

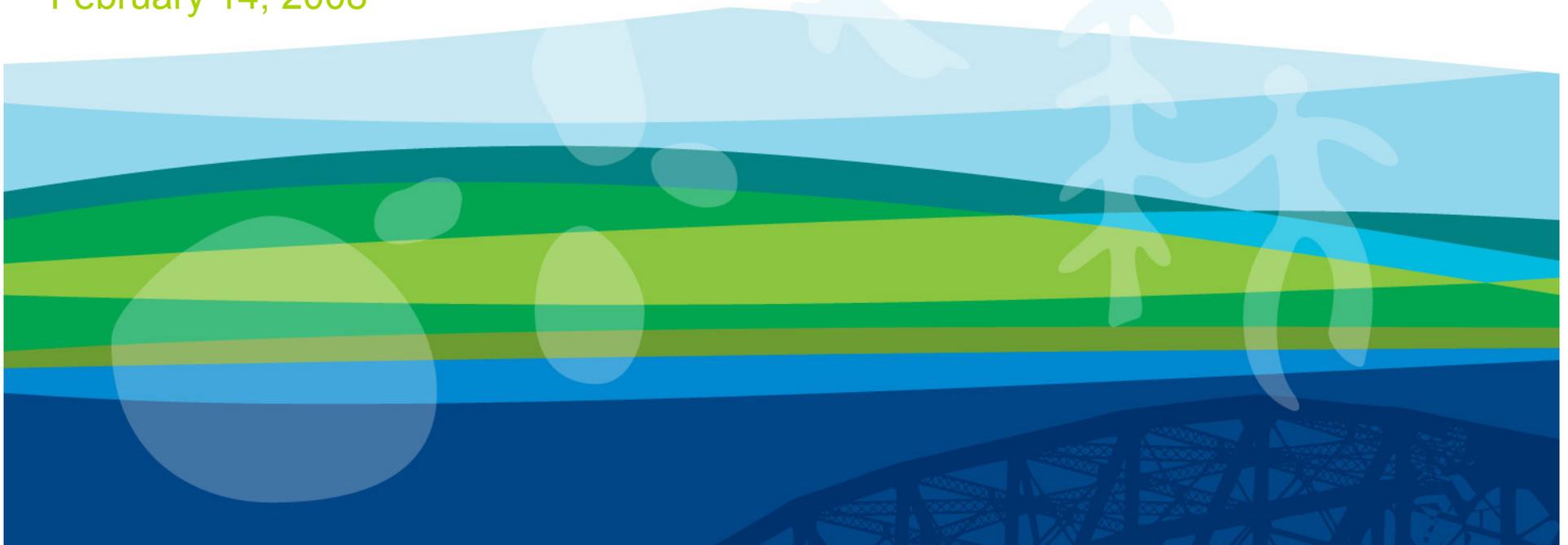


Sustainability and the 2010 Winter Games Vancouver, Canada

Alaska Business Roundtable – Alaska Forum on the Environment

Anchorage, Alaska

February 14, 2008



Agenda

- Overview of the 2010 Winter Games
- Sustainability and the Games
- Pursuing Carbon Neutral
- Zero Waste
- The Venue Program
- LEED in Action





An Overview of the 2010 Winter Games

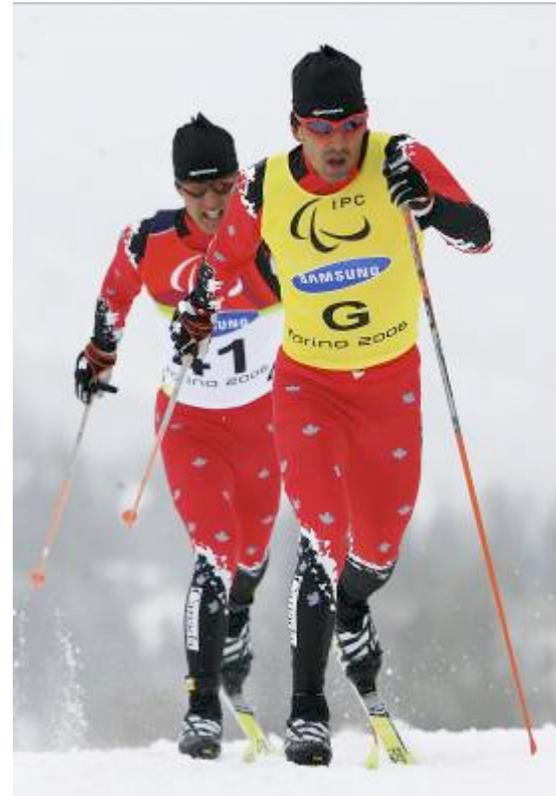
Vancouver 2010: Olympic Winter Games

- **17 days of events** from February 12 to 28, 2010
- **15 disciplines:**
Alpine Skiing ◦ Biathlon ◦ Bobsleigh ◦ Cross-Country Skiing
Curling ◦ Figure Skating ◦ Freestyle Skiing ◦ Ice Hockey
Luge ◦ Nordic Combined ◦ Short Track Speed Skating
Skeleton ◦ Ski Jumping ◦ Snowboard ◦ Speed Skating
- **9 competition venue sites:** Vancouver and Whistler
- **84 medal events**



Vancouver 2010: Paralympic Winter Games

- **10 days of events** from March 12 to 21, 2010
- **5 disciplines:**
 - Alpine Skiing, Biathlon
 - Cross-Country Skiing
 - Ice Sledge Hockey
 - Wheelchair Curling
- **4 competition venue sites:** snow events in Whistler, ice events in Vancouver
- **58 medal events**



Location

Vancouver, Whistler, British Columbia, Canada

2 'venue clusters' within a 110 km corridor between Vancouver & Whistler

Competition Venues

- Whistler
 - Alpine, Nordic, Sliding Sports, Paralympics
- Vancouver
 - Ice Sports, Snowboarding/Freestyle Paralympics

Athlete Villages

Vancouver and Whistler

Opening, Closing, Nightly Ceremonies
BC Place & Whistler Celebration Site



The Games Plan: Vancouver

Vancouver Sport Events:

Two Snow Sports:

- **Cypress Mountain** – Freestyle Skiing and Snowboard (12,000)

All Ice Sports:

- **General Motors Place** – Ice Hockey (18,630)
- **UBC Winter Sports Centre** – Ice Hockey, Ice Sledge Hockey (7,000)
- **Hastings Park / Pacific Coliseum** – Figure Skating and Short Track Speed Skating (15,586)
- **Hillcrest / Nat Bailey Stadium Park** – Curling, Wheelchair Curling (6,000)
- **Richmond Oval** – Speed Skating (8,000)



The Games Plan: Whistler

Most Snow Sports:

Whistler Creekside – Alpine Skiing (Olympic 7,600, Paralympic 6,000)

Nordic Venue, Callaghan Valley – Biathlon, Cross-Country Skiing - Olympic and Paralympic; Ski Jumping, Nordic Combined - Olympic (Olympic 12,000, Paralympic 6,000)

All Sliding Sports:

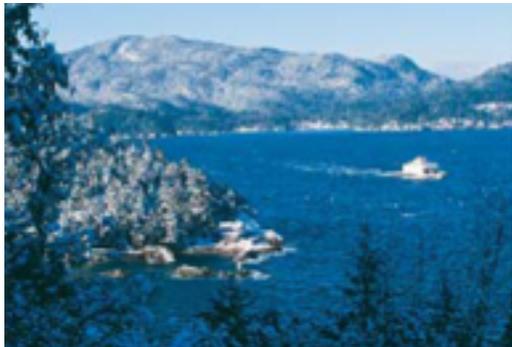
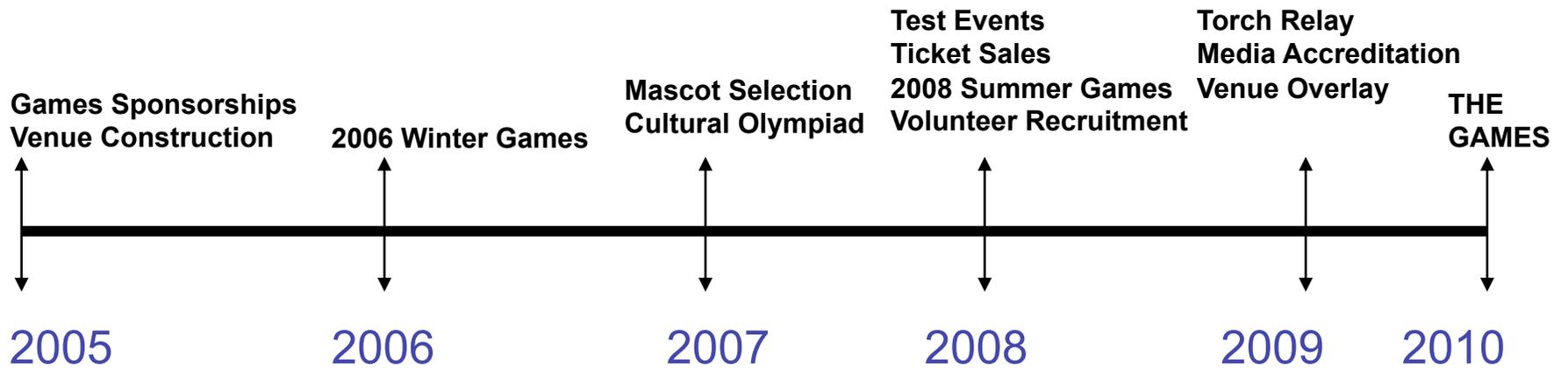
Whistler Sliding Centre on Blackcomb Mountain – Bobsleigh, Luge and Skeleton (12,000)



2010 By the Numbers

- Number of Olympic athletes and team officials 5,000
- Number of Paralympic athletes and team officials 1,300
- Participating countries (Olympic Games) 80+
- Participating countries (Paralympic Games) 40+
- Estimated available 2010 event tickets 1.6 million
- Estimated accredited media 10,000
- Estimated Games volunteers 25,000
- Estimated television viewers 3 billion

Games Timeline / Milestones



A photograph of a snowy mountain range with a semi-transparent white banner across the center containing the text "Sustainability and the Games". The mountains are covered in snow and have sharp peaks. The sky is a clear, pale blue. The banner is a horizontal strip that spans the width of the image, with the text centered within it. The overall image has a soft, slightly desaturated color palette.

Sustainability and the Games

The Olympic Games and Sustainability

A journey from ‘Two Pillars’:

Sport and Culture

... to ‘Three Pillars’:

Sport, Culture and Environment

- Lillehammer 1994, Sydney 2000, Salt Lake 2002, Torino 2006
- Beijing 2008: *‘Green Olympics, High Tech Olympics, People’s Olympics’*

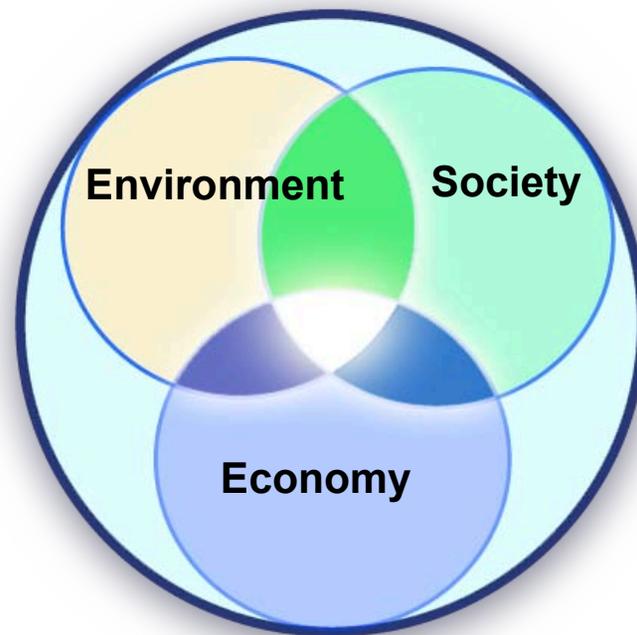
... to ‘Three Pillars – Plus’:

Sport, Culture and Sustainability

- Vancouver 2010 & London 2012

VANOC Working Definition of Sustainability

Managing the **social, economic and environmental** impacts and opportunities of our Games to produce lasting benefits, **locally and globally**



High-Level Organizational Integration

Vision: A stronger Canada whose spirit is raised by its passion for sport, culture and **sustainability**

Mission: To touch the soul of the nation and inspire the world by creating and delivering an **extraordinary Olympic and Paralympic experience** with **lasting legacies**

Values: Team, Trust, Excellence, **Sustainability**, Creativity

Board/Executive Commitment – Board Committee and Advisory Committee on Sustainability

Corporate Sustainability Policy – corporate goals, organization-wide application

Games Planning – 53 functions, sustainability integrated into business plans, operational plans

Sponsors, Suppliers – Buy Smart, Licensee code of conduct, sponsors sustainability initiative

Stakeholder Engagement – Environmental NGO dialogue, sustainability reporting

Sustainability Performance Goals

Bid commitments, corporate objectives, stakeholder engagement provide the foundation for 6 corporate sustainability goals:

1. Environmental Stewardship and Impact Reduction
2. Social Inclusion and Accessibility
3. Unprecedented Aboriginal Participation
4. Economic Value-Add and Competitiveness
5. Accountability - Performance Management & Reporting
6. Sport for Sustainable Living

Environmental Stewardship & Impact Reduction

Focus Areas

1. **Biodiversity & Habitat** – minimize footprint
2. **Energy & Climate Change** – aim for carbon neutral
3. **Water Quality & Conservation** – non-toxic, low-flow
4. **Air Quality** – minimize emissions
5. **Waste Management** – aim for zero waste

Strategic Approach

- Design For Less
- Operate Eco-Efficiently
- Invest in Offsets

An aerial photograph of a city waterfront at sunset. The scene features a marina with numerous sailboats and motorboats docked at a curved pier. In the background, a dense urban skyline is illuminated by the warm, golden light of the setting sun, with mountains visible in the distance. The text "Pursuing Carbon Neutral" is overlaid in a bold, blue font across the center of the image.

Pursuing Carbon Neutral

Carbon Management

Pursuing Carbon Neutral – Taking Responsibility

- Know – understand sources and quantity of GHG emissions
- Reduce – make every effort to reduce emissions
- Offset – acquire carbon offsets from reductions elsewhere to achieve zero net emissions

Where do the 2010 Winter Games emissions come from?

- Constructing venues – permanent and temporary
- Powering buildings and equipment – permanent and temporary
- Heating buildings, making snow, freezing ice
- Transporting people
- Moving materials
- Air travel
- Waste management
- Torch relay

Carbon Management

What are we doing to reduce emissions?

- Venue concept
 - compact venue/village concept, use existing venues where possible
- Venue design and construction
 - LEED green building principles – office and venues
- Sustainable energy
 - Clean energy from BC Hydro, green power certificates
 - Minimize stationary generators
- Sustainable Transportation
 - Focus on mass transit for moving people
 - No spectator/volunteer parking at venues; encourage bike, walk, ski
 - Right sizing vehicles, no idling, 33% lower emission vehicles from GM
- Materials management
 - BuySmart procurement, efficient warehousing and supply
- Zero waste goal for waste management

Carbon Management

Take Responsibility - Acquire offsets

- Show leadership in offsetting direct Games emissions
- Ensure quality offsets – verifiable, durable, additional

Engage others

- Raise awareness and inspire action on climate change
- Encourage Games participants to take responsibility for their footprint – particularly air travel



Zero Waste

Zero Waste

- Learning from Salt Lake and Torino Games and working with local governments
- Preliminary waste estimates for the Games: 4500 tonnes
 - Equivalent to 4 hours of GVRD waste
- Committed to pursue 'zero waste' through decision-making that prioritizes:
 - Source reduction
 - Reuse
 - Recycling - including composting
 - Waste-to-energy
 - Disposal at landfill
- Target minimum 85% diversion rate



Zero Waste

Key strategies

- Workforce - ensure staff understand the decision priorities and apply them when planning for and staging the Games
- Suppliers - work with suppliers to reduce waste in the supply chain
- Materials management – track every single item, identify in advance where items go at end of use
- Key projects - develop targeted reuse and recycling projects, e.g. temporary signs, cabling, lumber, sports equipment





The Venue Program

Venue Program

- \$580M program
- Compact concept - smart site selection
 - establish two 'clusters' – close to athletes' villages
 - use/renovate existing facilities or build new on disturbed sites
 - ensure access to public transit
- Green building principles
 - use LEED system to guide design work
 - minimize footprint, reduce long term operating costs
 - secure environmental assessment approvals
- Legacy value
 - plan and design for long term benefits – sport, community
 - involve community and stakeholders in planning and design
 - establish endowment fund for nordic, sliding, athletes' centres

Venue Partnerships

Type	Venue	Responsibility
New Venue Construction	Hillcrest Arena – curling, wheelchair curling Richmond Oval – speed skating UBC Sport Centre – hockey, sledge hockey Athletes' Villages (2) Sliding Centre – bobsleigh, luge, skeleton	City of Vancouver City of Richmond UBC City of Vancouver, RMOW VANOC
Upgrade of Existing Venues	Pacific Coliseum – figure skating, short track speed skating GM Place – hockey BC Place – Olympic opening, closing, medals ceremonies, Paralympic opening	City of Vancouver Orca Bay Corporation BC Pavilion Corporation
New and/or Upgrade Outdoor and Temporary <small>(minimum permanent structures)</small>	Whistler Creekside – Olympic and Paralympic alpine skiing Cypress – snowboard, freestyle Whistler Celebration site - medals Whistler Media Village Nordic Centre – cross country, biathlon, ski jump, Paralympic cross country, biathlon	Whistler Mountain VANOC VANOC VANOC VANOC

Venue Program – Current Status

- Overall, program is on track, on budget
- Sliding Centre, Nordic Centre, Whistler Creekside, Cypress venues were completed in fall 2007
- All other venue projects underway – competition venues will be complete by fall 2008, villages in mid 2009
- First sport event in February 2008 at Whistler Creekside
- VANOC headquarter renovation – LEED Gold CI certification

Other projects:

- Expanded Convention Centre on track, expected to be LEED Gold
- Sea to Sky Highway upgrade on track
- Skytrain ALRT extension to airport on track
- All 3 projects will be complete in 2009



LEED in Action



Whistler Sliding Centre



- Minimum site size, tree retention for habitat and visual values
- Energy conservation from mechanical shading, tree retention/shading
- Heat recovery from refrigeration system for building heating

Whistler Nordic Centre

- Previous timber, mineral and commercial recreation activities
- Minimum site footprint, riparian protection, tree retention



- Woody debris reuse
- On-site treatment, storm water management
- First Nations business and employment opportunity

Whistler Athletes' Village

- Being designed and constructed as a Canadian GBC pilot project for LEED ND standard for neighbourhood development
- Legacy use as affordable housing for residents
- Adjacent to former municipal landfill
- District energy system with methane gas capture and waste heat from treatment plant
- Athletes' centre for long term athlete training and development



Vancouver Athletes' Village



Vancouver Athletes' Village



- Spectacular downtown waterfront site
- First development in model 'sustainable community'
- Remediated 'brownfield' site

- Target LEED gold and platinum
- District energy system, heat recapture
- Green roofs, water conservation
- Affordable housing component



Richmond Oval



- Use of disturbed lands, legacy as new centre of the community
- Rainwater capture and use, storm water management system
- Waste heat capture and reuse, including surrounding residential uses
- Local wood products, including 'beetle wood' panels in roof structure

Hillcrest Complex

- New complex replace/consolidate old community facilities, regain green space
- Target LEED gold, waste heat energy used for space heating and warming aquatic centre, water conservation



- 1 Entry Plaza
- 2 Entry Court
- 3 Children's Play Area
- 4 Outdoor Pool
- 5 Storm Water Feature
- 6 Perimeter Trail
- 7 Seat Walls
- 8 Planting to Screen Parking
- 9 Parking with Decorative Paving
- 10 Parking with Reinforced Grass Stalls
- 11 Asphalt Surface
- 12 Future Temporary Parking
- 13 Baseball Diamond - 90'
- 14 Baseball Diamond - 90'
- 15 Little League Diamond - 60'
- 16 Baseball Diamond - 90'
- 17 Summer Soccer - 66' x 100'
- 18 Winter Soccer - 66' x 100'
- 19 Winter Soccer - 66' x 90'
- 20 Future Bus Stop

vancouver 2010^{TM/MC}

XXI OLYMPIC WINTER GAMES | X PARALYMPIC WINTER GAMES
XXI^{es} JEUX OLYMPIQUES D'HIVER | X^{es} JEUX PARALYMPIQUES D'HIVER

**Learn more at
vancouver2010.com**