VI Classification Research

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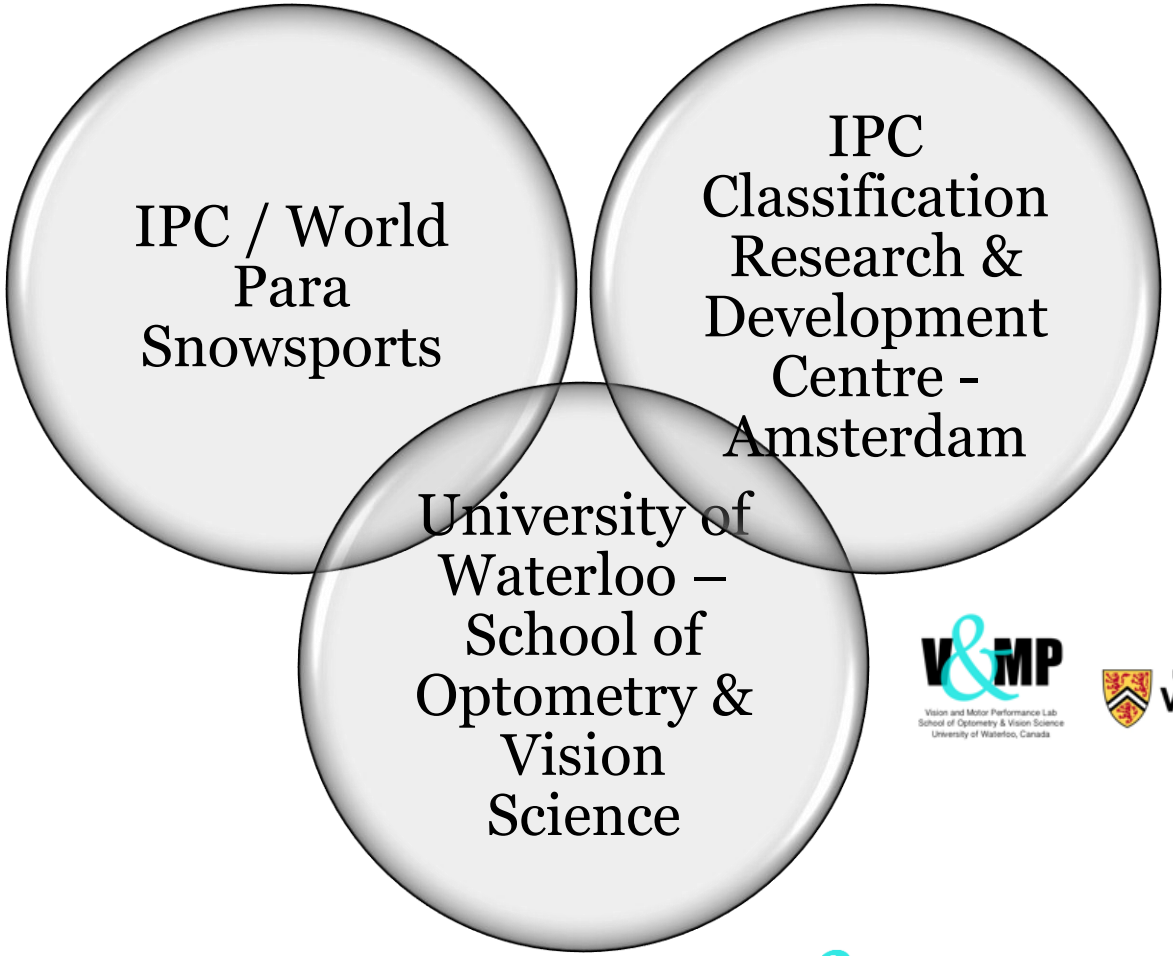
Research partnership



Classification Research Partner

Research questions

1. What visual functions should be measured?
2. What tests should be used in classification?
3. What are the minimum eligibility criteria?
4. What are the sport classes?
5. Are blindfolds needed?
6. What happens if we introduce new sport classes?

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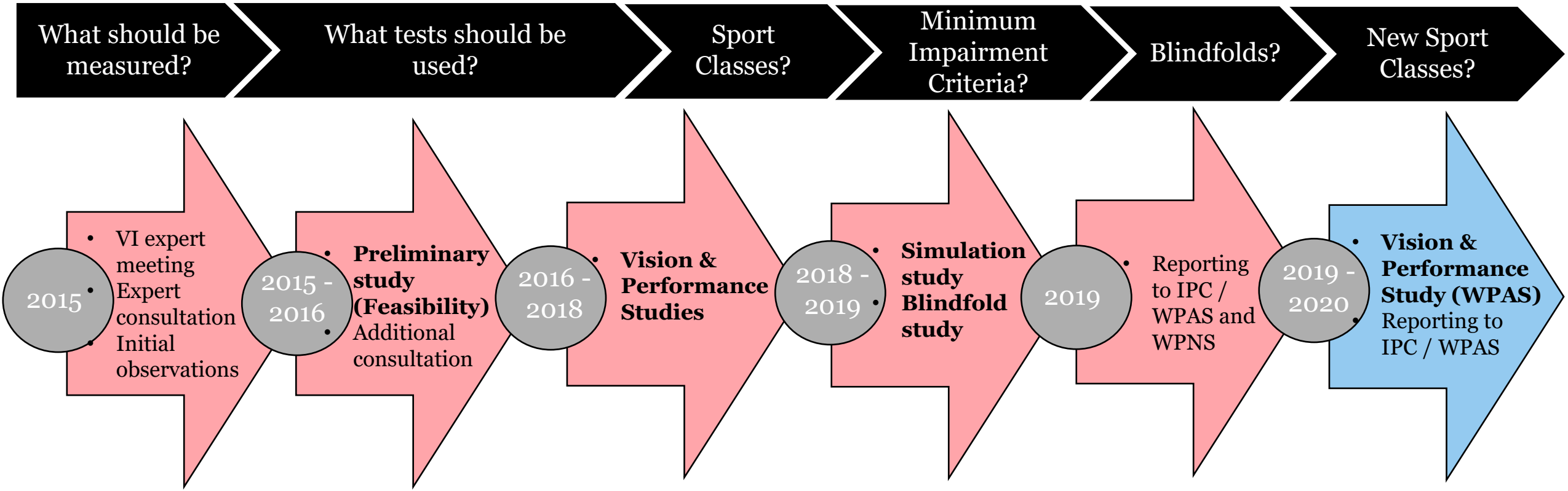
Research process



What tests should be used for classification?

- We examined many different vision tests based on consultation with sport experts (World Para Snow Sport, coaches, and sport technical staff)
  - Static visual acuity, dynamic visual acuity, contrast sensitivity, colour vision, light sensitivity, glare sensitivity, motion perception, and visual field

- In both Para Alpine and Para Nordic:
  - **Static visual acuity** and **visual field** were the best predictors of skiing performance

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What are the minimum eligibility criteria?

- Simulated visual acuity + contrast sensitivity and visual field loss impairments in skilled athletes with normal vision
  - Athletes skied short courses with and without the simulated impairments
    - Athletes skied without guides and all runs were timed
  - Determined what level of impairment significantly reduced performance
- Para Alpine:
  - Visual Acuity ≥ 0.60 logMAR (approx. 20/80)
  - Visual Field ≤ 70 degrees diameter
- Para Nordic:
  - Visual Acuity ≥ 0.90 logMAR (approx. 20/160)
  - Visual Field ≤ 60 degrees diameter

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What are the sport classes?

- Elite skiers with vision impairment recruited at World Championship and World Cup events in 2017-2018 and 2018-2019 seasons
  - Athletes had a detailed vision assessment at the event
  - Raw-WPNS / Raw-WPAS points were used to measure performance as per sport rules
    - Raw = recalculated WPNS / WPAS points with the **classification factor was removed**
  - Hierarchical cluster and decision tree statistical analyses
    - Statistical analysis suggested 2 classes in Para Nordic and 3 classes in Para Alpine
    - Expert feedback on research resulted in decision to move to 3 classes in Para Nordic and 4 classes in Para Alpine

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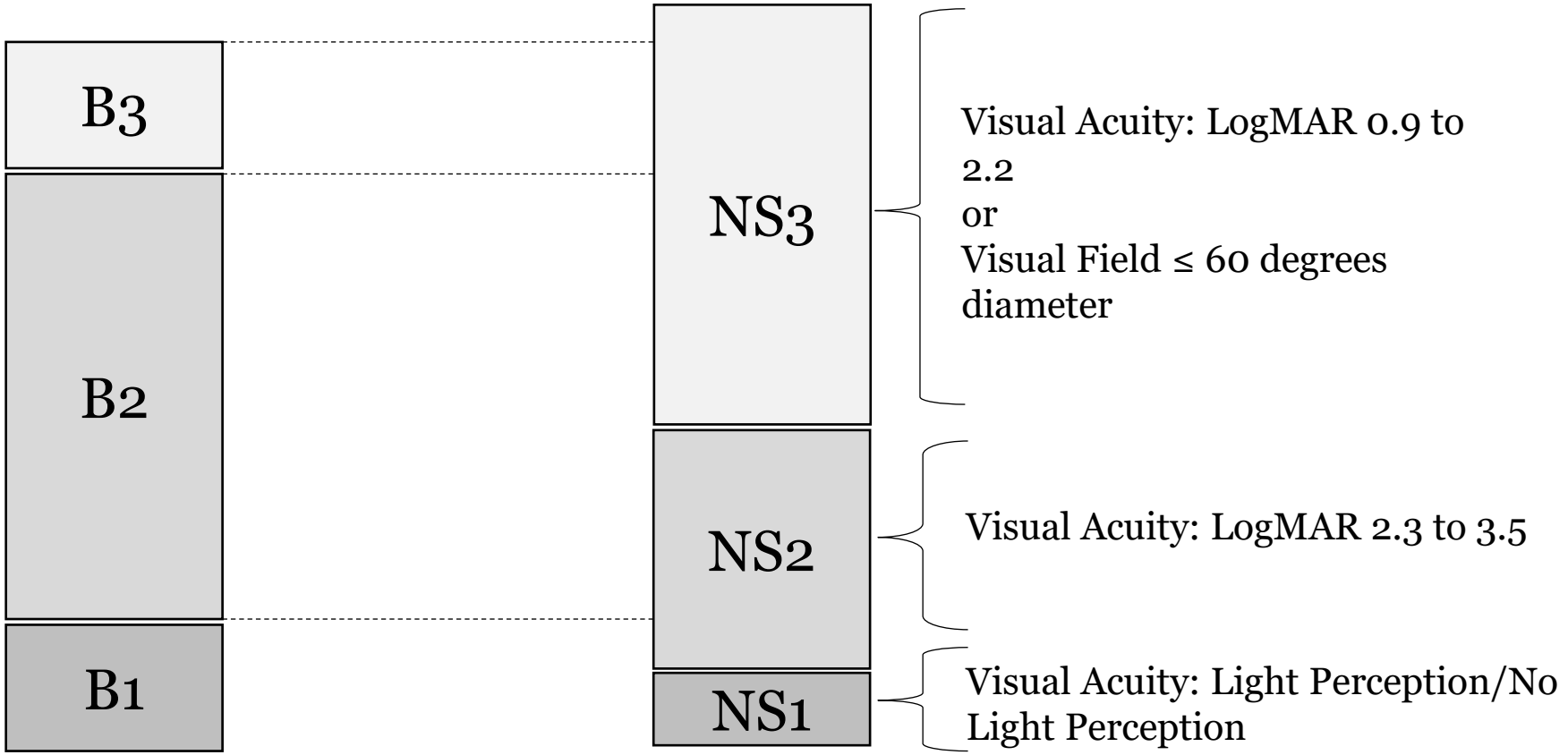
Proposed changes for Para Nordic

Visual Acuity: LogMAR 1.0 to 1.4
or
Visual Field <20 degrees radius

Visual Acuity: LogMAR 1.5-2.6
or
Visual Field <5 degrees radius

Visual Acuity: LogMAR >2.6 -> Light Perception/No Light Perception



Notes: 1) Measurements done with both eyes open

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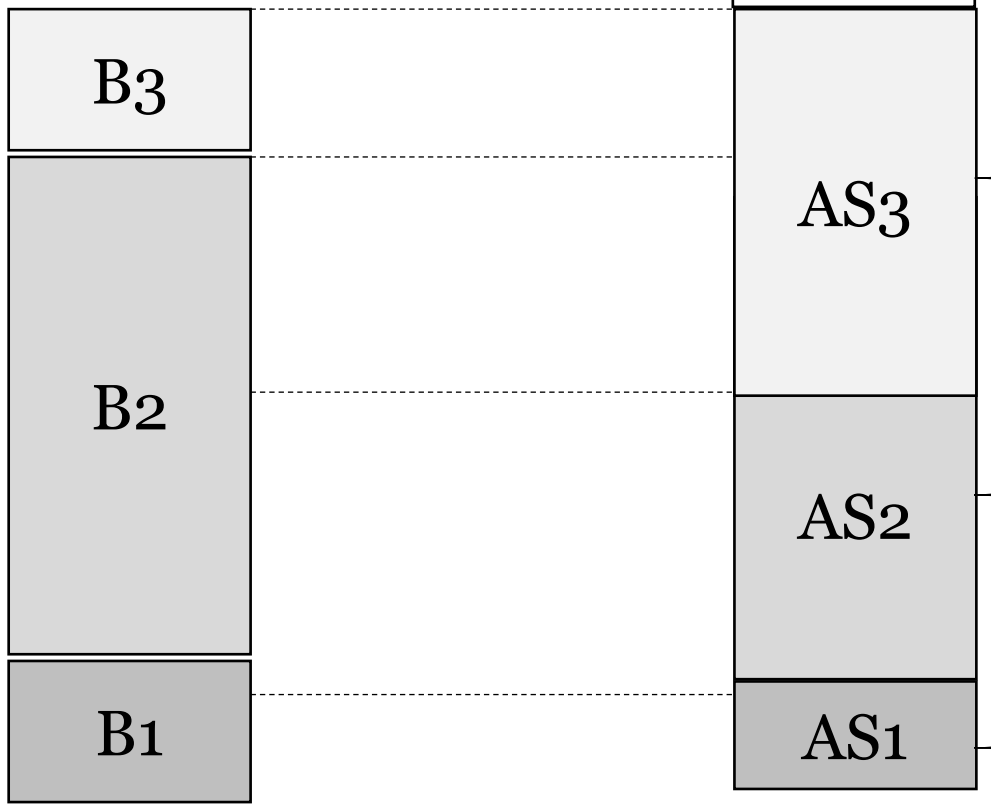
Proposed changes for Para Alpine



Visual Acuity: LogMAR 1.0-1.4
or
Visual Field <20 degrees radius

Visual Acuity: LogMAR 1.5-2.6
or
Visual Field <5 degrees radius

Visual Acuity: LogMAR >2.6, Light Perception/No Light Perception

Visual Acuity: LogMAR 0.6 – 0.9
or
Visual Field ≤ 70 degrees diameter

Visual Acuity: LogMAR 1.0 – 1.7

Visual Acuity: LogMAR 1.8 – 3.5

Visual Acuity: Light Perception/No Light Perception

Notes: 1) Measurements done with both eyes open

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What about blindfolds?

- Skiers currently classified as B1 were asked to ski a short racecourse with and without blindfolds
  - Race times were not significantly different between the with and without blindfold conditions
  - Skiers had different perspectives on blindfolds
    - 1 skier preferred a blindfold, 1 skier preferred no blindfold, and 3 skiers had no preference
- Blindfolds were recommended to be optional for AS1 and NS1, however based on community feedback **blindfolds will still be required in these classes**
  - Note: only skiers with light perception or no light perception vision are included in the AS1 and NS1 classes

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Thank You!

- All the athletes, coaches, guides, and team members who participated in our studies or helped us run them
- All the athletes, coaches, guides, team members, and members of the sport community who provided feedback on our research
- Dimitrije Lazarovski, Elke Gundermann, Antonio Chiracu, Sandra Titulaer, Dia Pernot, Laura Getzmann, and Timotej Dudas
- IPC, Agitos Foundation, VU Amsterdam VI Classification Research Partner
- Amritha Stalin, Marieke Creese

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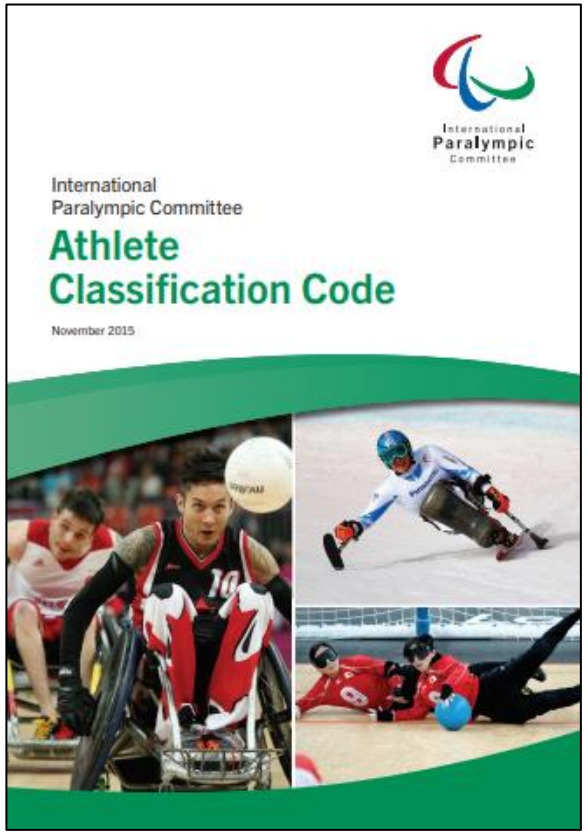
Implementation of New System



11.2 International Sport Federations must notify the IPC before Classification System changes and any other change(s) that might impact on Sport Class allocation with the rationale for change, the proposed timelines for implementation, transition rules, as applicable, and an overview of the process of consultation that is initiated as part of the system review process. The IPC must be provided an opportunity to submit feedback and comments.

Implementation Plan - Shadow System

- B1 – B3 Sport Classes remain in place for the 2023/24 Competition Season
- Athletes begin to be classified under the new criteria (Alpine Skiing AS1-4 , Nordic Skiing NS1-3) throughout the 2023/24 season in preparation for the 2024/25 season
- Start of 2024/25 season, at the start of the Milano Cortina qualification period, new classification system is fully implemented
- Shadow approach also allows time to gather data to calculate new factors

2023/24 Season

Entry Sport Class Status	N, R or R2023(-)	R2024+ or C** (incl. NE C*)
Sport Class Allocation	B1 – B3 ***and*** AS1-4 / NS1-3	AS1-4 / NS1-3 ***only***
Sport Class in Competition	B1-B3 *Athletes not meeting MIC of current classification system, but who meet the new MIC, may compete in a separate category in 23/24 to support the calculation of factors **Athletes with a R2024+ or C Sport Class Status are encouraged to undergo classification in the 23/24 for their AS1-4/NS1-3 Sport Class, to 1. avoid being allocated AS4/NS3 at the beginning of the 24/25 season (see next slide), and 2. to support the accurate calculation of factors	

2024/25 Season

	Classified in 2023/24		Not classified in 2023/24	
Entry Sport Class / Status	AS1-4 / NS1-3 R2025+ or C	AS1-4 / NS1-3 R or R2024	B1-3 R, R+, C	New
Classification Requirement in 2024/25	Next classification determined by Sport Class Status. B1-3 Sport Class and Status archived. AS1-4 or NS1-3 + Status applied to Classification Master list.	Classification at first opportunity in 24/25. B1-3 Sport Class and Status archived. AS1-4 or NS1-3 + Status applied to Classification Master list.	B1-3 Sport Class and Status archived. Allocated lowest Sport Class (AS4 or NS3) in FPDMS and must be classified against the new Sport Class criteria at first opportunity in 24/25.	Entered in FPDMS as AS4 or NS3. Classified at first opportunity

Next steps for implementation

FIS

- Finalise transition rules
- Submit rules and final reports to the FIS council by 11 May for approval
- Deliver VI Classifier training together with the IPC
- Identify classification opportunities
- Prepare further information for athletes/NSAs (e.g. FAQs)

NSAs

- Prepare athletes for classification
- Complete and submit new Medical Diagnostic Forms (MDF) together supporting diagnostic information for all athletes (New MDF will be shared in due course)