMS																														
AEROBIC ENDURANCE	L	L	L	L																										
ANAEROBIC POWER: PLYOMETRICS					L	L	L	L	L	D	D	D	M	M	M	M	D	D	D	D	D	D	D	M	M	M	D	D	D	
VOLUME (HOURS)	1	1	1	1	3	3	1	1	1	2	2	2	1	1	1	1	2	2	2	2	2	2	0,5	1	1	2	2			
MUSCULAR DEVELOPMENT																														
STRENGTH ENDURANCE	D	D	D	D	D	D																								
HYPERTROPHY					D	D	M	M	M	D	D	D	M	M	M	M								D	D	D				
MAXIMAL STRENGTH																		D	D	D	D	D	D					D	D	
SPEED STRENGTH/SPEED STRENGTH ENDURANCE	D	D	D	D	D	D	M	M	M	D	D	D	M	M	M	M	D	D	D	D	D	D	D	D	D	D	D	D	D	
FLEXIBILITY	D	D	D	D	D	D	M	M	M	D	D	D	M	M	M	M	D	D	D	D	M	M	D	D	D	D	D	D	D	
STABILIZER	D	D	D	D	D	D	M	M	M	D	D	D	M	M	M	M	D	D	D	D	M	M	D	D	D	D	D	D	D	
VOLUME (HOURS)	2,5	2,5	2,5	3	3	3	2	3	2	3,5	3,5	3,5	2	2	2	2,5	3	3	3	3	6	8	2,5	2,5	2,5	3	3	3		
TECHNICAL/TACTICAL SKILLS																														
SNOWBOARD: FUN																														
SNOWBOARD: SPEED AND CARVING							D	D	D				D	D	D	D								P	P	P				
SNOWBOARD: PARK AND PIPE							D	D	D				D	D	D	D								P	P	P				
SNOWBOARD: SBX COURSE/TACTICAL							D	D	D				D	D	D	D								P	P	P				
SKATEBOARD, WAKEBOARD (OFF-SEASON)	D	D	D	D	D	D				D	D	D					D	D	D	D	D	D	D	D	D	D	D			
VOLUME (HOURS)	2	2	2	2	2	2	12	12	12	2	2	2	11	12	11	13	2	2	2	2	2	2	2	2	2	2	2	0	0	
COMPETITION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PSYCHOLOGIC SKILLS																														
MOTIVATION/CONFIDENCE																														
CONCENTRATION/VISUALIZATION	D	D	D	D	D	D	I	I	I	D	D	D	I	I	I	I	D	D	D	D	D	D	D	P	P	P	D	D		
ACTIVATION/RELAXATION																														
PRE-COMPETITION PLAN																									D	D	D	D	D	
COMPETITION PLAN																									D	D	D	D	D	
VOLUME (HOURS)	0,5	0,5	0,5	0,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	3	3	3	3	1,5	1,5	1,5	1,5	3	4	1,5	1,5	1,5	1,5	1,5	1,5		
TOTAL VOLUME (HOURS)	6	6	6	6,5	9,5	9,5	16,5	17,5	16,5	9	9	9	17	18	17	19,5	8,5	8,5	8,5	8,5	13	16	6,5	7	7	7	6,5	6,5		

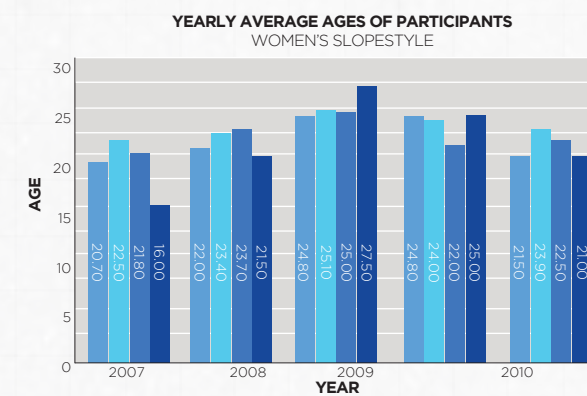
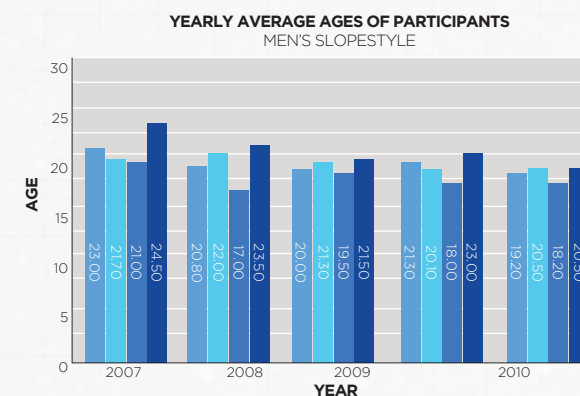
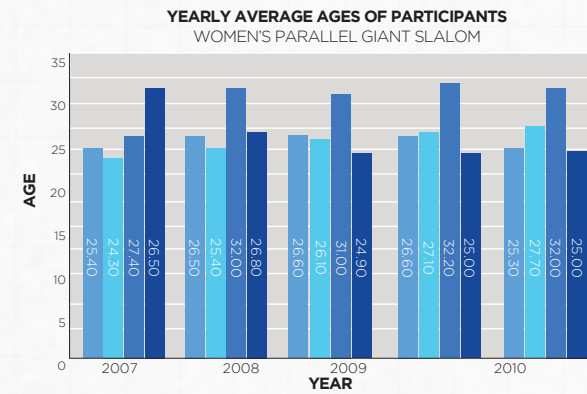
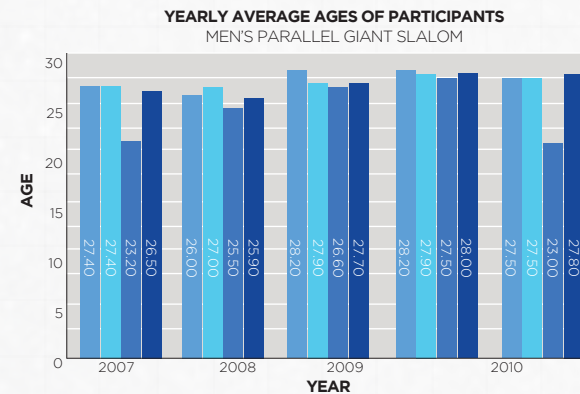
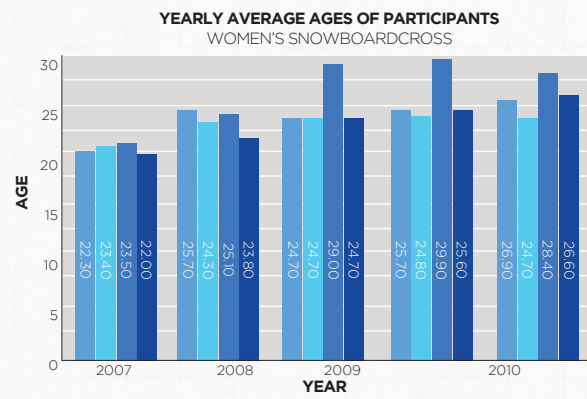
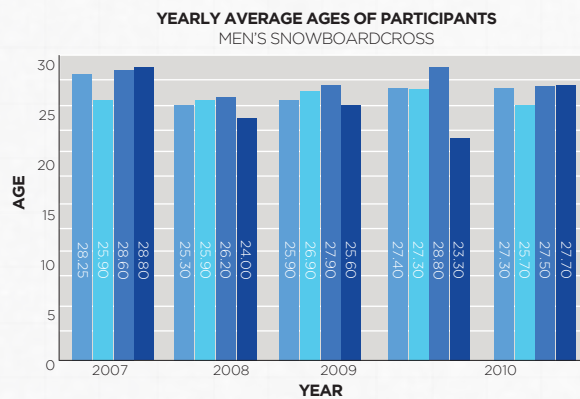
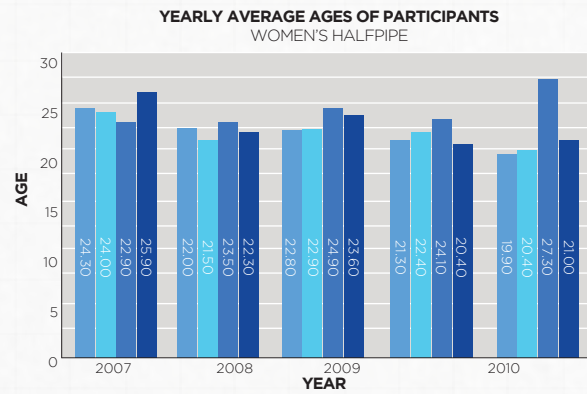
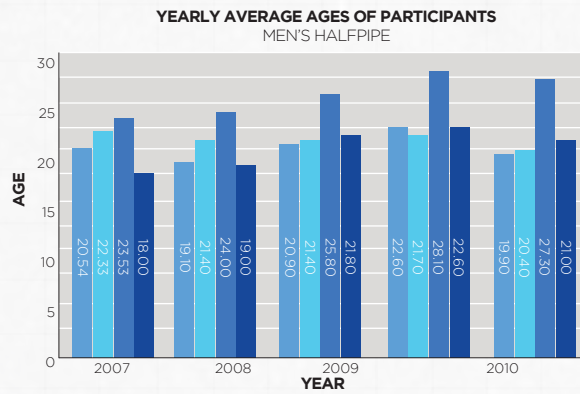
Preparatory competition		Training Camps	
Regular/qualifying competition		Evaluation: medical, physical, psychological etc.	
Important competition		Critical importance	
Crucial competition (Peak performance)		High importance	
		Moderate importance	

DAN: 2005-2006 / AGE: 19 / DISCIPLINE: SBX/Provincial Team																								ATHLETE		
Stage 5: Train to Compete																								LTAD Stage		
90																								# Days on snow		
Make top 10 Canadian Nationals																								Performance Goals		
Plyometric, Maximal strength, Speed-strength endurance, speed and carving, park and pipe skills, pre-competition and competition plan																								Training Priorities		
Nov	December			January				February				March				April				May				Months		
Nov 21-27	Nov 28-Dec 4	Dec 5-11	Dec 12-18	Dec 19-25	Dec 26-Jan 1	Jan 2-8	Jan 9-15	Jan 16-22	Jan 23-29	Jan 30-Feb 5	Feb 6-12	Feb 13-19	Feb 20-26	Feb 27-March 5	March 6-12	March 13-19	March 20-26	March 27-April 2	April 3-9	April 10-16	April 17-23	April 24-30	May 2-8	May 9-15	WEEKS	
			NA	FIS			NA	NA	JWS			NA	NA	FIS	FIS			CN	JWC	JWC					IMPORTANCE OF COMPETITIONS (1; 3; 5)	
																									TRAINING CAMPS	
																									PHYSICAL TESTING	
																									MEDICAL EVALUATION	
																									TECHNICAL/TACTICAL EVALUATION	
																									PSYCHOLOGICAL EVALUATION	
1 Macrocycle																								MACROCYCLE		
			Competition																		Transition			PERIOD		
Specific #3			Pre-Competition								Competition								Transition			PHASE				
Spec. Prep #4			Spec. Prep #5				Pre-Comp #1		SP #6		Competition #1				Tapering #1		Comp #2		Recovery				MESOCYCLES			
1	2	3	1	2	3	4	1	2	3	1	2	1	2	3	4	1	2	1	2	3	1	2	3	4	MICROCYCLES	
ENERGY SYSTEMS																										
																									AEROBIC ENDURANCE	
D	D	D	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	R	R	R	R	ANAEROBIC POWER: PLYOMETRICS	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	VOLUME (HOURS)	
MUSCULAR DEVELOPMENT																										
																									STRENGTH ENDURANCE	
																									HYPERTROPHY	
D	D	D																							MAXIMAL STRENGTH	
D	D	D	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	R	R	R	R	SPEED STRENGTH/SPEED STRENGTH ENDURANCE	
D	D	D	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	R	R	R	R	FLEXIBILITY	
D	D	D	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	R	R	R	R	STABILIZER	
3	1,5	1,5	1,5	1,5	1,5	1,5	2	2	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1	1	1	1	VOLUME (HOURS)	
TECHNICAL/TACTICAL SKILLS																										
																					R	R	R	R	SNOWBOARD: FUN	
																					R	R	R	R	SNOWBOARD: SPEED AND CARVING	
I	I	I	D	D	D	D	D	D	D	D	D	M	M	M	M	M	M	M	M	M	R	R	R	R	SNOWBOARD: PARK AND PIPE	
																					R	R	R	R	SNOWBOARD: SBX COURSE/ TACTICAL	
																					R	R	R	R	SKATEBOARD, WAKEBOARD (OFF SEASON)	
10	10	10	12	12	12	12	9	4	2	9	9	7	7	7	7	7	10	10	9	9	0	0	0	0	VOLUME (HOURS)	
0	0	0	5	5	0	0	5	5	5	0	0	5	5	5	5	7	0	0	7	7	0	0	0	0	COMPETITION	
PSYCHOLOGIC SKILLS																										
I	I	I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	M/I	R	R	R	R	MOTIVATION/ CONFIDENCE	
																									CONCENTRATION/ VISUALIZATION	
																									ACTIVATION/RELAXATION	
D	D	D	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	R	R	R	R	PRE-COMPETITION PLAN	
D	D	D	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	D/I	R	R	R	R	COMPETITION PLAN	
2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	VOLUME (HOURS)	
16,5	15	15	22	22	22	17	17	19,5	14	11,5	13,5	13,5	16,5	16,5	16,5	16,5	18,5	14,5	14,5	20,5	20,5	1	1	1	1	TOTAL VOLUME (HOURS)

NORAM Cup	NA	Integrate	I	Learn	L
FIS Level Provincial Cup	FIS	Recuperate	R	Develop	D
Canadian Nationals	CN	Maintain	M	Consolidate	C
Junior World Selection	JWS	Volume	10	Perfect	P
Junior World Cup	JWC				

APPENDIX D

AVERAGE AGE AT WORLD CUP



AVERAGE AGE OF TOP 3

AVERAGE AGE OF TOP 12

AVERAGE AGE OF CANADIAN

AVERAGE AGE OF WINNER

COMPETITION REVIEW APPENDIX

ATHLETE AND PARENT EXPECTATIONS FOR A YEARLY TRAINING PLAN (YTP) FROM A COACH:

The yearly training plan (YTP) is the road map that outlines the development plan for the athlete over the course of the year. All aspects of the plan should be age and stage of development appropriate according to the CS Long Term Athlete Development Model. As an athlete, you should have certain expectations from a coach in the development of a YTP.

Within the plan, the coach should clearly identify:

- different training blocks (macro cycles, periods, phases, meso cycles and micro cycles)
- different training phases (general, specific, pre-competition, competition, and transition)
- training priorities during various phases
- age and stage of development appropriate training to competition ratios
- number of days of both on and off snow training
- number of days in competition
- strategies to address individual athlete gaps and development (technical, tactical, physical, psychological)
- physical training to identify energy system and muscular development
- timing of strategies within the plan
- targeted competitions
- appropriate rest and recovery to optimize performance and adaptation

APPENDIX 1: DETAILED YEARLY TRAINING PLAN FOR STAGE 3 ATHLETES

Stage 3 YTP can be found online at www.canadasnowboard.ca.

A MICROCYCLE (WEEK) FOR A STAGE 3 ATHLETE DURING THE MAIN PHASE (WINTER)

Macrocycle	Main Phase of Season					Sport 1 -- Ambidextrous Sport...	
Mesocycle	Main 1			Comp Level	Stage 3	Technical Training (on-snow)	
Focus	Technical Progression					Creative active 'play' time	
						Pre-habilitation (injury prevention)	
						Sport 2-SAQ (speed/agility/quickness)	

MICRO #	39	DATE	23-JAN-13		TO	30-JAN-13	
BLOCK	MAIN PHASE						
	MON	TUES	WED	THURS	FRI	SAT	SUN
AM	SCHOOL	SCHOOL	SCHOOL	SCHOOL	SCHOOL		
PM	SCHOOL	SCHOOL	SCHOOL	SCHOOL	SCHOOL	TECHNICAL TRAINING	TECHNICAL TRAINING
PM	SPORT 1	REST	SPORT 2	SPORT 1	PLAY	PRE-HAB	PRE-HAB

OTHER KEY POINTS

SLEEP & RECOVERY

* Information from *Sport4Life, Sleep, Recovery and Human Performance* by Charles H. Samuels, MD, CCFP, DABSM & Brent N. Alexander, M.Sc

LEARN TO TRAIN (STAGE 3) ATHLETE

Hours of Sleep per night: 9.5-10

30 min nap each day between 2-4pm

Goal is to reinforce a regular sleep routine.

- Maintain 15-30 min. bedtime routine
- Monitor and control "screen time"
- Monitor caffeine intake

NUTRITION

Focus on eating routines, both the timing of eating regular meals (especially breakfast) as well as the kinds of foods. Work to have each meal 3/4s from healthy carbohydrates (fruits, veggies and breads) and the last 1/4 from proteins/meats/dairy. Teach recovery nutrition basics -- ie. What to eat after training/competition and when.

APPENDIX 2: DETAILED YEARLY TRAINING PLAN FOR STAGE 4 ATHLETES

STAGE 4 Freestyle -- May-September | Style -- WESTERN/EASTERN Canada, October-April | Speed

information available on www.canadasnowboard.ca

A MICROCYCLE (WEEK) FOR A STAGE 4 ATHLETE DURING THE COMPETITION PHASE

Macrocycle	Main Phase of Season					Strength Training	
Mesocycle	Main 1			Comp Level	Stage 4	Technical Training (on-snow)	
Focus	Technical Progression					Energy Systems (Aerobic/Anaerobic)	
						Pre-habilitation (injury prevention)	
						SAQ (speed/agility/quickness)	
MICRO #	39	DATE	23-JAN-13		TO	30-JAN-13	
BLOCK	MAIN PHASE						
	MON	TUES	WED	THURS	FRI	SAT	SUN
AM	REST					TECHNICAL TRAINING	TECHNICAL TRAINING
PM	REST	SAQ	ENERGY SYSTEM 1	PRE-HAB		TECHNICAL TRAINING	TECHNICAL TRAINING
PM	REST	STRENGTH 1		STRENGTH 2	ENERGY SYSTEM 2	PRE-HAB	PRE-HAB

APPENDIX 2: CONTINUED

OTHER KEY POINTS

CAMPS

Camps give an opportunity to practice travel competition type scheduling including sleep, on-road nutrition, etc.

SLEEP & RECOVERY

** Information from Sport4Life, Sleep, Recovery and Human Performance by Charles H. Samuels, MD, CCFP, DABSM & Brent N. Alexander, M.Sc*

Train to Train (Stage 4) athlete

Hours of Sleep per night: 9+

30 min nap each day between 2-4pm

Goal is to reinforce a regular sleep routine.

NUTRITION

Focus on eating routines, both the timing of eating regular meals (especially breakfast) as well as the kinds of foods. Work to have each meal 3/4's from healthy carbohydrates (fruits, veggies & breads) and the last 1/4 from proteins/meats/dairy.

Teach recovery nutrition basics - ie. What to eat after training/competition and when.

COMPETITIONS

Competition is a poor master. Use it as a training tool for athletes at this stage.

Train to train athletes should have a single peak (ie. Nationals in this example) they are working towards for the season.

APPENDIX 3: DETAILED YEARLY TRAINING PLAN FOR STAGE 5 ATHLETES

Detailed **FREESTYLE, SPEED -- SBX and SPEED -- PGS** information available at canadasnowboard.ca

A MICROCYCLE (WEEK) FOR A STAGE 5 ATHLETE IN THE COMPETITION PHASE

Macrocycle	Main Phase of Season				Strength Training		
Mesocycle	Main Competition 2	Comp Level	Stage 5		Technical Training (on-snow)		
Focus	Competition Progression				Energy Systems (Aerobic/Anaerobic)		
					Pre-habilitation (injury prevention)		
					SAQ (speed/agility/quickness)		
MICRO #	40	DATE	23-JAN-13	TO	30-JAN-13		
BLOCK	MAIN COMPETITION PHASE						
	MON	TUES	WED	THURS	FRI	SAT	SUN
AM	REST	TECHNICAL TRAINING		TECHNICAL TRAINING		TECHNICAL TRAINING	TECHNICAL TRAINING
PM	REST	SAQ	ENERGY SYSTEM 1	PRE-HAB	SAQ	TECHNICAL TRAINING	TECHNICAL TRAINING
PM	REST	STRENGTH 1		STRENGTH 2	ENERGY SYSTEM 2	PRE-HAB	PRE-HAB

APPENDIX 3: CONTINUED

OTHER KEY POINTS

CAMPS

Camps give an opportunity to practice travel competition type scheduling including sleep, on-road nutrition, etc.

SLEEP & RECOVERY*

** Information from Sport4Life, Sleep, Recovery and Human Performance by Charles H. Samuels, MD, CCFP, DABSM & Brent N. Alexander, M.Sc*

Train to Compete (Stage 5) athlete

Hours of Sleep per night: 8 -10

30 min nap each day between 2-4pm

Goals at this stage include:

- Focus on reducing sleep debt. Get 56-70 hours of sleep/week
- Do not train if unrested and sleep deprived
- Avoid technology (screen time) before bed
- If your sleep is poor seek help
- Maintain regular sleep/nap routine
- Monitor for a delayed sleep phase (difficulty falling asleep and waking up for school)
- Get early morning light exposure for 30 min. daily
- Maintain reliable nutrition routines (breakfast is the most important meal of the day)

NUTRITION

Focus on the type & time of meals during the competition phase.

Learn to track food intake and ensure getting correct %'s for intake (fat, protein, carbs)

Hydration during training & competition a priority

COMPETITIONS

Entry level stage 5 athletes, single peak season. Late stage 5 athletes may have double peak season.

Focus is on gaining competition experience at the international level. Competition routines, tactics and determining the ideal performance state are the main goals.

DETAILED YTP FOR STAGE 6 AND 7 ATHLETES CAN BE FOUND ON www.canadasnowboard.ca.

APPENDIX 4: GROWTH AND MATURATION OF ATHLETES

Identifying early and late maturers can be done by measurements which track the athlete's growth. Whether one is an early or late maturer is not of issue; the issue is the potential short-term and long-term treatment of such athletes. Appropriate training and competition schedules can be set up for the individual needs of the early, average and late maturing athlete. These measurements are needed to identify the windows of trainability (the best time to train endurance, strength, speed, skill and flexibility). For more information on the windows of trainability please read pages 25-27 in the Canadian Sport for Life resource paper*.

**To read the full length version of this article visit the Resources & Downloads section at www.canadiansportforlife.*

APPENDIX 4: CONTINUED

Although growth and development is a natural process, the tempo of the maturation process can vary greatly: “A child with a chronological age of 12 years may possess a biological age of between 9 and 15 years” (Borms, 1986). The difference between a 9-year-old and a 15-year-old is huge; notwithstanding, these athletes are often trained the same way and participate in age group competitions, which give early maturers, especially males, a huge advantage in performance and in the selection process. **For these reasons, the developmental age of athletes should be identified and monitored by coaches.**

During growth onset, early maturation can be an advantage in snowboard speed disciplines since they become ‘bigger & stronger’ and therefore faster, before their peers. Later on, as other athletes catch up, it can be a disadvantage as the late maturing athletes sensitive period of skill learning is open longer.

Freestyle athletes who are early maturers have strength earlier on however may not gain the flexibility required. The late maturing athletes generally are better at technical skills again due to the longer sensitive period of skill learning.

Coaches and an athletes support team (parents, physiologists, doctors, etc) should be measuring standing, sitting and arm length starting at the age of 11 for girls and age 12 for boys. With this information, peak height velocity (PHV) can be calculated. This can then ensure they are training the ‘right thing at the right time’ as outlined earlier in this LTAD document (sensitive periods of trainability).

SITTING HEIGHT MEASUREMENT

- Student sits on the base of the stadiometer with knees slightly bent. Hands rested on knees.
- The buttocks and shoulders rest lightly against the stadiometer, which is positioned vertically behind the student. Ensure there is no gap between buttocks of student and stadiometer.
- The tester applies gentle upwards traction to the skull behind the ears to ensure the trunk is fully stretched.
- Draw down the measuring bar to the student’s head and record sitting height to the nearest 0.1 cm.
- Once sitting height is calculated, it can be subtracted from the stature score, in order to derive the leg length height.



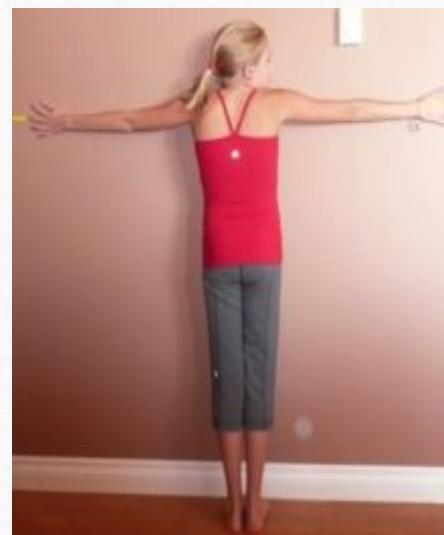
STANDING HEIGHT MEASUREMENT

- The student stands erect in bare feet with heels, buttocks and shoulders pressed against the stadiometer.
- The heels are together with arms hanging freely by the side (palms facing thighs).
- The tester applies gentle upward traction to the skull behind the ears.
- The student looks straight ahead, takes a deep breath and stands as tall as possible.
- Draw down the measuring bar to the student’s head and record standing height to the nearest 0.1 cm.

APPENDIX 4: CONTINUED

ARM LENGTH MEASUREMENT

- Mount a tape measure on the wall about shoulder height of the students being tested. Ensure the starting point of the tape measure is fixed to a corner of a wall. This is where the student's fingers must be fixed.
- The student stands erect with their stomach and toes facing the wall, feet together and head turned to the right.
- The arms are extended laterally at shoulder level (horizontal) with palms facing forwards. Fingers stretched.
- The tip of the middle finger is aligned with the beginning of the tape measure (corner of wall) and arms are out-stretched along the tape measure.
- Use a ruler held vertically to the tape measure to record total arm span to the nearest 0.1 cm.



APPENDIX 5: FACILITY PLANNING TOOL EXAMPLE – ONTARIO

REGION	STAGE 2	STAGE 3	STAGE 3	STAGE 3	STAGE 3	STAGE 4	STAGE 4	STAGE 4	STAGE 4	STAGE 5	STAGE 5	STAGE 5	STAGE 5
	ALL	ALPINE	SBX	PARK	PIPE	ALPINE	SBX	PARK	PIPE	ALPINE	SBX	PARK	PIPE
Southern	YES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	IP	No	No	No
Southern	YES	Yes	Yes	Yes	No	No	Yes	Yes	No	No	No	No	No
Southern	YES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	IP	Yes	Yes	Yes
Southern	YES	Yes	No	Yes	No	No	No	No	No	No	No	No	No
Southern	YES	Yes	Yes	Yes	No	IP	Yes	Yes	No	No	No	No	No
Southern	YES	Yes	Yes	No	No	IP	Yes	No	No	No	No	No	No
Southern	YES	Yes	No	Yes	No	IP	Yes	No	No	No	No	No	No
Southern	YES	Yes	Yes	Yes	No	No	Yes	No	No	No	No	No	No
Southern	YES	Yes	No	Yes	No	No	???	Yes	No	No	No	No	No
Southern	YES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Southern	YES	Yes	Yes	Yes	No	No	Yes	No	No	No	No	No	No
Southern	YES	Yes	Yes	Yes	No	IP	Yes	Yes	No	No	No	No	No
Southern	YES	Yes	No	Yes	No	IP	No	No	No	IP	No	No	No
Southern	YES	Yes	No	Yes	Yes	No	No	Yes	Yes	No	No	No	No
Southern	YES	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No
Eastern	YES	Yes	No	Yes	No	No	No	No	No	No	No	No	No
Eastern	YES	Yes	No	Yes	No	IP	No	No	No	No	No	No	No
Eastern	YES	Yes	Yes	Yes	No	IP	No	No	No	No	No	No	No
Northern	YES	Yes	No	No	No	IP	No	No	No	No	No	No	No
Northern	YES	Yes	No	Yes	No	No	No	No	No	No	No	No	No
Northern	YES	Yes	Yes	Yes	No	IP	Yes	No	No	No	No	No	No
Northern	YES	Yes	No	No	No	No	No	No	No	No	No	No	No
Eastern	YES	Yes	No	No	No	No	No	No	No	No	No	No	No

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CREDITS

Alpine Integration Model Alpine Canada Alpine, High Performance Advisory Committee, 1999.

Baechle, T.R, Earle, R. Essentials of strength training and conditioning. National Strength and Conditioning Association. 2000.

Balyi, I. Sport system building and long-term athlete development in Canada. The situation and solutions, in Coaches Report. The Official Publication of the Canadian Professional Coaches Association. Summer 2001. Vol.8, No.1, pp.25-28.

Balyi, I. Coaching for Long-Term Athlete Development: To improve participation and performance in sport. The National Coaching Foundation, 2005.

Bompa, T.O. Periodization: Theory and Methodology of Training. Champaign, IL: Human Kinetics. 1999.

Bulota, C. Développement à Long Terme de l'Athlète: le Snowboardcross masculin au Canada. University of Sherbrooke 2006.

Canadian-Snowboard Comp Intro Advanced and Competition Development Manuals. Canada. Snowboard Coaching Program. Vancouver 2012.

Canadian Sport Centres Long-Term Athlete Development: No Accidental Champions. Athletes with a Disability: Canadian Sport Centres. Vancouver: 2005.

Canadian Sport Centres Long-Term Athlete Development: Canadian Sport For Life. Canadian Sport Centres. Vancouver: 2005.

Côté, J. (1999) The influence of the family in the development of talent in sport. *The Sport Psychologist*, 13, 395-417.

Durand-Bush, N., Salmela, J., H. (2002). The development and maintenance of expert athletic performance: Perceptions of World and Olympic champions. *Journal of Applied Sport Psychology*, 14, pp.154-171.

England and Wales Cricket Board

The Long-Term Athlete Development Model for Cricket. London: 2005.

Naughton, G. (2001) Coaching athletes as individuals. In F. Pyke (Ed.) *Better Coaching*, Advanced Coaching Manual pp.87-98. Belconnen, ACT: Australian Sports Commission.

Petersen, C.W. Fit to ski. Vancouver: Fit to play. 2004.

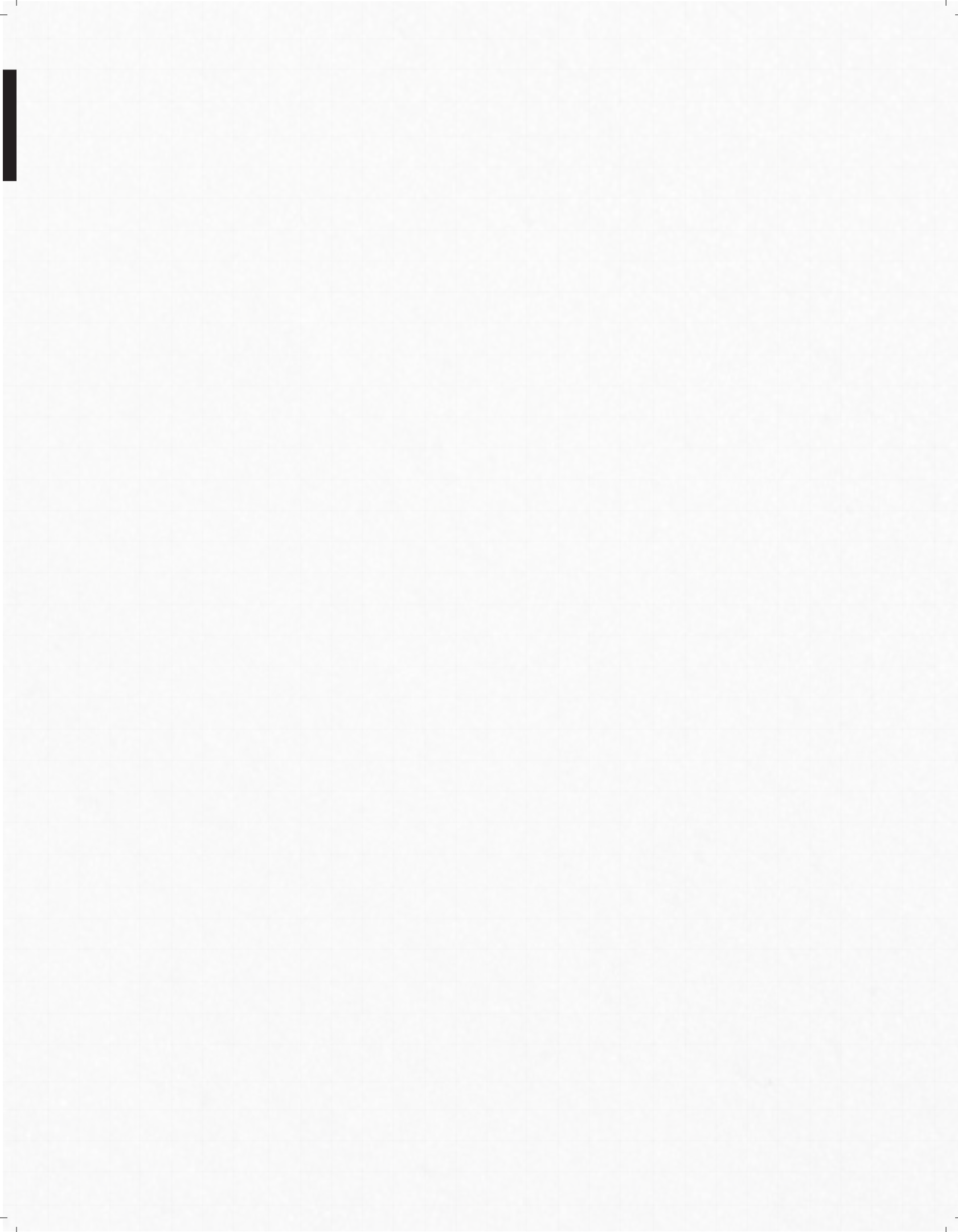
Roy, M. Modèle développement à long terme de l'athlète (DLTA). Kin-353 Planification et méthodes d'entraînement : University of Sherbrooke. 2006.

Royle, Q. Peak Performance - The Average Ages of World Class Snowboarding Athletes (a multi disciplinary review). Concordia University, 2006

Stafford, I. (2005) Coaching for long-term athlete development: To improve participation and performance in sport. Leeds, UK: Coachwise Business Solutions.

Statistics Canada (2006) Participation and Activity Limitation Survey 2006: Tables. Retrieved November 29, 2012 from <http://www4.hrsdc.gc.ca/.3ndic.1t.4r@-eng.jsp?iid=40>.

Whitehead, M. (2001) The concept of physical literacy. *European Journal of Physical Education*, 6, pp.127-138.





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