

**PADDLE AUSTRALIA
SPRINT CANOE / KAYAK**

PERFORMANCE PROGNOSTIC CHART (October, 2020)

This explanatory document outlines the introduction and implementation of the Performance Prognostic Chart (PPC) for the Paris 2024 quadrennial cycle. It outlines the method by which the PPC has been established, the reason for its development and the application of it by Paddle Australia (PA) in relation to establishing Prognostic Performance Standards (PPS). The PPC and the application of PPS are to be used as informative guidelines due to the variable nature of Sprint Canoe / Kayak competition.

Background:

1. The level of competition in sprint canoe / kayak across the globe is improving in both quality and depth. Australia's isolation from the large European sprint canoeing nations mean as a country we have less access to quality International competition.
2. For Australia to remain a strong nation in sprint canoe / kayak, we must have a clear understanding of the standard of International competition and regularly monitor and assess our performances against those standards.
3. In 2017, PA introduced International Performance Standards (IPS) for the purpose of:
 - (a) educating athletes, coaches, parents, support staff and stakeholders on the current standards of International competition.
 - (b) providing Selectors with International Standards to assist in their decision making in assessing whether an Athlete or Crew's performance is of sufficient level to benefit from being exposed to International Competitions.
4. The general feedback has been that the establishment of IPS has been a good initiative and that it has been effective in achieving these two principle objectives. Nevertheless, after 3 years of implementation, there is recognition that there are some weaknesses and potentially a better method to establish relevant performance standards. Two main weaknesses have been identified:
 - (a) The objective nature of the calculations (which is viewed as positive) means that the IPS fluctuated (sometimes quite significantly) from one year to another (including getting easier). This is less than ideal as we'd prefer a more consistent standard and one that only gets faster from year to year, reflecting the nature of HP sport.
 - (b) Due to numerous factors, and especially related to the depth of competition as well as the method used to calculate IPS (being the time to qualify for the A-final, from the semi-final performance), there are some anomalies across different classes, with the IPS of some classes being extremely difficult, whereas other classes are relatively easier. This makes it difficult to compare across classes and makes decisions around prioritisation of boat classes challenging.

Development of the Performance Prognostic Chart:

5. Beginning in the second half of 2020, a new system utilising a performance prognostic chart will be introduced and utilised to determine relevant performance standards across different boat classes and age categories.

6. The PPC has been developed based on the average of the top 5 ICF's World's Best Times (WBTs). The basis for developing the PPC is as follows:
 - (a) the average of the top 5 WBTs in each of the Olympic boat classes (plus WK1 200, MK1 200, MK1 500, MK2 1000), as determined by the ICF, has been used to calculate the 100% Prognostic Speed. The reason for using the average top 5 times is to minimise the impact of an extreme outlier within the WBTs.
 - (b) A percentage of prognostic speed is calculated by dividing the athlete/crew's average speed by the relevant average speed of the WBT for the relevant class of boat and multiply it by 100. For example:

WK1 500: WBT Time = 1:47.05 (Avg. Speed = 4.6707m/s); Athlete Result = 1:50.00 (Avg. Speed = 4.5454m/s)

Percentage of Prognostic Speed = $(4.5454/4.6707)*100 = 97.32\%$
7. The implementation of the PPC, along with the associated Prognostic Performance Standards (PPS), will have the following benefits:
 - (a) reduces the potential for large variability in performance standards from year to year (it is unlikely to be much variability in WBTs from one year to another and further reduced by averaging over the top 5 times).
 - (b) PPS times can only improve (they can't become easier)
 - (c) there is relative consistency across classes (against World's Best Times), potentially allowing informed decisions on prioritisation of boats to be made.
 - (d) A clear performance progression in the PPS can be visible and communicated between different age categories (e.g. it has been identified that approx. a 2% improvement is required between juniors and U21 and another 2% improvement is required for U23 selection. This avoids significant jumps between age groups that the current IPS system allows.
 - (e) The opportunity to do time trial type events (across all age categories) and rank athletes (from junior to senior) against each other.
8. Importantly, it is understood that the 100% WBTs are times achieved in extremely favourable conditions (including tail winds, potential water flow etc.). These times are simply there as an anchor point for each class of boat to then determine percentages from those times. The calculation of PPS will then be a percentage of those WBTs (as outlined below).
9. Unfortunately, at present, the ICF have not calculated WBTs for paracanoe classes and hence the old International Performance Standard methodology will be utilised until such times as the ICF publishes those times. Paddle Australia are in the process of determining the WBTs for Paracanoe, meaning this approach is likely to be used for Paracanoe in the future.
10. The ICF have indicated that they may be revising the method for World's Best Times. If that is the case, PA will review the current method and decide whether to maintain the current method or adopt the new ICF method.

Establishment of Prognostic Performance Standards (PPS) in relation to the PPC:

11. One of the benefits of the PPC allows us to rank and compare athletes across any boat class or age category as required.
12. Ultimately, within PA's Performance Pathway, we seek to identify and develop athletes who are capable of future success at the Senior Elite level. Hence the Prognostic Performance Standards that have been identified across all of the different age categories for the Paris cycle

are designed to provide an indication of the minimum standards required to be considered 'on track' to achieve success at Senior Elite level.

13. Following extensive analysis and consultation, the following performance prognostic standards have been identified for each age category to guide the selection of teams in 2021:
 - (a) Senior: 95%
 - (b) U23: 93%
 - (c) U21: 91%
 - (d) Junior: 89%
14. Separate performance prognostic standards may be determined for different selection purposes (e.g. athlete categorisation)
15. When implementing the PPS, it is reasonable to assume the times need to be achieved in neutral environmental conditions. The assessment of neutral conditions and the final decision of whether any athlete has demonstrated the ability to achieve PPS is in the absolute discretion of the relevant Selection Panel, based on the influence of external conditions that may either positively or negatively influence the ability of an athlete to achieve the PPS. Such conditions may include, but not be limited to, wind speed/direction, water temperature, wave size and currents.
16. Hence, when applying the PPS in either training or competition, a realistic judgement is required to assess the relative effect of the environmental conditions. For instance, if an Athlete/Crew narrowly misses the PPS but conditions were unfavourable, it is reasonable to assume this was a satisfactory performance. Similarly, if an Athlete/Crew narrowly achieves the PPS and conditions were very favourable, it may not be considered a satisfactory performance. The PPS are not a definitive selection criterion, but will be used by Selectors as a guide.
17. Given the variability in environmental conditions, the PPS should be used as a guide only. Nevertheless, the PPS serves a valuable and important tool for assessing an Athlete/Crews performance level against their International competitors.