In an hour or less...

- Mandate & Terms of Reference
- Mission, Vision, Values, Pillars
- Committee Process (Walls of Protection)
  - Basic Research
  - Behavioral Wall
  - Emergency Response
- Crash Protection
- Plans for 2012/2013
SIMEC’s Mandate

Establish priorities and make recommendations to Speed Skating Canada (SSC) regarding the development and implementation of policies and procedures pertaining to sport injury and medical emergencies.
SIMEC Key Duties

• Develop and maintain an appropriate registry for sport injuries and medical emergencies pertaining to speed skating in Canada;
• Develop and recommend implementation for short and long term plans which advance SSC’s strategic objectives and specific strategies pertaining to sport injury and medical emergency prevention and response;
• Develop and recommend implementation for SSC’s sport injury and medical emergency prevention and response strategies;
• Propose guidelines, minimum standards and regulations for speed skating practices and competitions;
• Oversee working groups and task forces tasked to examine specific issues;
• Report on the status of sport injuries and medical injuries within speed skating.
When Making Recommendations

_SIMEC strives to account for and be mindful of:_

– the likelihood of risks;
– the severity of harm associated with risks;
– the monetary costs of addressing risks;
– the sociocultural impact of addressing risks;
– the environmental impact of addressing risks.
2011-2012 Committee Members

- Dr. Sean Maw (Chair)
- Dr. Anne Pousette
- Dr. Andrew Quinn
- Dr. Jane Moran (Ex-officio member, Chair ISU Medical Commission)
- Robert Dubreuil
- Douglas Duncan
SIMEC Vision

In 2020, all of SSC’s stakeholders will view speed skating as a safety-conscious and safety-diligent sport. Injury rates will be low and serious injuries will be all but absent in Canada. SSC will be a recognized and influential international leader in effective injury prevention and response through multidisciplinary collaboration and a broad, systematic approach that is grounded in sound risk management practices as well as three-pillar sustainability.

Regular reviews and high-quality research will proactively ensure continuous improvement and use of best practices. Our injury prevention practices will be stage appropriate for all participants and will be based on evidence associated with probability of risk in each context. A comprehensive and reliable injury monitoring system will be in place across all stages of development and all levels of training and competition in Canada.

SSC will enable its existing and new partners in the development of safe speed skating environments, in part through effective and timely knowledge transfer. Clubs and branches will be empowered to explore even higher standards.
SIMEC Values

Sustainability

Integrity

Multidisciplinarity

Excellence

Collaboration

SIMEC – To lead and to act, enabling the speed skating community to effectively protect itself from and respond to injury.
5 Strategic Pillars

1. Knowledge Building
2. International Leadership
3. Domestic Leadership
4. Attitudes & Expectations
5. Effective Implementation
Knowledge Building

• To understand what injuries and illnesses occur in speed skating
• To understand the mechanisms of injury and illnesses in speed skating
• To know the most effective ways to prevent speed skating injuries and illnesses
• To know the most effective ways to respond to speed skating injuries and illnesses
International Leadership

• To have SSC standards drive world standards

• To be a leading source of best practices in sport injury and illness prevention and response

• To be a significant contributor in relevant international forums
Domestic Leadership

• To be the primary source of speed skating best practices in sport injury and illness prevention and respond
• To enable our Clubs and Branches to be recognized local and regional leaders
• To have Speed Skating Canada nationally recognized in sport injury and illness prevention and response
Attitudes & Expectations

• To create individual ownership and accountability and to have all participants act safely together.
• To have members be confident in the quality of our safety programs
• To have the SSC brand synonymous with safe sport.
Effective Implementation

- To have Canadian sport for life be a reality in speed skating
- To educate and communicate the most current knowledge
- To have best practices in use in sport injury and illness prevention and response
SIMEC – To lead and to act, enabling the speed skating community to effectively protect itself from and respond to injury.

Interconnection of Domains & Defensive Walls

Prior knowledge from sport science/engineering/medicine

Basic Research (mechanisms of injury)

Surveillance (statistics of injury)

Prior knowledge from sport science/engineering/medicine

1st Defensive Wall

Cognitive, Affective and Physical Preparations/Interventions (educational and training programs, rules, guidelines, standards)

Prior knowledge from sport science/engineering/medicine

2nd Defensive Wall

Protective Equipment Preparations/Interventions (impact protection, cut/puncture protection, and test equipment/methods)

Prior knowledge from sport medicine

Injuries and Medical Emergencies

Emergency Preparedness and Responses

Success: few injuries, and no long-term serious injuries
SIMEC – To lead and to act, enabling the speed skating community to effectively protect itself from and respond to injury.

SIMEC Process

Surveillance

Assess Effectiveness

State of sport (Statistics)

Interventions

Research & Analysis
2011-2012 in Review

Basic Research

- Literature review on helmet design and testing (Cripton, UBC) in cooperation with Alpine Canada Alpin

- Evaluation of the shape/size of helmets and different regions of the pads (Maw, Morris, Clarke and Lun, Mount Royal University and University of Calgary)

- Initial contacts made with research groups in area of Injury Surveillance and Mechanism of Injury

2011-2012 in Review

Basic Research

SIMEC – To lead and to act, enabling the speed skating community to effectively protect itself from and respond to injury.
2011-2012 in Review

Behaviour (1st Wall)

• Engaged with Snowboard Canada, Canadian Freestyle Ski Association and Coaching Association of Canada to seek funding through the Public Health Agency of Canada (PHAC) to develop a sport safety e-learning module (announcement pending)

• Concussion awareness video for skaters and coaches to be completed Summer 2012
2011-2012 in Review

Equipment (2nd Wall)

• Revision of P&Rs to add intent, better reflect nature of activities, skater speed & skill, definition of regulations by function

• Completion of Crash Protection Specifications & Guidelines for both ST and LT

• Met with CSA regarding helmet certification, engaged with ASTM to improve F1849, formed HHITT
2011-2012 in Review
Emergency Response (3rd Wall)

- Adjustment of first responder requirements to better reflect diversity of medical qualifications across country
- Incorporation of key elements of hosting manual into P&Rs vs. secondary reference
2011-2012 in Review
Injury Surveillance

• Current system has limited efficacy
• Examining different options and strategies; we need to:
  • Streamline process for data collection,
  • Facilitate compliance, especially from clubs in the training environment, and
  • Ensure data can be processed and used to inform/evaluate strategies.
• Two options to be considered
  • Targeted research projects with comprehensive surveillance, and
  • Establish broad surveillance to gather key markers to inform decision making (difficult to access mechanism of injury this way)
• Preliminary discussions have been had with U of C Sport Injury Prevention Research Centre to support work
## 2011-2012 in Review
### SSC Injuries – 2006/07 to 2011/12 (without FPVQ Data)

### Table: SSC Injuries 2006-2007 to 2011-2012

<table>
<thead>
<tr>
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<tr>
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SIMEC – To lead and to act, enabling the speed skating community to effectively protect itself from and respond to injury.
2011-2012 in Review

FPVQ Injuries – 2010/11

<table>
<thead>
<tr>
<th>Injury Type</th>
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<td>Contusion</td>
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<td>Fracture/Break</td>
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<td>Laceration</td>
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<tr>
<td>Sprain/Strain</td>
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<tr>
<td>Other</td>
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</table>
## 2011-2012 in Review

### SSC Injuries – 2006/07 to 2011/12 (with 2010-11 FPVQ Data)

<table>
<thead>
<tr>
<th>Year</th>
<th>Other</th>
<th>Sprain/Strain</th>
<th>Laceration</th>
<th>Hyperventilation</th>
<th>Fracture/Break</th>
<th>Dental</th>
<th>Contusion</th>
<th>Concussion</th>
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<td>1</td>
<td>9</td>
<td>15</td>
<td>12</td>
<td>15</td>
</tr>
</tbody>
</table>

### Notes

- **Other**
- **Sprain/Strain**
- **Laceration**
- **Hyperventilation**
- **Fracture/Break**
- **Dental**
- **Contusion**
- **Concussion**
Crash Protection and Prevention Specifications & Guidelines
Overview

- Separate documents for Short Track & Long Track
- Regulations reference specification documents, but pre-assign levels of protection for SSC Championships & Selection Events
- Appendices provide specific thickness and placement based on the required level of protection
- Full implementation to be phased in
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<th>Skater Mass</th>
<th>Lap Times (sec)</th>
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<tr>
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<td>0.14</td>
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<td>60/133</td>
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<tr>
<td>70/155</td>
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<tr>
<td>80/177</td>
<td>0.56</td>
</tr>
<tr>
<td>90/199</td>
<td>0.63</td>
</tr>
<tr>
<td>100/221</td>
<td>0.69</td>
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</tbody>
</table>

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### Padding Required by Level

#### Table 2 – Minimum Padding Specifications Chart (Training)

<table>
<thead>
<tr>
<th>KEFs</th>
<th>Level 1 &lt;.30</th>
<th>Level 2 .30 to &lt;.60</th>
<th>Level 3 1 .60 to &lt;.90</th>
<th>Level 4 1,2 .90 to &lt;1.15</th>
<th>Level 5 3 1.15+</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED ZONE</td>
<td>20(8)</td>
<td>40.5(16)</td>
<td>50.5(20)</td>
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<td>YELLOW ZONE</td>
<td>20(8)</td>
<td>20(8)</td>
<td>30.5(12)</td>
<td>40.5(16)</td>
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<tr>
<td>BLUE ZONE</td>
<td>0</td>
<td>20(8)</td>
<td>25(10)</td>
<td>30.5(12)</td>
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<tr>
<td>GREEN ZONE</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*Legend:* 
1. rink can be no shorter than 195’ long (59.4 m)  
2. rink can be no narrower than 92’ wide (28 m)  
3. must use a boardless system  
4. last pad in Red Zone should be tapered

#### Table 3 – Minimum Padding Specifications Chart (Competition)

<table>
<thead>
<tr>
<th>KEFs</th>
<th>Level 1 &lt;.30</th>
<th>Level 2 .30 to &lt;.60</th>
<th>Level 3 1,2 .60 to &lt;.90</th>
<th>Level 4 1,3 .90 to &lt;1.15</th>
<th>Level 5 4 1.15+</th>
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</thead>
<tbody>
<tr>
<td>RED ZONE</td>
<td>20(8)</td>
<td>45.5(18)</td>
<td>56 (22)</td>
<td>70(28)*</td>
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<tr>
<td>YELLOW ZONE</td>
<td>20(8)</td>
<td>25(10)</td>
<td>35(14)</td>
<td>40.5(16)</td>
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<tr>
<td>BLUE ZONE</td>
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<td>20(8)</td>
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<td>30.5(12)</td>
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<tr>
<td>GREEN ZONE</td>
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<td>0</td>
<td>15(6)</td>
<td>20(8)</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*Legend:* 
1. rink can be no shorter than 195’ long (59.4 m)  
2. rink can be no narrower than 85’ wide (26 m)  
3. rink can be no narrower than 92’ wide (28 m)  
4. must use a boardless system  
5. last pad in Red Zone should be tapered
Implementation Timelines

- **SSC Championships & Selection Events**, effective immediately
- **All other sanctioned competitions:**
  - **2012-2013**: For competitions where skater KEF values are equal to or greater than those specified for Level 1 crash protection, Level 1 crash protection must be provided.
  - **2013-2014**: For competitions where skater KEF values are equal to or greater than those specified for Level 2 crash protection, Level 2 crash protection must be provided.
  - **2014-2015**: For competitions where skater KEF values are equal to or greater than those specified for Level 3 crash protection, Level 3 crash protection must be provided.
Progress on Building Pillars

• Knowledge Building
  – conferences, literature review, Club Facility Survey

• International Leadership
  – ISU, ASTM, US Speed Skating, FIS

• Domestic Leadership
  – conferences, ThinkFirst, CSSS, CSA, HHITT, Apogee

• Attitudes and Expectations
  – new P&Rs

• Effective Implementation
  – crash protection S&Gs, and P&Rs
Plans for 2012/2013

- Basic Research
- Injury Surveillance
- Behavioural Intervention
  - Safety handbook
  - PHAC Application
- Protective Equipment
  - ASTM, HHITT, and CSSS
  - Empower clubs to do their own evaluation of pads
- Emergency Response
- Refinement of SIMEC Operating Procedures & recruitment of new members