

Paracanoe classification



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- Previous paracanoe secretary for ICF at international competitions
- Member of the ICF Paracanoe classification committee
- PhD candidate "Classification and performance in paracanoe athletes"
- MSc in Sport Sciences (GIH), BSc in Applied Sport and Exercise Science (Northumbria University)

Anna Bjerkefors

- Physiotherapist
- Associate professor at GIH
- Paracanoe as a rehabilitation method since '92
- Principal investigator for paracanoe classification research
- Member of the ICF Paracanoe classification committee

What is classification?

- Taxonomy: the science of classification.
- Classification: Divide a group of entities into smaller groups based on common factors



Carl von Linné
The father of taxonomy

Classification within sports



Selective classification



Performance-based
classification

Purpose of Paralympic classification

Minimising the impact of eligible impairment on the outcome of competition (Tweedy & Vanlandewijck 2011)



Eligible Impairment Types

Short stature
Leg length difference



Visual impairment
Intellectual impairment

Impaired muscle power
Impaired passive range of motion
Limb deficiency

Ataxia
Athetosis
Hypertonia

Paralympic classification systems

- Medical based classification system
- Functional sport specific classification system
- Evidence-based sport specific classification system



Evidence-based classification

- Sport-specific classification based on multidisciplinary research
- Relationship between impairment and key performance factors



Paracanoe

Para va'a



Para kayak



1. Define the eligible impairment types for the sport



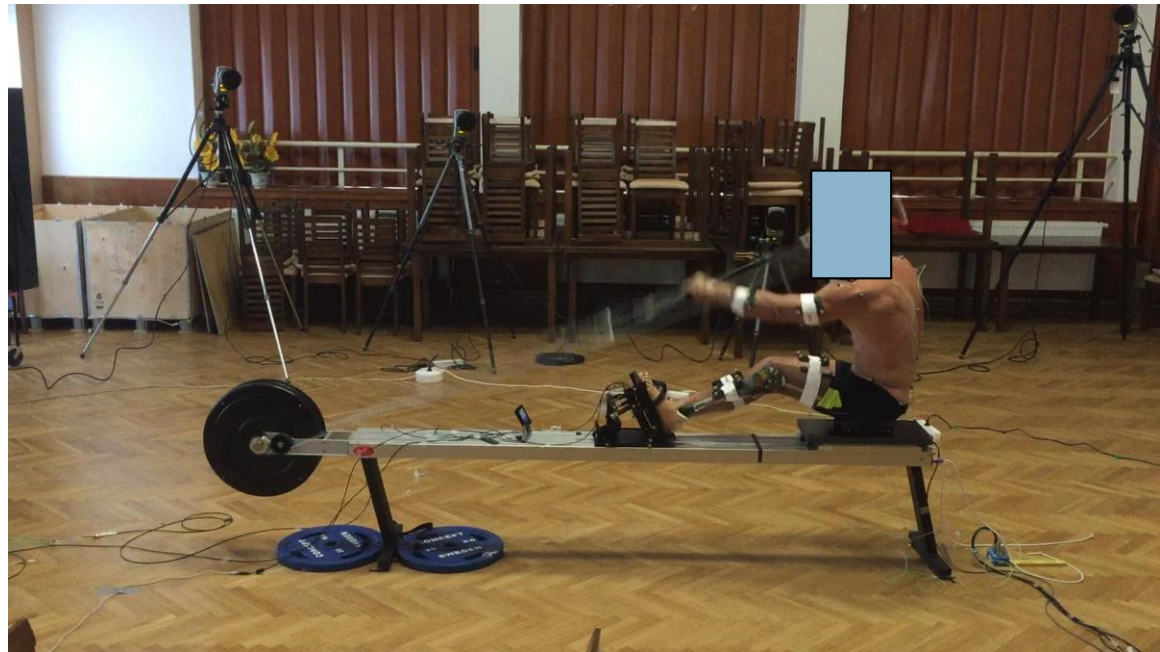
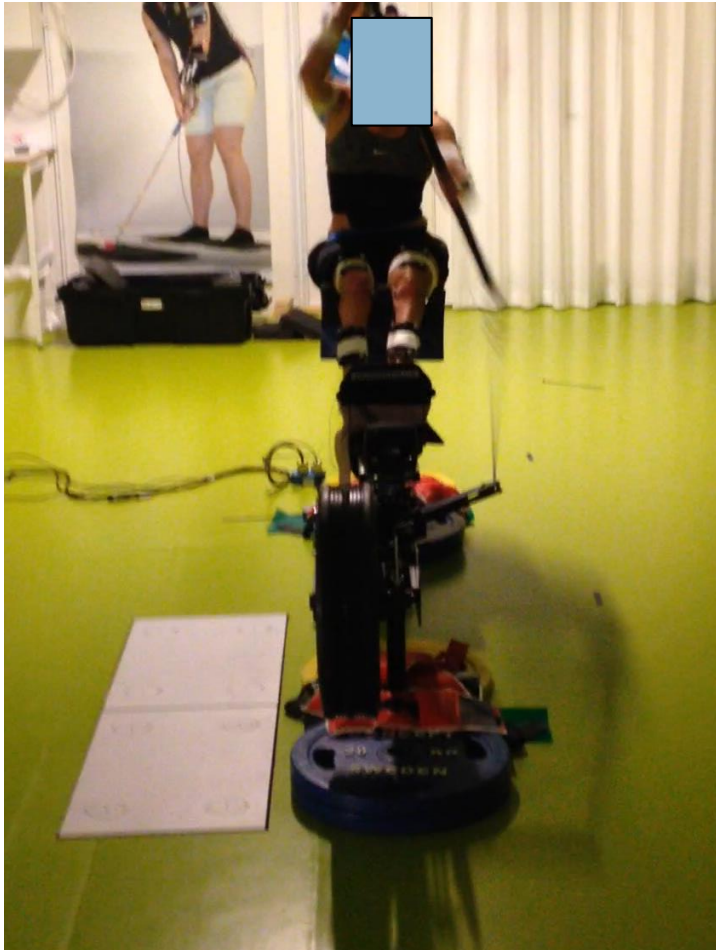
Impaired muscle power

Impaired passive range of motion

Limb deficiency

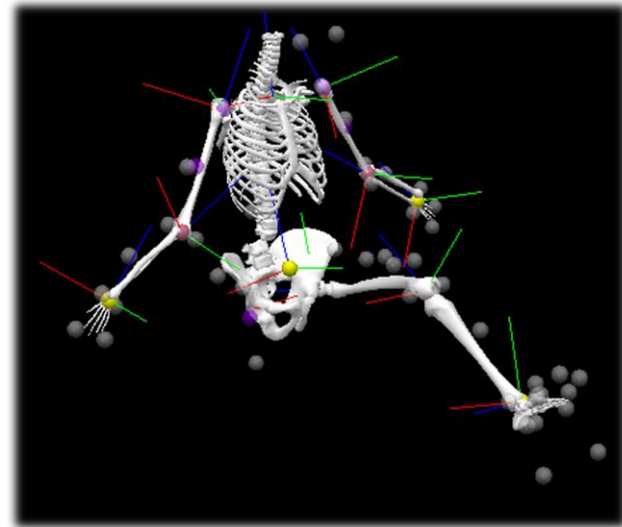
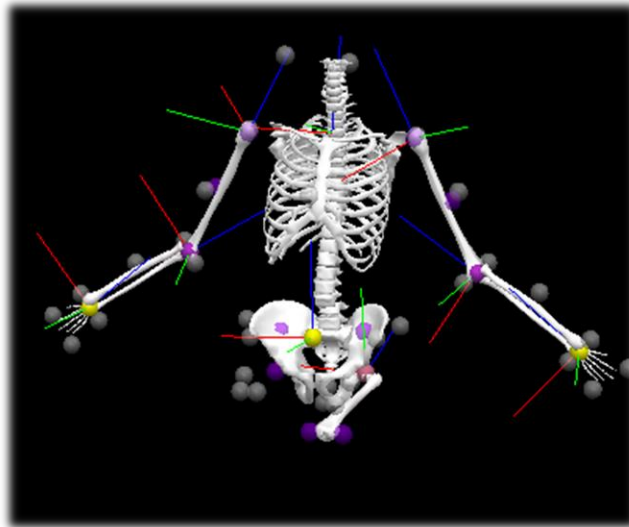
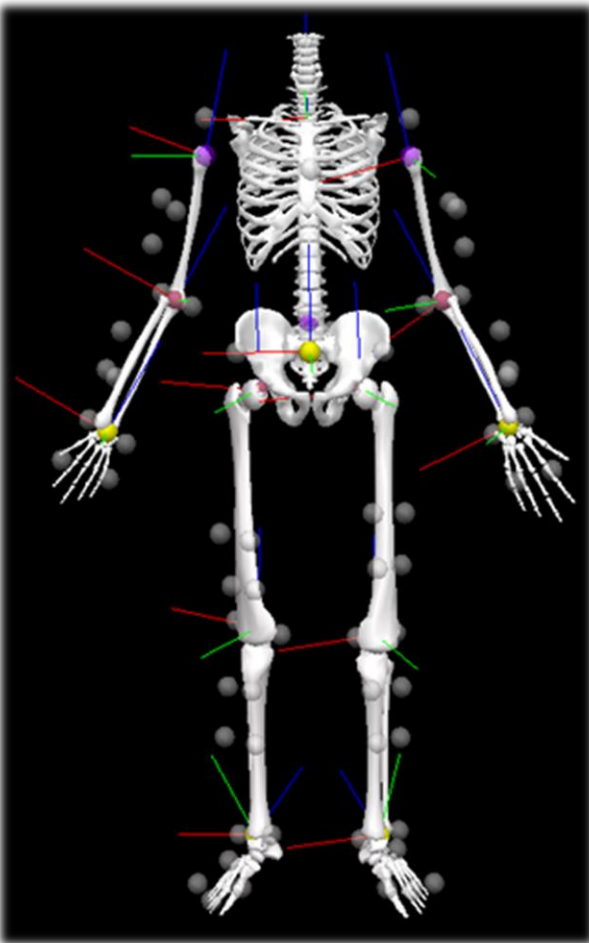
(affecting trunk and/or legs)

2. Identify key performance factors



- 12-camera 3D optoelectronic system
- 39-64 reflective markers

3D kinematics



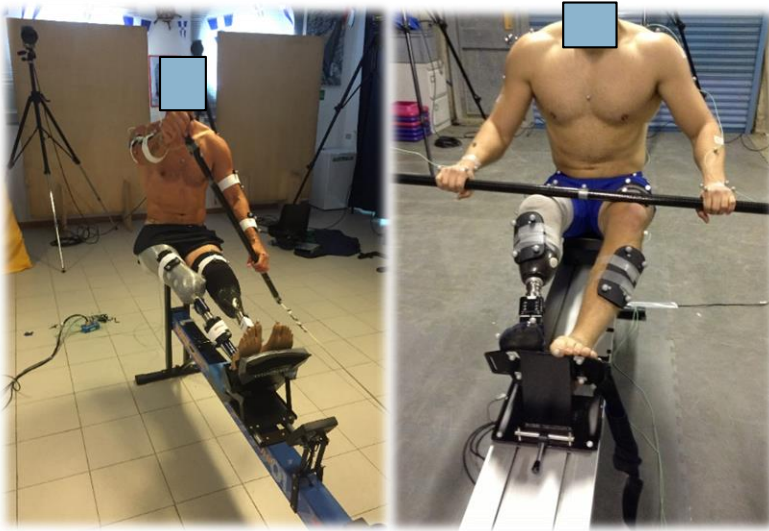
Whole-body model consisting of 8-14 segments



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Key performance factors



↑ Trunk rotation
Trunk forward flexion
Leg movement

=

↑ Performance

3: Create valid tests for measuring function

Trunk test (42 tests)

Manual muscle tests



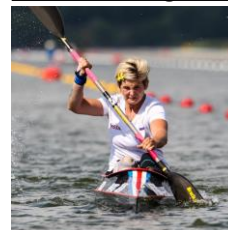
Leg test (14 tests)

Manual muscle tests



Sport-specific test

Trunk and leg function (kayak 6 tests)



Sitting balance and dynamic tests



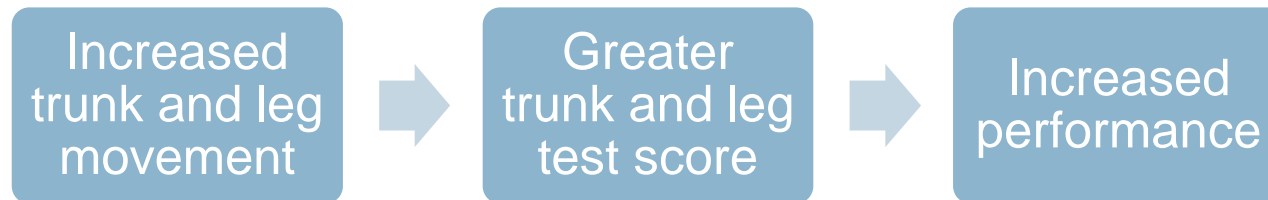
Leg press tests



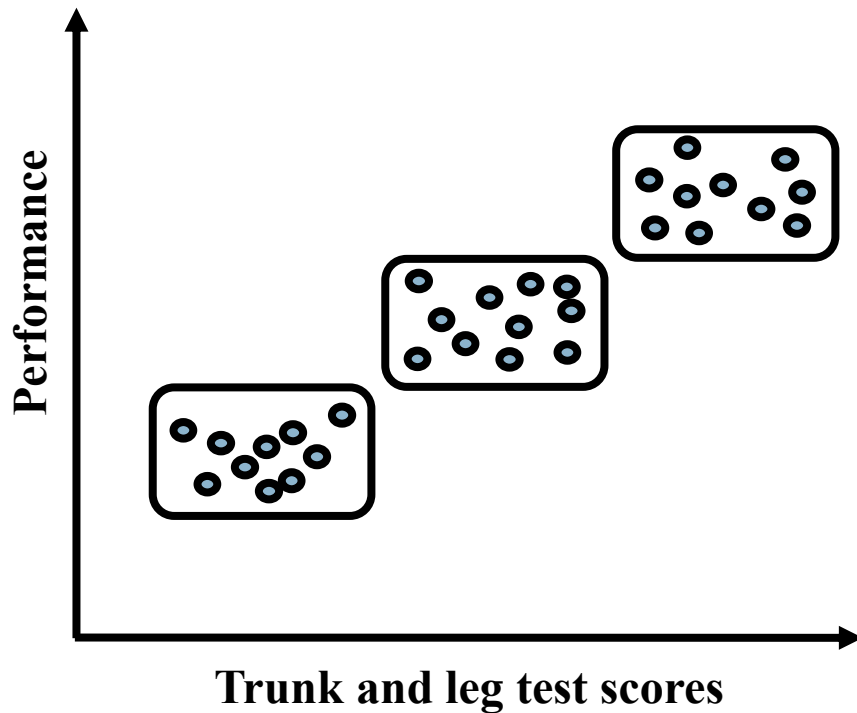
Trunk and leg function (Va'a 3 tests)



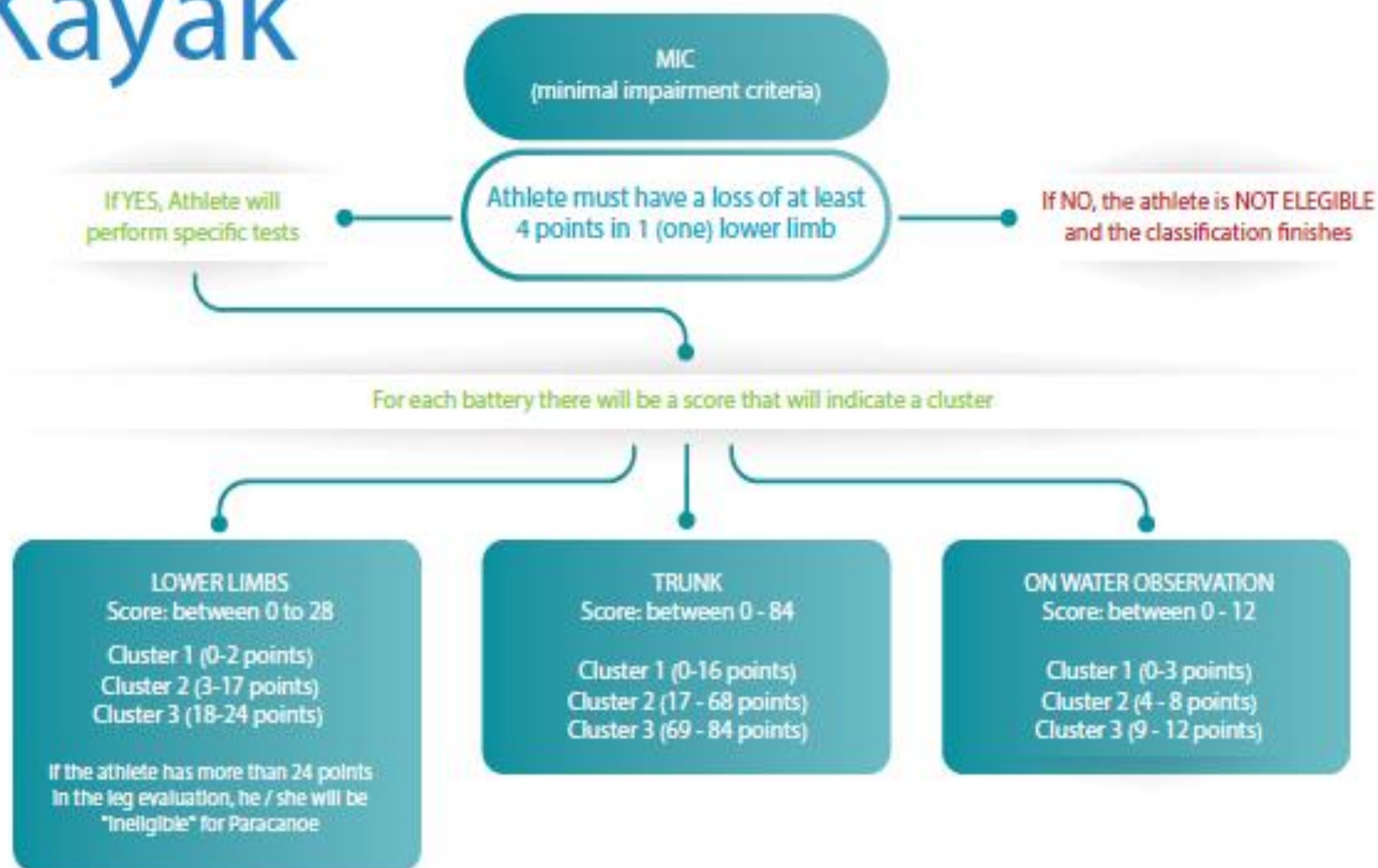
4. Examine the relationship between impairment and performance



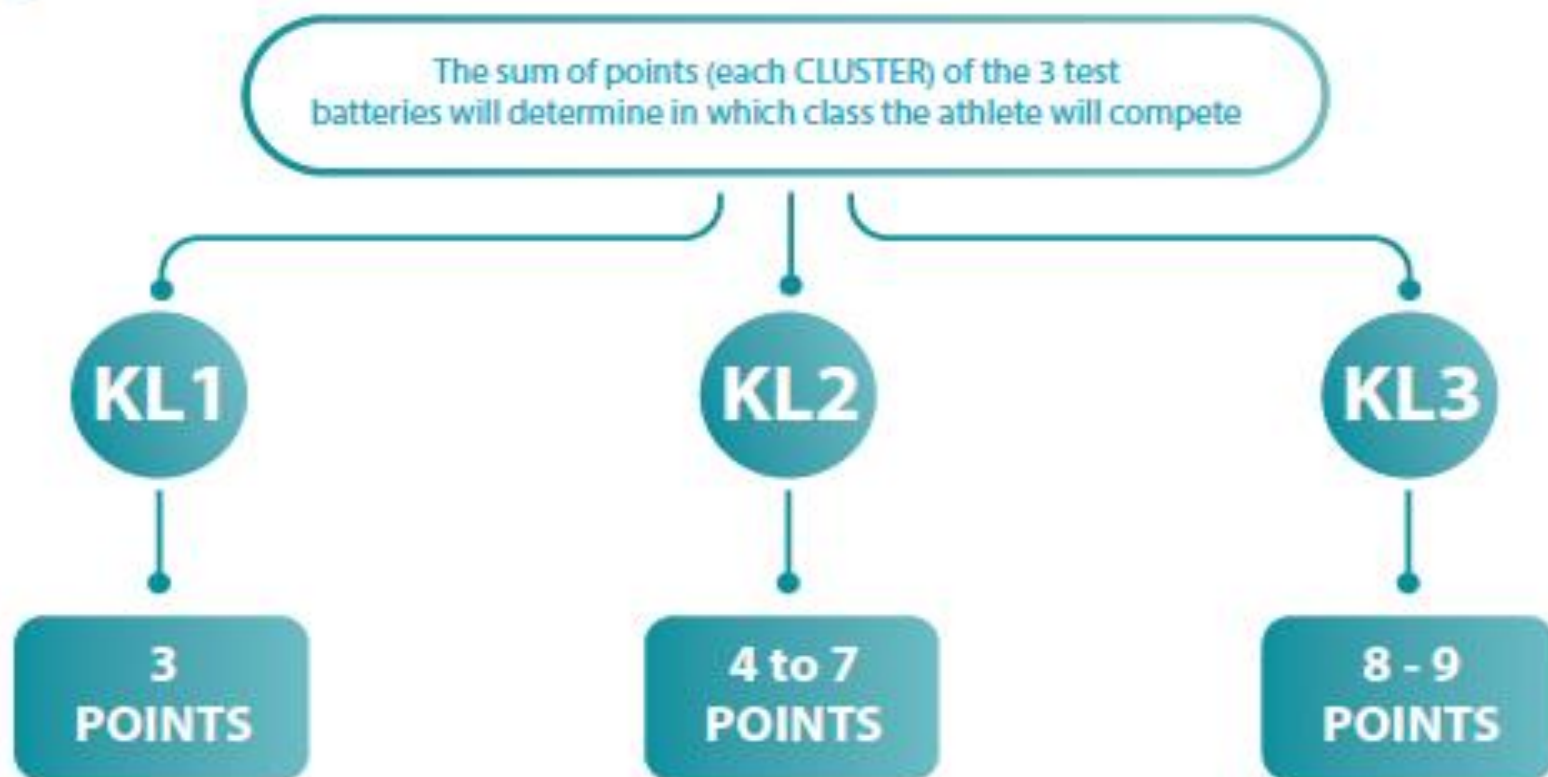
5: Decide number of classes and class profile



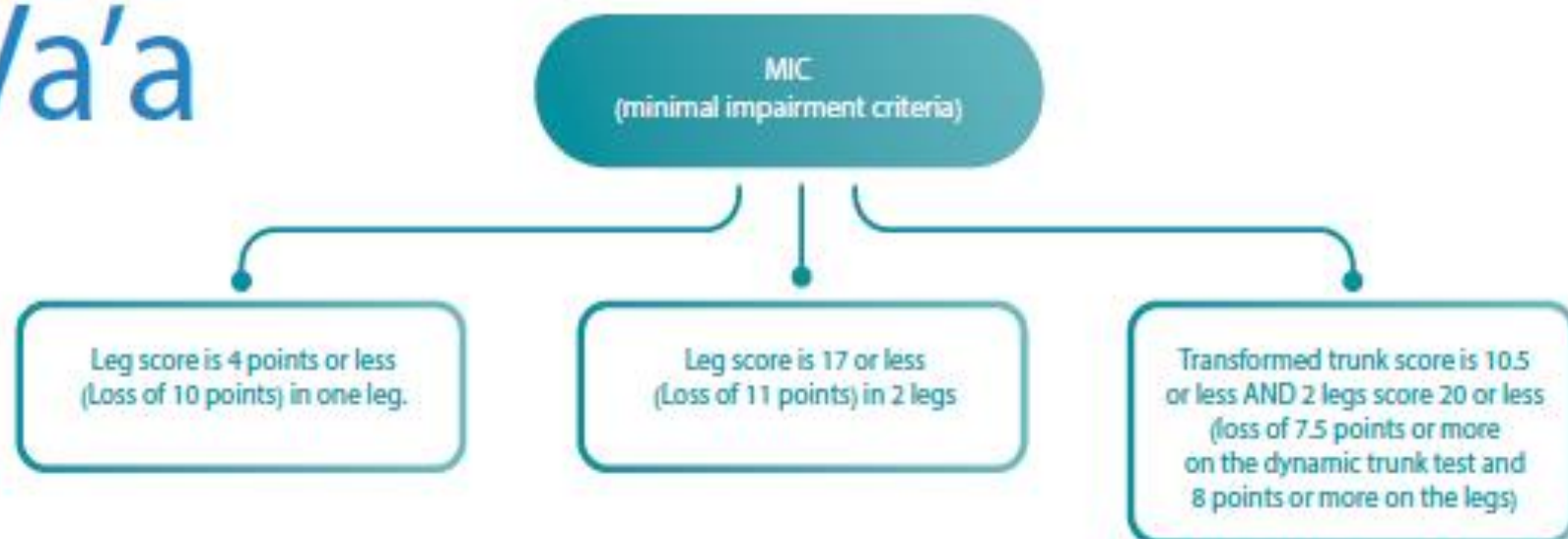
Kayak



Kayak



Va'a

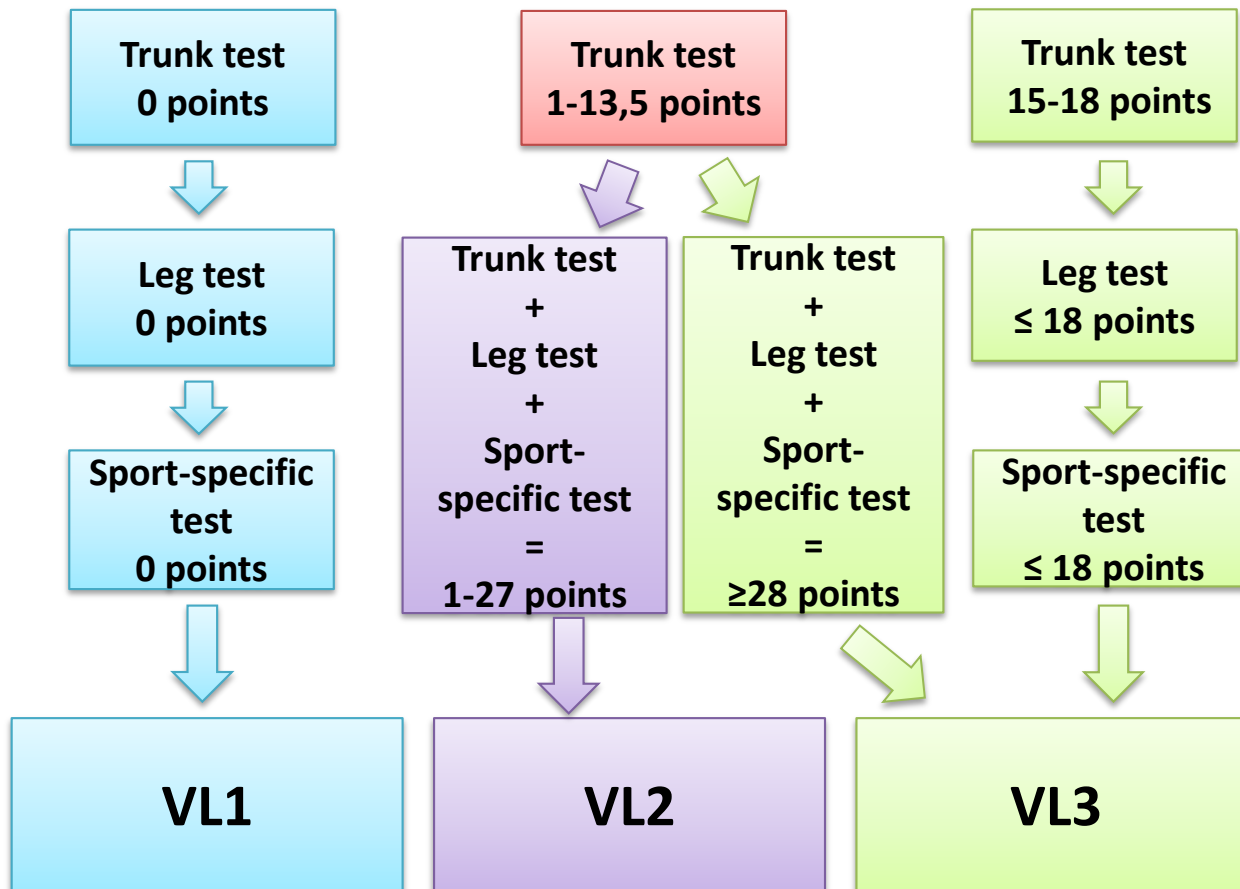


if YES, please, indicate
one of the options below

if NO, the athlete is not eligible
and the classification finishes

After confirmation of the scores from the 3 Battery Tests:
trunk, legs and on water observation, calculate as indicated below to allocate the athlete in one class

Para Va'a classification system



Classification

Before classification

- Eligible impairment?
- Doctor's certificate on impairment and diagnosis
- Medication

During classification

- Tests - Voluntary - Cooperation
- Minimal eligibility

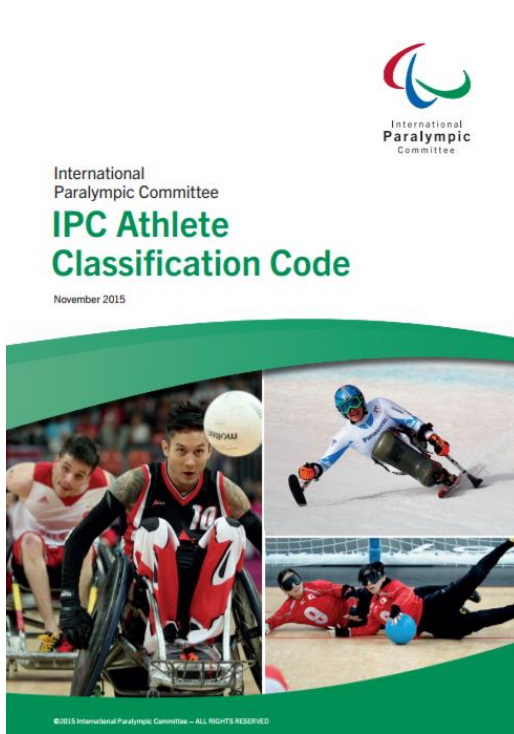
After classification

- Status
- Class



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IPC classification code and ICF classification rules



ICF Classification Rules for Paracanoe



Classification Rules for Paracanoe

According to Model Rules consistent with the 2015 IPC Athlete Classification Code and accompanying International Standards - January 2017

<https://www.canoeicf.com/disciplines/paracanoe>

ICF Paracanoe classification sub-committee

Fatima Fernandes (BRA)

Julie Gray (GBR)

Diego Doga (ITA)

Jean-Christophe Gonneaud (FRA)

John Edwards (CAN)

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THANK YOU
for your attention
Questions?



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