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How to develop a plan to incorporate data & expert opinion in Olympic athletes' selection processes?

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Note: No ChatGTP was used in any part of this research, nor in the making of this document.

2 Abstract

"The biggest failing anyone could do is think they know all the answers to this topic, which is actually not the case". Interviewee: NOC2.

The general issue of this research is the selection of athletes for the Olympic Games, by national federations and NOCs. There were two impetuses for this study. Firstly, the Dutch judo federation decided to make the internal selection procedure for Paris 2024 completely **data-driven**, to avoid lawsuits. However, one could argue if this policy exactly aligns with the goals of the Dutch NOC: to select athletes with a reasonable chance to finish top-8 in Paris. Is this possible without taking into account **expert opinion** at the moment of selection? Secondly, increased number of integrity reports where athletes complained about selection criteria not being transparent.

The research question that drove this project is: *How to develop a plan to incorporate data & expert opinion in Olympic athletes' selection processes?* The purpose of this project is to provide guidance to coaches, athletes, national federations and NOCs in this delicate decision-making process.

When it comes to athlete selection, there is much literature in the field of *talent* selection. However, there is a gap in research on *elite* athlete selection. Therefore, to place this research in a scientific context, a clinical decision framework that utilized quadruple decision making was translated to a sport context. This leads to the introduction of **four themes** that could be used in decision making:

1. Data from competitions / ranking lists.
2. Data from performance tests.
3. Expert opinion.
4. Athlete preferences.

Data was collected from 7 NOCs and 12 National Federations (from three countries) using four methods: benchmarking, review of policy documents, surveys, and post-survey interviews.

The results are consistent with the literature about clinical decision making. All four themes are considered, both by NOCs and NFs. Performance tests are considered, but at a lower rate than the other themes. All collected data and results are translated into four practical checklists, using the cycle of Plan – Do – Check – Act (PDCA).

Plan means that one should start thinking about the goals of selecting athletes. For example: nominating / selecting athletes with the highest probability to finish top-8 at the Games. Another goal could be a fair and transparent process that build trust to athletes.

The **Do**-checklist contains practical tips, e.g., optimising the use of expert opinion by using the IDEA protocol. Moreover, guidance is given to what kind of expert opinion and data one could consider and how these could be combined.

The next step, **Check**, also contains practical recommendations how one could check if the pre-defined goals from the Plan-phase were met. Finally, one should **Act** accordingly, by either standardizing proven practices or identifying points of improvement and start the PDCA-cycle again.

Other recommendations, beyond implementing the PDCA-checklists, include creating an athlete survey to ask if - in their opinion - the selection process is fair, transparent and unbiased. Moreover, more knowledge could be shared between Universities and NOCs/NFs, for example with the University of Groningen where "*selection procedures in sports are reviewed through the lens of selection psychology"* (Den Hartigh et al., 2018, p. 1191).

3 Résumé

"Le plus gros échec que quelqu'un puisse faire est de penser qu'il connaît toutes les réponses à ce sujet, ce qui n'est en fait pas le cas". Personne interrogée: CNO2.

L'enjeu général de cette recherche est la sélection des athlètes pour les Jeux Olympiques, par les fédérations nationales et les comités nationaux olympiques. Il y avait deux impulsions pour cette étude. Premièrement, la fédération néerlandaise de judo a décidé de rendre la procédure de sélection interne pour Paris 2024 entièrement **basée sur les données**, afin d'éviter les poursuites. Cependant, on pourrait se demander si cette politique s'aligne exactement sur les objectifs du CNO néerlandais : sélectionner des athlètes ayant une chance raisonnable de terminer parmi les 8 premiers à Paris. Est-ce possible sans tenir compte de **l'avis des experts** au moment de la sélection ? Deuxièmement, l'augmentation du nombre de rapports d'intégrité dans lesquels les athlètes se sont plaints du fait que les critères de sélection n'étaient pas transparents.

La question de recherche qui a guidé ce projet est: *Comment élaborer un plan pour intégrer les données et l'opinion d'experts dans les processus de sélection des athlètes olympiques?* L'objectif de ce projet est de guider les entraîneurs, les athlètes, les fédérations nationales et les CNO dans ce délicat processus de prise de décision.
En ce qui concerne la sélection des athlètes, il existe une abondante littérature dans le domaine de la sélection des *talents*. Cependant, il existe une lacune dans la recherche sur la sélection des athlètes *d'élite*. Par conséquent, pour placer cette recherche dans un contexte scientifique, un cadre de décision clinique qui utilisait la prise de décision quadruple a été traduit dans un contexte sportif. Cela a conduit à l'introduction **de quatre thèmes** qui pourraient être utilisés dans la prise de décision:

1. Données des compétitions / listes de classement.
2. Données des tests de performance.
3. Avis d'expert.
4. Préférences des athlètes.

Les données ont été recueillies auprès de 7 CNO et de 12 fédérations nationales (de trois pays) à l'aide de quatre méthodes: analyse comparative, examen des documents politiques, enquêtes et entretiens post-enquête. Les résultats sont cohérents avec la littérature sur la prise de décision clinique. Les quatre thèmes sont pris en compte, tant par les CNO que par les FN. Des tests de performance ont été envisagés, mais à un rythme inférieur aux autres thèmes. Toutes les données et résultats collectés ont été traduites en quatre listes de contrôle pratiques, en utilisant le cycle Planifier – Faire – Vérifier – Agir (PFVA).

Planifier signifie qu'il faut commencer à réfléchir aux objectifs de sélection des athlètes. Par exemple: nominer/sélectionner les athlètes ayant la plus grande probabilité de finir parmi les 8 premiers aux Jeux. Un autre objectif pourrait être un processus équitable et transparent qui renforce la confiance des athlètes.
La liste de contrôle (**Faire**) contient des conseils pratiques. Par exemple, optimiser l'utilisation de l'avis d'expert en utilisant le protocole IDEA. De plus, des conseils sont donnés sur le type d'avis d'experts et de données à prendre en compte et sur la manière dont ceux-ci peuvent être combinés. L'étape suivante, **Vérifier**, contient également des recommandations pratiques sur la manière de vérifier si les objectifs prédéfinis de la phase de planification ont été atteints. Enfin, il convient **d'Agir** en conséquence, soit en normalisant les pratiques éprouvées, soit en identifiant les points d'amélioration et en recommençant le cycle PFVA.

D'autres recommandations, au-delà de la mise en œuvre des listes de contrôle PFVA, incluent la création d'un sondage auprès des athlètes pour leur demander si, à leur avis, le processus de sélection est juste, transparent et impartial. De plus, davantage de connaissances pourraient être partagées entre les universités et les CNO/FN, par exemple avec l'Université de Groningue où *"les procédures de sélection dans le sport sont examinées à travers le prisme de la psychologie de la sélection"* (Den Hartigh et al., 2018, p. 1191).

4 Introduction

"...subject area experts won't die out. But their supremacy will die out. From now on, they must share the podium with the big-data geeks, …"

(Mayer-Schönberger, & Cukier, quoted in Whitmee, 2017, p. 19).

4.1 Rationale for the study

The general focus of this research is on the selection of athletes for the Olympic Games, by national federations and NOCs. For example, if a Dutch athlete wants to qualify for the Olympic Games, he/she needs to meet the qualification standards of the:

1. International Federation (IF).
2. Dutch NOC.
   These are also sport specific standards, to maintain the top10 ambition of TeamNL.
3. National Federation (NF).
   Internal selection procedures apply if more athletes qualify than are invited to the Games (e.g. 2 judokas in the same weight class).

The selection process for athletes for national teams is becoming increasingly contentious. NOCs and national federations need to consider incorporating the growing amount of data in decisions.

There were two impetuses to start this study. Firstly, the Dutch judo federation decided to make the internal selection procedure for Paris 2024 completely **data-driven**, to avoid lawsuits. However, one could argue if this policy exactly aligns with the goals of the Dutch NOC: to select athletes with a reasonable chance to finish top-8 in Paris. Is this possible without taking into account **expert opinion** at the moment of selection? Secondly, the increased number of integrity reports where athletes complained about selection criteria not being transparent.

4.2 Research question

The research question that drove this project is:

How to develop a plan to incorporate data & expert opinion in Olympic athletes' selection processes?

Clear procedures for athlete selection -at the level of NFs and NOCs- become more and more important because they contribute to athlete welfare, transparency, and accountability. These are all elements of good governance of the IOC.

The purpose of this project is to provide guidance to coaches, athletes, national federations, and NOCs in this delicate decision-making process.

4.2.1 Who would benefit from this study and why?

There are various stakeholders that could benefit from the results of this study including the following:

- Athletes.
  - Athletes ask for fairness and transparency, in a timely manner: selection criteria should be clear, before the qualification period starts. So, it contributes to athlete welfare.
- National Federations and NOCs.
  - Less issues related to selections.
  - Credibility and continuity through well-developed practises.
- (Head) coaches.
  - It helps to optimise the game plan towards the Games (qualification pathway).

The following chapter will review the existing research evidence related to this topic.

5 Review of existing evidence

5.1 Key trends

When it comes to athlete selection, there is much literature in the field of *talent* selection (e.g., Collins et al., 2019; Johnston et al., 2018; Till & Baker, 2020). However, there is a gap in research on *elite* athlete selection. McEwen et al. (2017, p.3) state that "selection processes for high performance sporting events have been under-researched". This is confirmed in a recent scoping review by Fiander et al. (2021, p.2) who found that "For example, in several recently published sports coaching textbooks (e.g., Cope & Partington, 2020; Thelwell & Dicks, 2019) team selection is offered only a passing mention".

5.2 Brief outline of the structure of this review

Therefore, the review will start from a broader perspective and then narrow down to one specific sport.

The following topics are covered:

- Decision-making in general, with examples from HRM and public health.
- Olympic athlete selection.
- Sport specific selection: judo.

5.3 Decision-making in general

There are many frameworks to look at, e.g., HR selection procedures (Bradbury & Forsyth, 2012). They translate the HRM selection process to sport (p. 9) as shown in Figure 1:

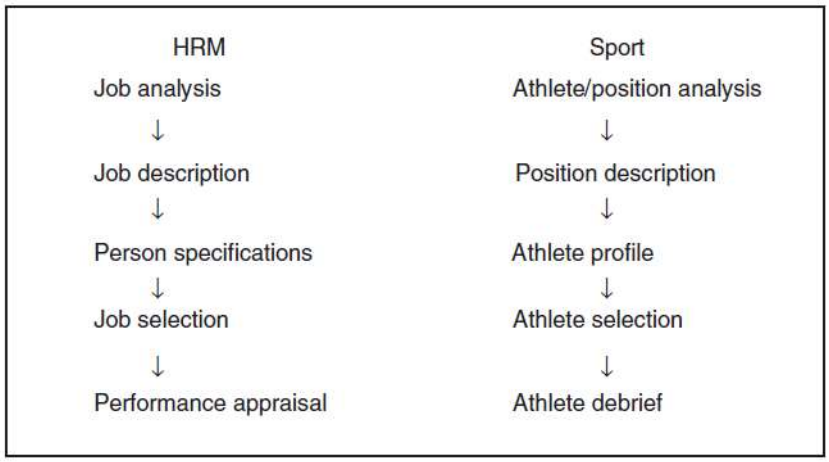


Figure 1. HRM selection process translated to a sport context. Reprint from Bradbury and Forsyth (2012).

It would be interesting to discover to what extent this translation can be made, as the difference between athlete selection and personnel selection is that – generally speaking – athletes are well known to their selectors where new personnel usually is not. Schelling and Samuel (2020, p. 1) propose "… a decision support system [DSS] development framework for specific use in high-

performance sport." Amongst many other aspects, they show the different steps from *data* to *insights* to *decisions* (p. 8), which is very useful in any data-informed decision-making process. See Figure 2:

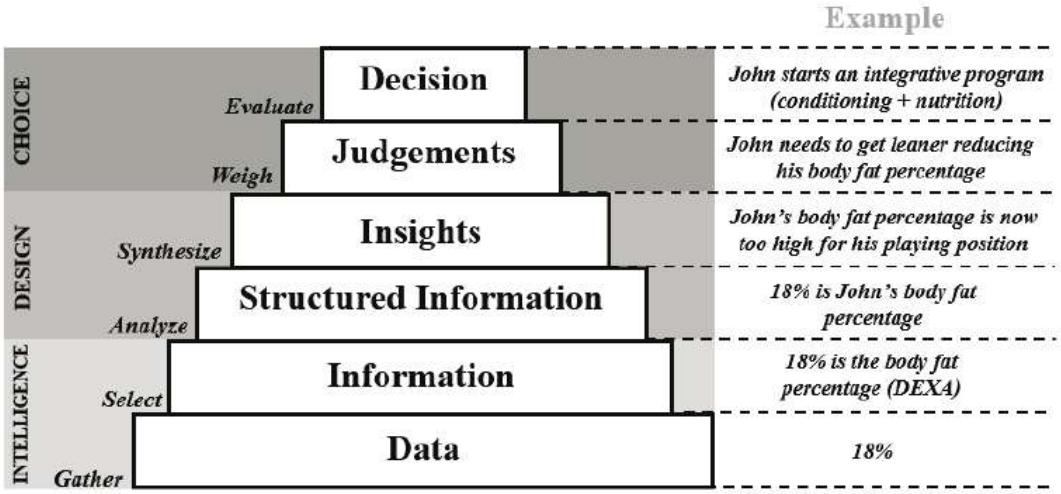


Figure 5: Knowledge as a progression of states. Based on van Louhizen (1986) and adapted from Holsapple (2008).

Figure 2. Reprint from Schelling and Samuel (2020).

Their conclusions are shared in the next paragraph, after the introduction of two important aspects related to decision-making.

5.3.1 Bias and bounded rationality

As many other researchers in this field, Schelling and Samuel (2020) highlight the existence of *confirmation bias* (p. 9): "The decision-maker's mental model will be limited by cognitive biases, such as the human tendency to search for, interpret, favour, and recall information in a way that confirms one's pre-existing beliefs or hypotheses, also known as confirmation bias (Plous, 1993)."Moreover, they acknowledge the existence of *bounded rationality*. Bate et al. (2012, p. 614) describe this as follows: "When making a decision, there is so much potentially relevant information available, it is impossible to know or process it all...".

With respect to *expert bias*, Schelling and Samuel (2020, p. 9) emphasize that: "…developers need to design a DSS that can provide an understanding of the discrepancy between the DSS recommendation and the expert's opinion (identification of expert bias)." In the end they conclude that (p. 16) "… [in sports environments] it is unlikely that decision makers can consistently outperform a DSS (Hoch & Schkade, 1996)." This is an interesting insight, if you strive to develop a decision-making process which combines expert opinion with data.

5.4 Decision Making in Public Health

Within the public health domain, (big) data is used to construct personalised treatments. Kolasa et al. (2020, p. 150) talk about a transformation in this field: "In conclusion, the growing amount of data will surely transform healthcare systems. There are already multiple examples available that highlight how descriptive, predictive, and prescriptive data analytics can contribute toward further development of personalized medicine...".

Knight et al. (2016, p. 17) also espouse the view of data-informed decision-making: "… a framework for improved collaboration between public health decision-makers and mathematical modellers that could lead to more transparent and evidence-driven policy decisions for infectious diseases in the future is proposed."
Figure 3 displays this data-informed decision-making. Note that this is an ongoing pathway (and no concentric circles):

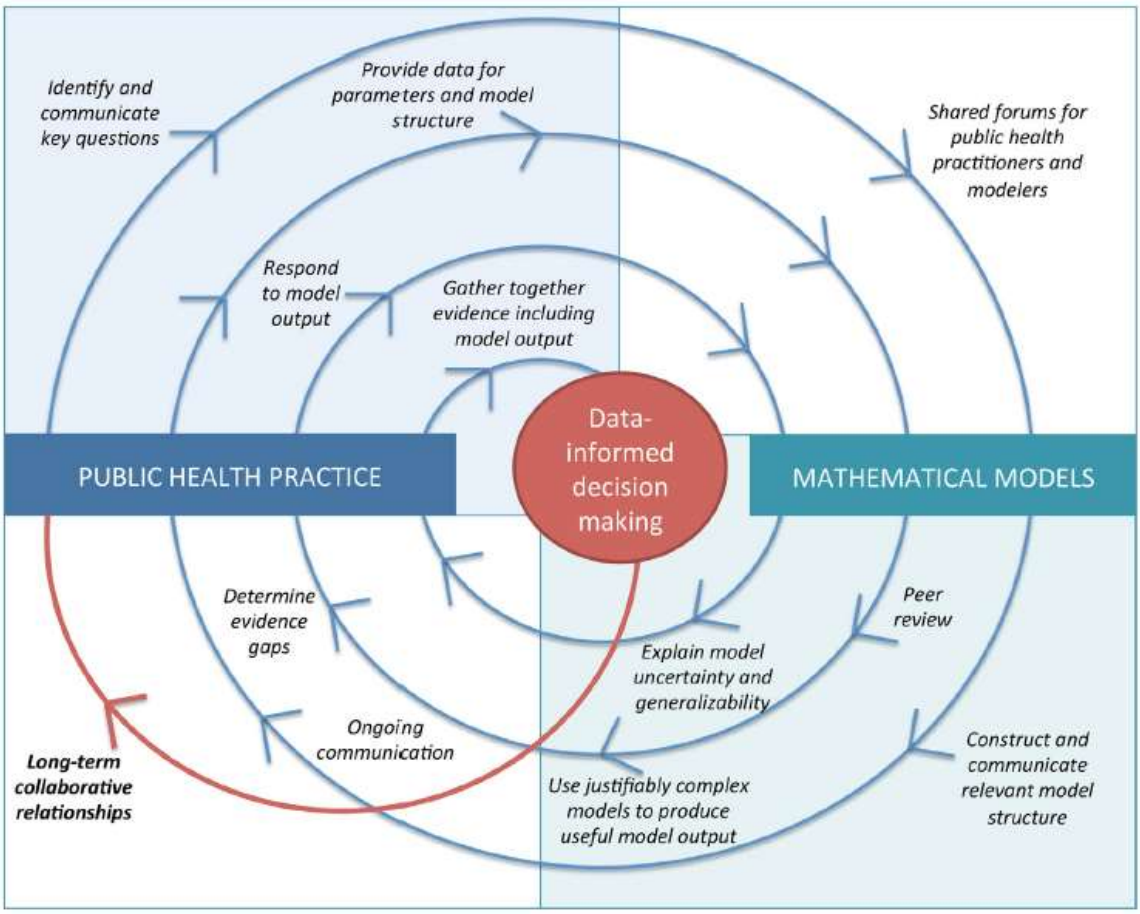


Figure 3. Data-informed decision making. Reprint from Knight et al. (2016).

Van den Heuvel et al. (2020) insist that *big data* should be added as a fourth element in decision-making for Parkinson's patients, next to the three existing elements:

1. Expert opinion.
2. Patient preferences.
3. Scientific evidence.

They call this quadruple decision-making (p. 225) and visualise their view as shown in Figure 4:

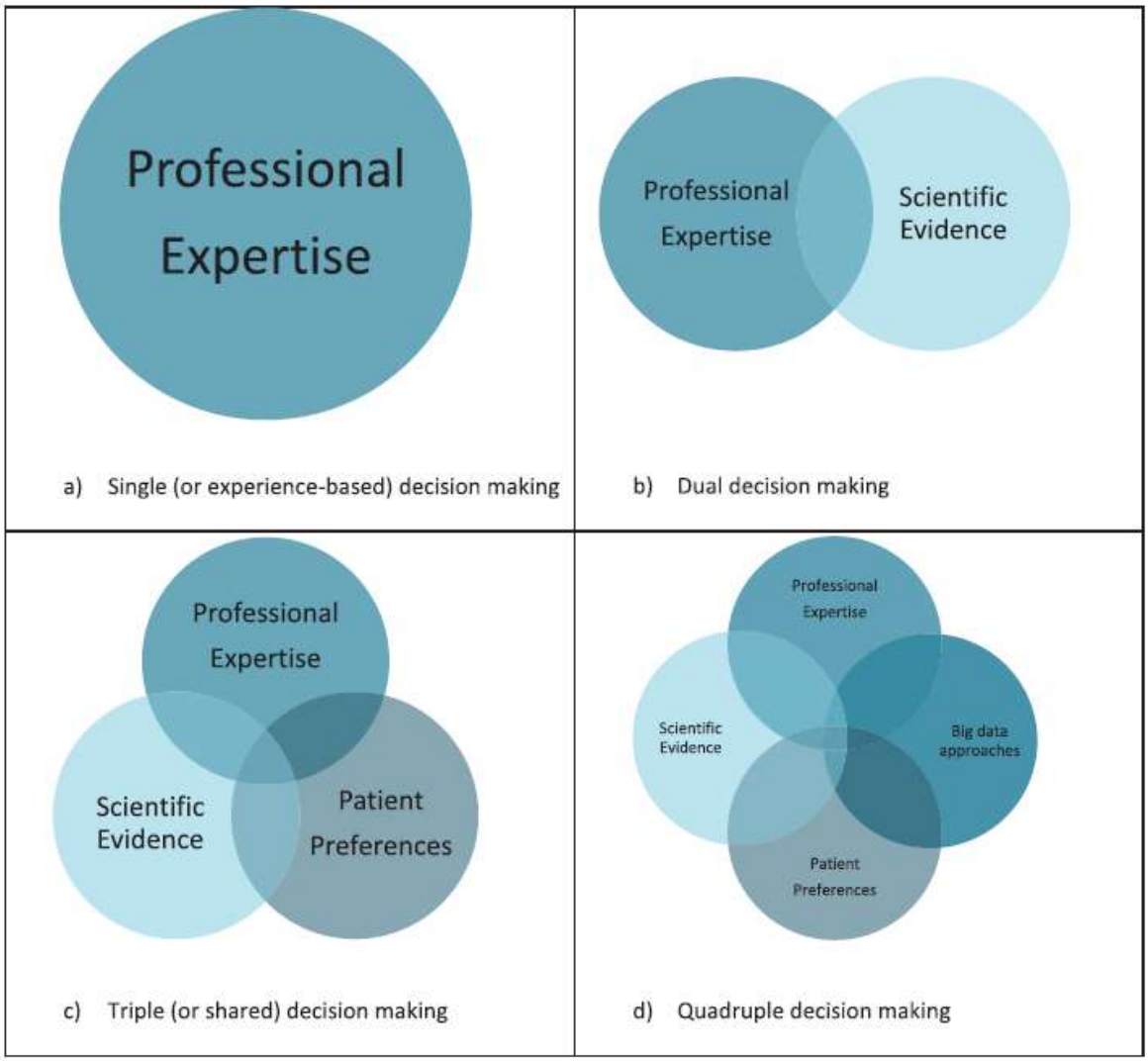


Fig. 1. Clinical decision making models.

Figure 4. Reprint from van den Heuvel et al. (2020).

If you would translate quadruple decision making to high-performance sport, you might want to replace 'patient preferences' with 'athlete preferences'. For example, some Dutch athletes strongly emphasize the importance of *transparency* in Olympic athletes' selection, in a *timely manner*. So, in the decision-making processes the voices of the athletes should be heard.

Therefore, to construct a decision framework for high performance sports, insights could be taken from HRM processes and public health decision-making models. In any framework, decision makers should be aware of (expert) bias and bounded rationality.

5.5 Olympic athletes' selection: Theoretical versus practical models

"…many of the coaches experienced how the athletes who were selected perceived the selections as being fair and how the athletes not being selected perceived the selections as unfair."

(Johansson & Fahlén, 2017).

Some researchers describe game-theoretic models for athlete selection (Hizen & Okui, 2009 ; Mizrahi et al., 2006). Later studies criticise these type of models "…for promoting an unrealistic image of decision making in the real world." (Miller et al., 2011, p. 4). Therefore, more practical models are discussed in the remainder of this paragraph.

A more realistic implementation can be found in Karetos et al. (2014) who claim (p. 342): " It was concluded that the HOC [Hellenic Olympic Committee] succeeded in establishing fair and transparent selection criteria for the athletes aspiring to participate in the OG and allowed the organization to make easier and better decisions regarding the selection of the athletes who would participate in the 2004 edition." In summary (p. 344) and Table 1:

Criterion A:	1 – 3 in the OG 1 – 3 in World Championships World Record	Criterion B:	4 – 8 in the OG 4 – 8 in World Championships 1 – 6 in World Lists
Criterion C:	9 – 16 in the OG 9 – 12 in World Championships 1 – 3 in European Champ. 1 – 6 in World Champ. (J) 7 – 12 in World Lists World Record (J) European Record	Criterion D:	4 – 6 in European Champ. 1 – 3 in European Champ. (J) 13 – 20 in World Lists 1 – 8 in World Lists (J) Particular Distinctions in Major International Competitions
Criterion E:	Participation in the Last OG	Criterion F:	Directly Qualifying for the OG
Criterion G:	Hopeful Athletes		

Table 1. Criteria for the selection of the athletes who would participate in the Athens 2004 OG. Reprint from Karetos et al. (2014).

However, these criteria lack an important requirement: what if *more* athletes meet these selection criteria, than available quota numbers? Indeed, that's exactly what Sierksma & Talsma (2021) considered when they developed a decision support system for the Dutch Speed Skating federation. Their algorithm (p. 51): "… leads to a team of skaters with a highest total Olympic medal-winning probability." On request of the federation, they incorporated the results of the "attractive trials with full stadiums" in their DSS, leading to "so-called selection rankings" (p. 52).

Generally speaking, Den Hartig et al. (2018, p.1191) confirm the use of explicit decision rules by citing the study of Kahneman (2011) on how this could look like: "First, determine a set of relevant variables to measure. These are preferably relatively easy to assess, with a maximum of seven variables. Second, determine how you will combine the variables, for instance, do some variables have more weight than other variables? Third, determine how these variables will be scored (e.g., on a five-point Likert scale). Fourth, combine the scores based on the pre-defined formula. Fifth, use the final score to make your selection decisions."

5.6 Sport specific selection: judo

Why are transparent selection procedures for sports like judo important? In the past, within TeamNL judokas were *nominated* by (head) coaches. The *selection* was made by a commission of three people. More than once, athletes appealed to these selection decisions. Both athletes and coaches within the Netherlands, asked for a fully data-driven selection procedure for OG Paris 2024. This resulted in a decision tree, which is fully based on the performances of the athletes (at World Championships and in competitions for the World Ranking List (WRL)).

Franchini and Julio (2015) investigated the relationship between the World Ranking List of the International Judo Federation (IJF) and the outcomes of the Olympic Games in London 2012. By that time, they concluded that (p.1): "Thus, only 24% to 26% of female and male judo performance in the 2012 London Olympics could be predicted, respectively, by variables derived from the IJF WRL." However, they also mention that the IJF WRL was created in 2009. It should be noted that this was only a few years before the London Olympics. It would be interesting to update this research with the results of the Games of 2016 and 2021, to learn more about the predictive value of the current IJF WRL. Especially because changes were made to the construction of the WRL, such as the inclusion of other competitions and the number of points rewarded to performances.

Guilheiro and Franchini (2017) examined the relationship between *being seeded* and winning a medal at the Olympic Games. Note that the top-8 athletes of the WRL are seeded in the next competition. They found out that (p.1): "For males the probability of seeded athletes to win a medal was 41.1% and 42.9%, while for females it was 35.7% and 44.6% at London 2012 and Rio 2016, respectively."

However, the authors also explain that a top-8 ranking comes with a price (p. 1): "Based on these results the cost-benefit of investing human and financial resources to qualify an athletes [sic] among the top eight competitors and his/her exposure to competitions—resulting in technical-tactical analysis of the opponent and higher risk of injury—should be carefully analyzed when determining the competition calendar to each athlete."

Courel-Ibáñez et al. (2018, p. 131): "…fuel the debate about the seeding process in judo championships." Although their research was limited to *Spanish* judo athletes, they report that: "Specifically, high-ranked athletes had more probability of winning and passing to the next stage."

Therefore, based on the example from Judo, athlete performance at competitions for the World Ranking List (such as World Championships) could be used to predict future performance and thus for data-driven selection procedures. However, one should be aware of the differences in the predictive value of several indicators (WRL, being seeded, etc). So, if a national federation wants to use performance predictors in their selection process, they could construct a decision tree. From a mathematical perspective, you would put the indicators with the highest predictive value in the top-layers of this tree. However, one should be aware of the costs of striving for a high world ranking (funding needs and risk of injuries).

5.7 Conclusion from existing evidence

Although research on (Olympic) athletes' selection is limited, several insights were found and used as a starting point for this project and to address the research question on how to combine data & expert opinion for (Olympic) athletes' selection?[1]

5.7.1 Possible selection criteria and how to use them

The first is to look at possible selection criteria and how to use them in a decision making process. Table 2 built on the work of Johansson and Fahlén (2017), Franchini and Julio (2015) and Güllich et al. (2019) and delineates the types of data based selection criteria that could be used for team selection.

Metric	Reference
Ranking of athletes	Johansson and Fahlén (2017)
Anthropometric	idem
Physiological	idem
Skill	idem
Current & past performances	idem
Predictions of future performances	idem
Ranking lists (not always valid)	idem
Team sports: skills in relation to position & game plan	idem
Experiences and ages	idem
Injuries	idem
Physical tests	idem
Different kind of statistics	idem
Performances in World Ranking List competitions	Franchini and Julio (2015)
World ranking points valid in 2 year pre-OS period	idem
Number of competitions (before OS)	idem
Percentage of matches won (in OS year)	idem
Performance under pressure	Güllich et al. (2019)

Table 2. Possible data to use for (Olympic) athletes' selection – author's summary of references

The second type of selection criteria is expert opinion and refers to the work of Johansson and Fahlén (2017) and Den Hartigh et al. (2018) .

[1] Categorization between data & expert opinion is not black-and-white but the choice of the author. E.g. "performance under pressure" could be measured during big events like World Championships, but for younger athletes it could also be based on expert judgement of a coach. Likewise, some expert opinion can be captured with data (e.g. current form).

Possible basis for expert opinion and other selection criteria used are listed in Table 3.

Decision base	Reference
Gut feel (of the coach)	Johansson and Fahlén (2017)
Athlete's behaviour	idem
Psycho-behavioural skills	idem
Ability to deal with stressors	idem
Confidence	idem
Mental toughness	idem
Ability to focus	idem
Ability to cope with & control anxiety	idem
Goal setting	idem
Perfectionism	idem
Team sport: team's game plan	idem
Intuition (of the coach)	idem
The coaches "discretion"	idem
Attitude	idem
Potential	idem
Technique	idem
Players who worked best together as a team	idem
Balance between players with different skills	idem
Personality	idem
Good character	idem
Ability to develop a necessary skill	idem
Current form	idem
Player's opponents	idem
Coaches Eye	idem
Team sport: investments in high-profile players	idem
Pressure from media, agents, general public, sponsors, parents	idem
Spending a lot of time with an athlete	idem
Consistently follow a coaching philosophy	idem
Being close to the coaches' eye	idem
External and internal pressure	idem
X-factor	Den Hartigh et al. (2018)

Table 3. Possible expert opinion to use for (Olympic) athletes' selection – author's summary of references

Other important aspects, mentioned by Johansson and Fahlén (2017):

- (p. 476): "From a validity perspective, it is important to identify the goal of the selection."
- (p. 474): "Weighing these different rationales."

Who is on the decision making table?

- Coaches (selectors).
- Board / federation.
- Head coach.

As a final note, a warning is taken from Johnston et al. (2021, p.1): "Selection criteria policies have the potential to help encourage fair selection practices by holding selectors accountable to their selection criteria, but their implementation also has the potential to wrongfully nudge selectors toward developing more defendable, but less-accurate selection practices".

In conclusion, there is not much literature on elite athlete selection although several insights were found that served as a starting point for this project.

6 Data Collection Method

As this is an exploratory, new topic, four different data collection methods were used. The research process involved the following steps:

1. Benchmarking.
2. Desk study of policy documents.
3. Surveys.
4. Post-survey interviews (tailormade).

6.1 Step 1. Benchmarking

Benchmarking was used to find out, how other NOCs deal with the selection of athletes for their Olympic team. What are the best practices?

The benchmark NOCs were chosen based on factors that were similar to the Netherlands and the first step was to identify the similarities. The following list provides the criteria used to determine which NOCs would be included in the study:

- Top10 in the Olympic medal table (Summer and/or Winter).
- Comparable High Performance Sport System.
- Comparable relationship NOC – National Governing Body.

This leads to a small decision matrix, with the assumed similarities in the rows and the potential benchmark-NOCs in the columns. Similarities were determined using expert opinion. The practitioner created a list and used expert opinion of a high-performance manager to refine it, resulting in the table below:

Possible Benchmark NOCs	AUS	AUT	BEL	CAN	CHN	FRA	GBR	GER	ITA	JPN	NED	NOR	NZL	ROC	SUI	SWE	USA
Top10 Tokyo 2020	x				x	x	x	x	x	x	x			x			x
Top10 Beijing 2022		x			x	x		x			x	x		x	x	x	x
Comparable HPS system			x								x	x			x	x	
Comparable relationship NOC-National Governing Body (NGB)	x	x	x	x		x	x	x	x	x	x	x	x		x	x	x
Club based system		x	x	x		x	x	x	x		x	x			x	x	
Funded by government	x	x	x	x		x	x	x	x		x	x	x	x	x	x	
Longterm relationship with TeamNL	x		x	x		x	x			x	x	x	x		x	x	
Competitor in a TeamNL medal-sport, for example:	x			x	x	x	x	x	x	x	x		x	x			x
Rowing	x						x				x		x				
Sailing	x		x			x	x				x						
Track Cycling	x					x	x	x			x						
Speed Skating				x						x	x	x				x	
Short Track			x	x	x						x						

Table 4. Decision matrix to find relevant benchmark-NOCs for TeamNL.

From this simple decision matrix, 10 NOCs were chosen to possibly serve as a meaningful benchmark group for TeamNL: AUS, BEL, CAN, GBR, GER, JPN, NOR, NZL, SWE and USA.

Moreover, some Dutch national sport federations were surveyed as well. They were chosen to represent three categories of sports (Whitmee, 2017):

1. CGS- sports (Centimetres/Grams/Seconds). (e.g., sports that are objectively measurable such as swimming and weightlifting, where best performances can be compared).
2. Head-to-head sports. (e.g., sports that involve two athletes or teams competing against each other such as judo and volleyball).
3. Multi-competitor sports. (e.g. sports where conditions and/or tactics differ from one competition to the next such as triathlon and marathon swimming).

Furthermore, an estimate was made as to which targeted sports would be mostly data-driven, expert opinion-based or a combination of both. This leads to the following choice of sports in Table 5:

	Data-driven	Expert-based	Expert + Data
CGS	Swimming	Artistic swimming	Cycling (track)
H2H	Judo	Water polo	Handball
MC	Sailing	Cycling (road)	Rowing

Table 5. Underpinning of the choice of sports for the surveys/interviews.

6.2 Step 2. Desk study of policy documents

Several selection policies of the benchmark-NOCs/ sports were studied and compared, to serve as a guideline for the questions in the survey/interviews and to find answers to the research question.

Some examples of what was found, are shown in Table 6 and Table 7. The answers to the research question were only partly found in the documents. Some NOCs use explicit decision rules, e.g., for judo. One NOC uses a formula in track cycling, to value an athletes' performance relative to the strength of the other competitors.

However, in most documents, the weighing of data and expert opinion is not specified. This is up to the discretion of the selectors. Based on these documents, this question was included in the survey:

"Are there any decision rules / formulas to combine data and expert opinion (e.g., by weights)?"

This question was illustrated by the example of Dutch speed skating, as described in Sierksma & Talsma (2021) and summarized by the practitioner:

In Dutch speed skating, the number of quota places is limited. Therefore, an algorithm is used to find the optimal so-called "selection ranking". For example: the winner of the 1000m - men (in trials) is most likely to win a gold medal at the Olympic Games for TeamNL. The winner of the 5000m – men (in trials) is the second most likely person to win gold at the Games, etcetera.

The outcome of this algorithm is combined with the trials, which form the base of selecting athletes for individual events. After the trials, experts will make the final selection, considering the optimal combinations for the team pursuit and mass start. By their discretion, maximum 3 men/women could replace other skaters after the trials.

	Expert opinion & coaches' eye	Data from competition results /world ranking / etc	Data from performance tests	Athlete preferences	How are the 4 themes combined?	Exact answer to research question?
NOC_A	NO	YES	NO	Not sure	Decision tree.	Yes: the selection process is 100% data driven
NOC_B	MAY	YES	MAY	Not sure	- Decision tree with respect to data from competitions, world ranking list etc. - Relevance and Weighting: **The Selectors may determine** the relevance and weight that they wish to place on **any Specific Nomination Factor(s) => mainly expert opinion & performance tests (fitness).**	Partly: input from themes is specified. However, **the weighing is NOT specified** w.r.t. expert opinion & performance tests.
NOC_C	NO	YES	NO	Not sure	The highest ranked athlete is sent (IJF World Ranking List of the Olympic Qualification Period).	Yes: the selection process is 100% data driven.

Table 6. Judo. Comparison of policy documents from different NOCs.

	Expert opinion & coaches' eye	Data from competition results /world ranking / etc	Data from performance tests	Athlete preferences	How are the 4 themes combined?	Exact answer to research question?
NOC_C	YES	YES	YES	Not sure	Given the complex and conditional international criteria for track cycling, the pursuit of the highest possible result across all cycling disciplines means that **a real chance of Olympic victory will be treated as a priority** over a real chance of a medal or a top 8 place.	- Partly: input from themes is specified, however **the weighing is NOT specified**. - For individual events, there is a **formula to value a performance against the strength of the other competitors** (based on UCI-points).
NOC_B	YES	YES	MAY	Not sure	Relevance & Weight: Discipline and Nomination Panels have **absolute discretion to decide the relevance and weight** of these Nomination Factors and any Extenuating Circumstances.	-Partly: input from themes is specified. - However, the performance standards are a combination of time/points AND podium performance(s) at the 2023 UCI Track World Championship Nations Cup. **Weighing NOT specified.**

Table 7. Track Cycling. Comparison of policy documents from different NOCs.

Note: athlete preferences deal with transparency, perceiving selection criteria as fair, clear communication etcetera. This can not be concluded from documents, so separate questions for this theme were included in the survey.

6.3 Step 3. Surveys

The benchmark-NOCs and national sport federations were invited to participate in a survey that took approximately 15 minutes to complete. The survey was a self-administered questionnaire, distributed by e-mail with a link to a digital form. It covered several aspects of the literature review. For example, in which of the following quadrants of Figure 5 could the NOC be placed? (Where *patient* should be read as *athlete*):

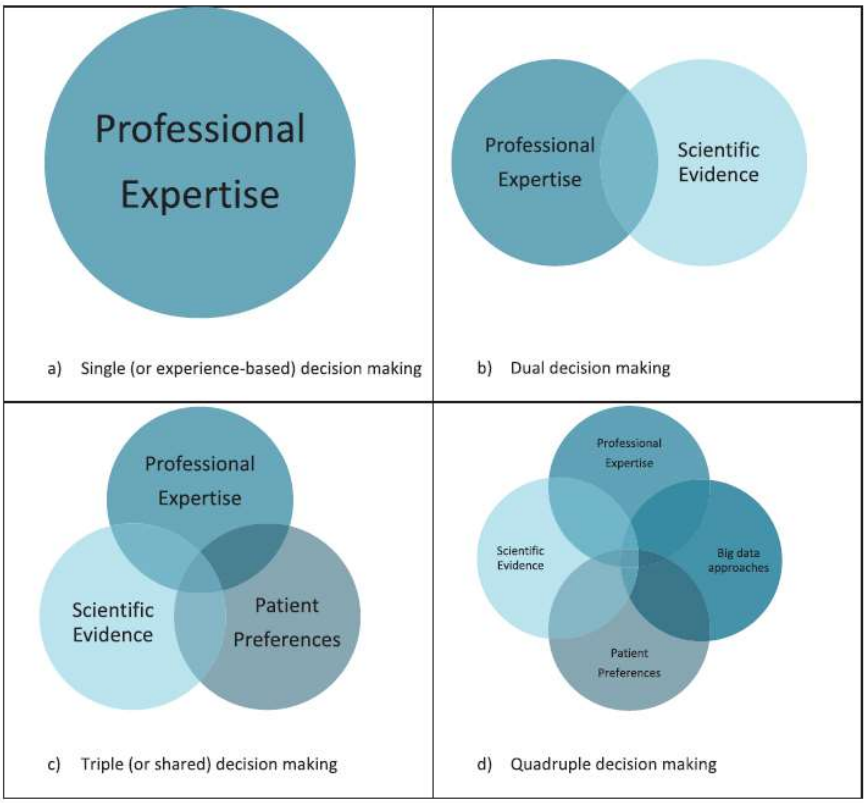


Fig. 1. Clinical decision making models.

Figure 5. Reprint from van den Heuvel et al. (2020).

For the purpose of this project, the four themes are translated to the sports environment in Table 8:

Clinical decision making	Selecting athletes for OG
Professional Expertise	Expert opinion
Scientific Evidence	Data from tests (performance test, medical tests, etc)
Patient Preferences	Athlete Preferences
Big data approaches	Data from competitions / ranking lists etc

Table 8. Clinical decision making translated to sport context.

Moreover, the survey should lead to more in-depth insights in the use of expert opinion and athlete data. The NOCs/ sports will be asked to tick several boxes which were found in the literature and policy documents. A few examples are given in Table 9 and Table 10:

How important are the following categories for the selection of athletes for the Olympic Games?

Metric
Ranking of athletes
Result at World Championships
Competition result related to the strength of the participants in that specific contest
…

Table 9. Examples of metrics used in selection of athletes.

Which expert opinion is used?

Decision base
Coaches Eye / experts "discretion"
Athlete's behaviour
Ability to deal with stressors / peak performance at big events
….

Table 10. Examples of expert opinion used in selection of athletes.

6.4 Step 4. Post-survey interviews

Any NOC and (Dutch) federation that is willing to be interviewed after the survey, will be invited for an interview of 30 minutes. During these interviews, the research question will be explored in more depth. All interview-questions were tailor made, based on the specific survey answers.

7 Data Results and Analysis

7.1 Survey Data Results and Analysis

7.1.1 Data Sample

As described in Chapter 6 Data Collection Method, 10 benchmark-NOCs were invited to participate in this project. Together with TeamNL this resulted in 7 completed surveys and 7 interviews between January and May 2023. The countries surveyed and interviewed included: BEL, GBR, GER, NED, NOR, NZL and USA. Moreover, both Canada and Japan politely replied that they could not fill out the survey, because the responsibility for team selection lies within their National Sport Federations.

7.1.2 National Sport Federations

Furthermore, 9 Dutch sports were invited to participate. Thanks to the MEMOS-network, 1 national sport federation from Canada and 5 from New Zealand participated as well. This resulted in 13 completed surveys and 8 interviews between March and June 2023. All sports categories were covered as can be seen in Table 11:

Sports category	# Completed surveys	# Interviews	Sports
CGS	2	2	Artistic swimming, Swimming
CGS/MC	3	2	Athletics (2x) , Cycling
Head-to-head	5	2	Football, Handball, Judo (2x), Water polo
MC	3	2	Sailing, Triathlon, Rowing
Total	**13**	**8**	**11**

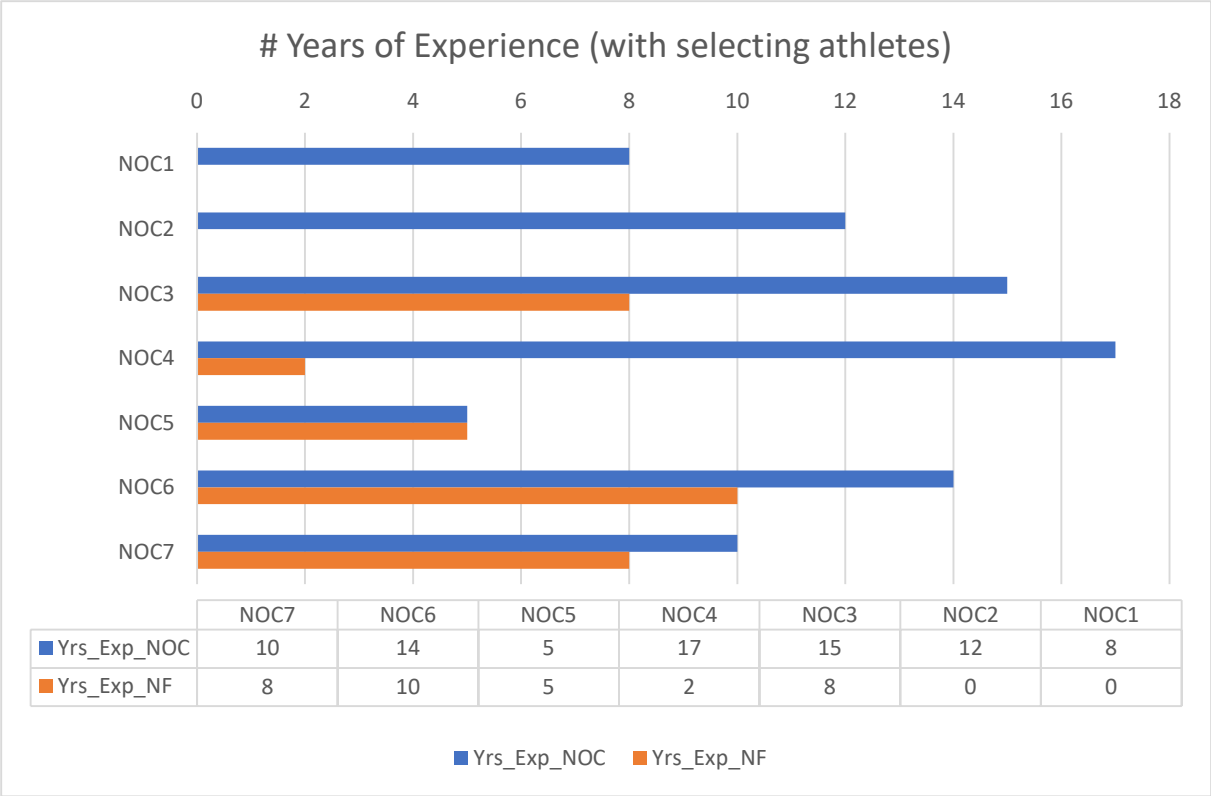
Table 11. Number of completed surveys and interviews by sports categories.

7.1.3 Profile of Survey Respondents

The first step was to ensure that the survey respondents met the criteria as individuals qualified to answer the survey. This was done through asking 3 key questions at the beginning of the survey:

1. Current role.
2. Number of years of experience in the field of selecting athletes for the Olympic Games (at NOC level)?
3. Number of years of experience at NF level (if any)?

The answers to these questions were reviewed to confirm that all respondents met the criteria to be considered knowledgeable in the area and therefore credible sources of information. The seven NOC-respondents have between 5 - 17 years' experience in the field of selecting athletes for the Olympic Games. Added to that, five NOC-respondents have experience at NF level, ranging from 2 – 10 years, as shown in Figure 6:



	NOC7	NOC6	NOC5	NOC4	NOC3	NOC2	NOC1
Yrs_Exp_NOC	10	14	5	17	15	12	8
Yrs_Exp_NF	8	10	5	2	8	0	0

Figure 6. Number of years of experience (7 NOC-respondents).

Moreover, the NOC-respondents represent different interesting roles in the field of selecting, as listed in Table 12:

Role	Frequency
High Performance Director / Technical Director	3
Chef de Mission	1
Chief Operations Officer	1
Head of Sport Engagement	1
Olympic Performance Advisor	1
High Performance Manager	1
Total number of roles	**8**

Table 12. Roles of the 7 NOC-respondents. Note that respondents can have multiple roles (e.g. combined with Chef de Mission).

The national federations were asked comparable questions. Their experience differs between 0 and 16 years, with a mean of 6 years, as shown in Figure 7:

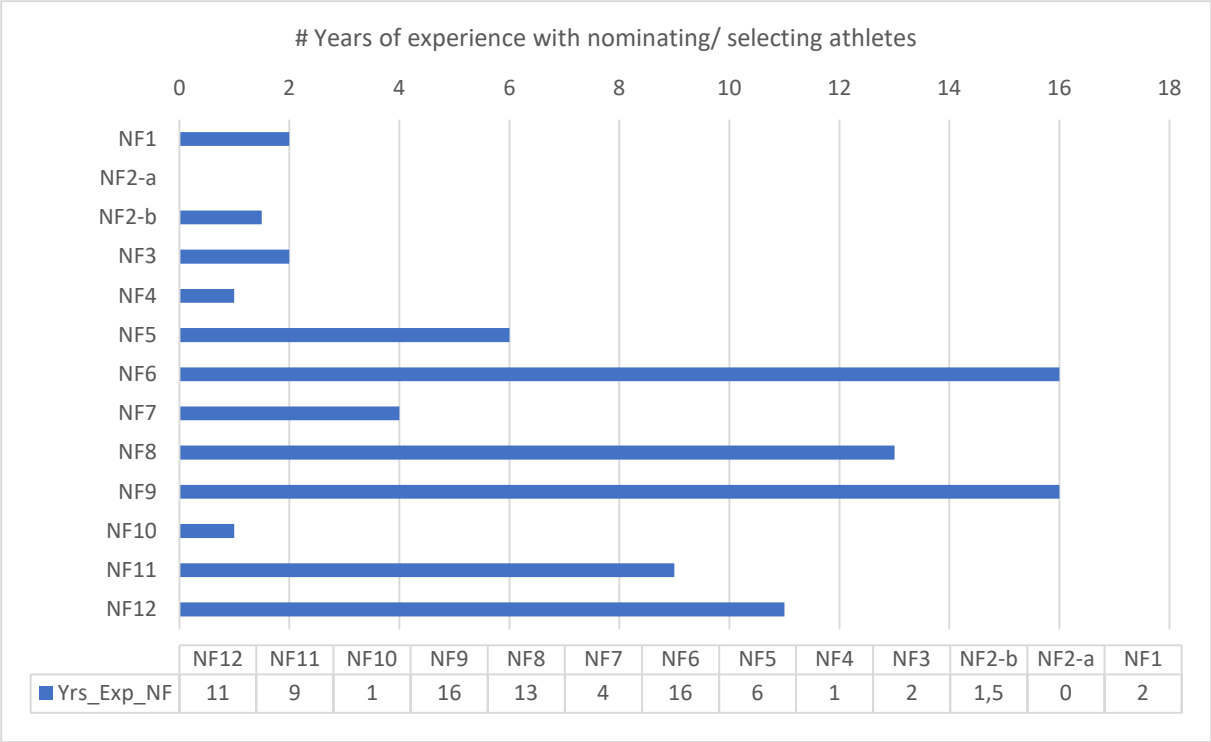


Figure 7. Number of years of experience (13 NF-respondents).

NF2 was represented by both a coach and a technical director and is therefore split in NF2a and NF2b.

Like the NOCs, all respondents have relevant roles in the field of selecting athletes, as listed in Table 13:

Role	Frequency
High Performance Director / Technical Director	5
Coach	4
General Manager (High) Performance	2
High Performance Operations Lead	1
Topsport manager	1
Total number of roles	**13**

Table 13. Roles of the 13 NF-respondents.

7.1.4 NOCs and Decision Making Quadrants

Inspired by the literature about clinical decision-making models (Van den Heuvel et al., 2020), the survey was used to identify how many quadrants every NOC uses in their decision making. Respondents were asked to give a score between 0 and 100 on the following 4 questions:

*Considering a sport with **Individual events**:*
"How important is each of the following themes, when selecting athletes for OG?"

1. Data from competitions / ranking lists / etc.
2. Data from performance tests.
3. Expert opinion.
4. Athlete preferences (transparency, fairness etc).

These questions were repeated for **Team sports** and **Relay (or comparable team) events**. It turns out that almost all NOCs use *triple or quadruple* decision making, for all events. The following diagrams (Diagram 1, Diagram 2 and Diagram 3) illustrate how NOCs use the quadrants in decision making for each type of event.

Individual Events – NOCs in quadrants:

	NOC7
Single	Dual (Data + Athlete preferences)
NOC1 NOC6	NOC2, NOC3 NOC4, NOC5
Triple (Data + Athlete preferences + Expert opinion)	Quadruple (Data + Athlete preferences + Expert opinion + Performance tests)

Diagram 1. Decision making for selecting athletes for individual events.

Team sports – NOCs in quadrants:

Single	Dual (Data + Athlete preferences)
NOC1	NOC2, NOC3 NOC4, NOC5 NOC6, NOC7
Triple (Data + Athlete preferences + Expert opinion)	Quadruple (Data + Athlete preferences + Expert opinion + Performance tests)

Diagram 2. Decision making for selecting athletes for team sports.

Relay event (or comparable) – NOCs in quadrants:

	NOC7
Single	Dual (Data + Athlete preferences)
NOC1	NOC2, NOC3 NOC4, NOC5 NOC6
Triple (Data + Athlete preferences + Expert opinion)	Quadruple (Data + Athlete preferences + Expert opinion + Performance tests)

Diagram 3. Decision making for selecting athletes for relay events (or comparable).

The quadrants were derived from the data, meaning that the clinical decision framework was used as a guide and then the survey responses were used to determine what *dual, triple*, etc. were in a sport context.

7.1.5 Overall importance of the four themes

In this section, a deeper dive is taken into the importance of the four themes for the NOCs. Figures are based on the scores as introduced in the previous chapter (0-100).

The scores of the group are summarized, using the median (to be less sensitive to outliers) in the figure below:

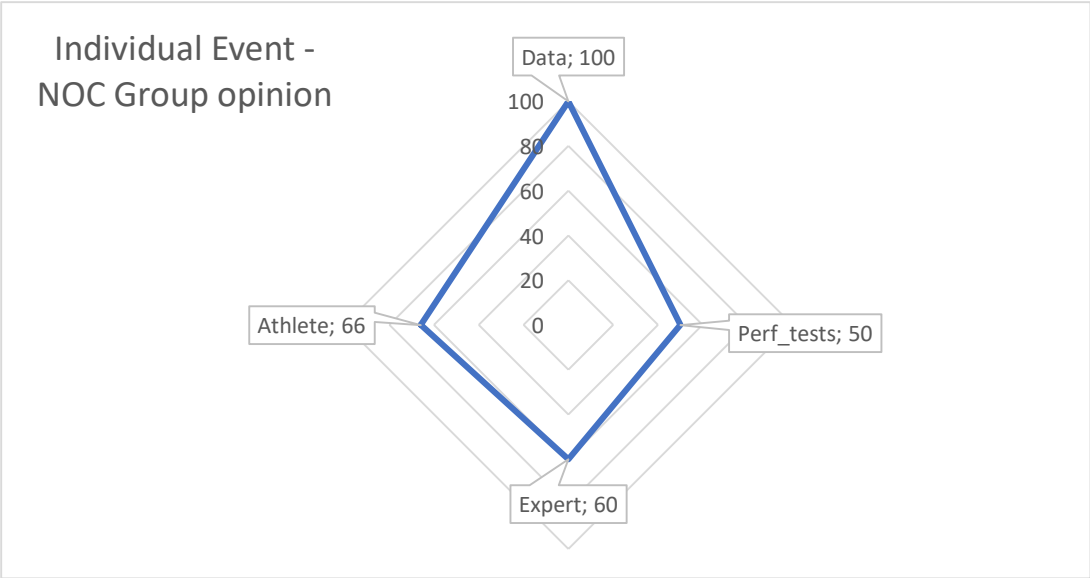


Figure 8. Overall importance of the four themes, when selecting athletes for individual events (7 respondents).

From this graph can be concluded – for Individual events:

- **Data** from competitions is extremely important. Four NOCs scored 100.
- Data from **performance tests** is less important, for actual selection of athletes.
- **Athlete preferences** are even more important than **expert opinion**.

To give more insight in the underlying observations, the boxplots of each theme are shown in Figure 9. Although they are based on maximum 7 observations, they give insight in the variance of the answers (minimum, maximum, median (horizontal line) and mean (x)).

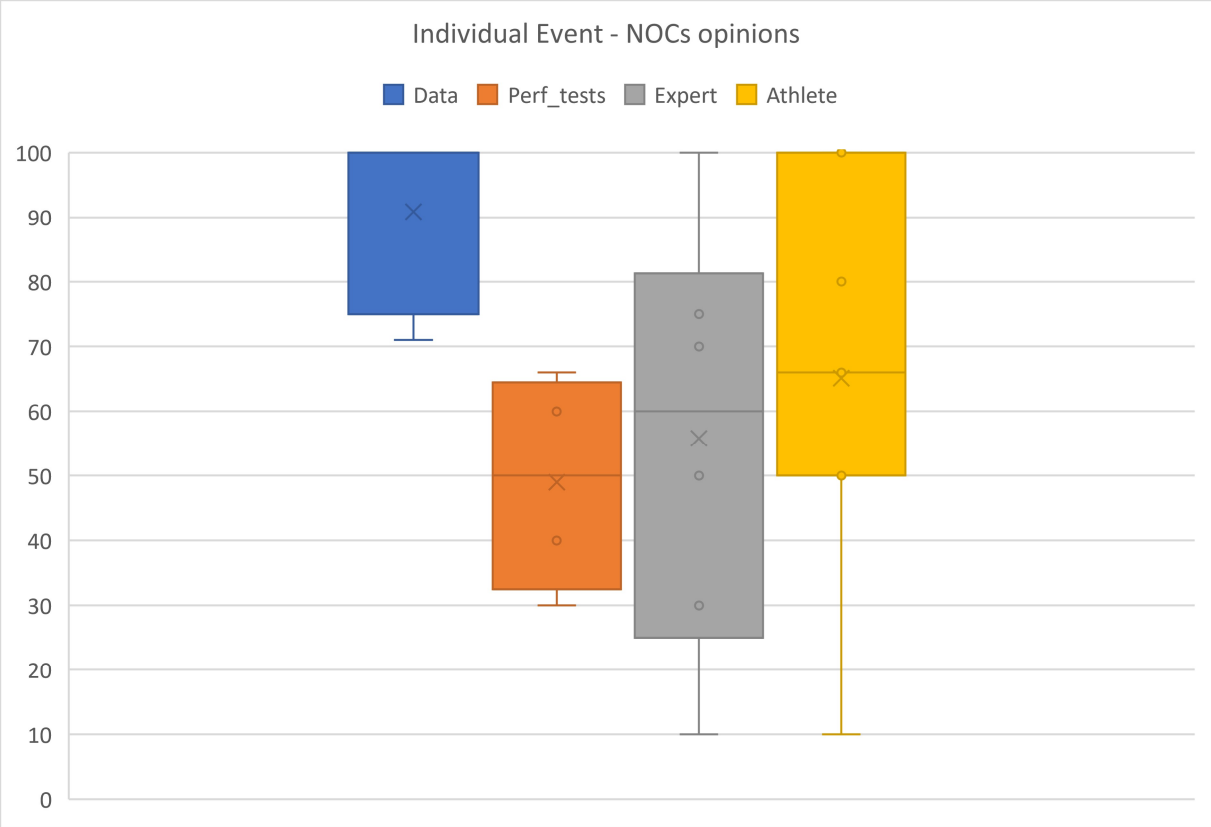


Figure 9. Importance per theme , when selecting athletes for individual events (7 respondents).

From these boxplots, it can be concluded that, for Individual Events:

- NOCs agree on
  - The high importance of **data** from competitions (scores range from 71 – 100).
  - The medium / lower importance of **performance tests** (30 – 66).

- NOCs disagree on
  - The importance of **expert opinion** and **athlete preferences**: both vary between 10 and 100.

The same two figures are made for team sports and relay events. Compared with individual events, the overall results are displayed in Figure 10:

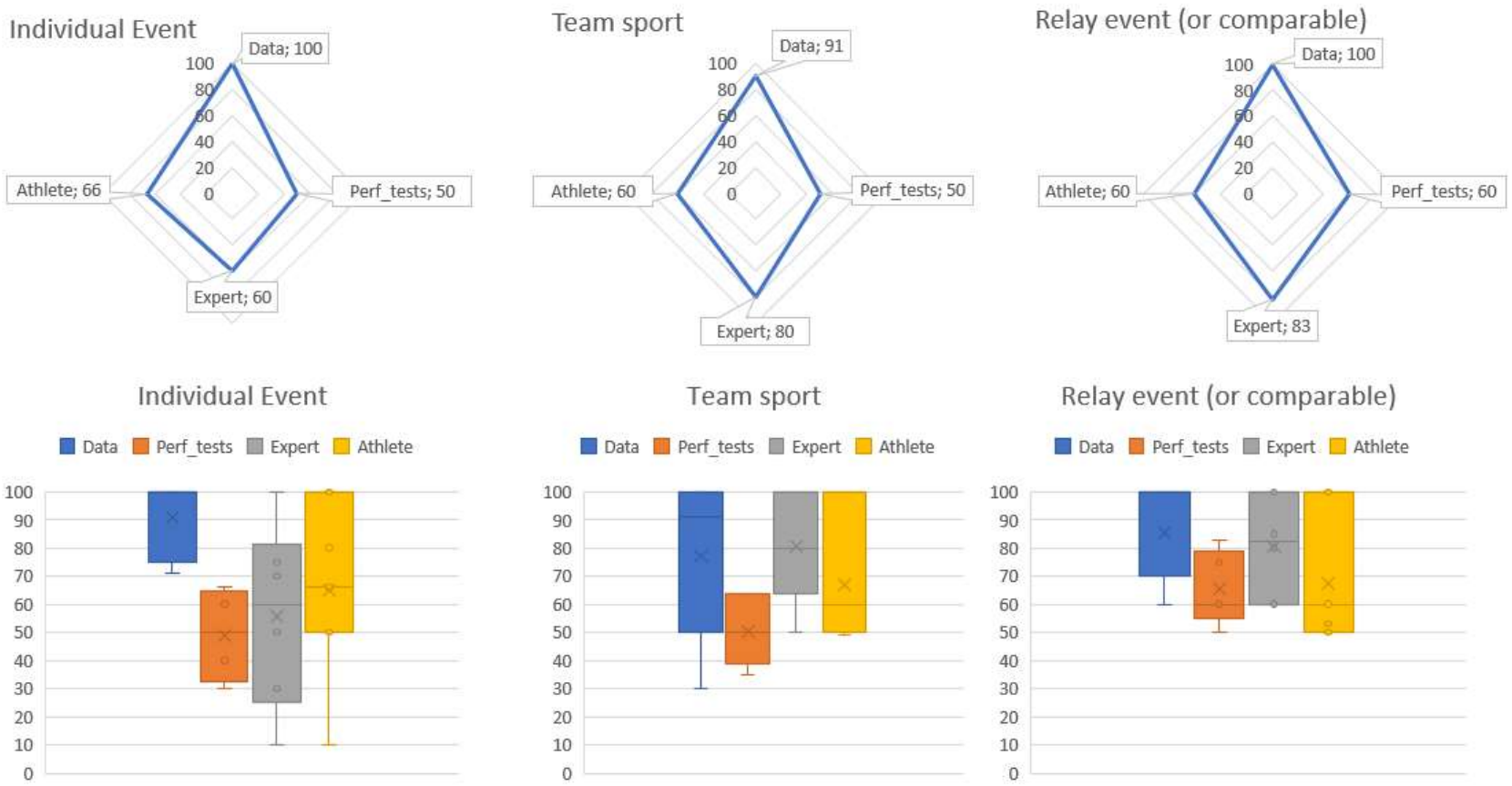


Figure 10. Overall importance of the four themes, per event: Individual event, Team sport, Relay event (or comparable). (7 respondents).

Looking at team sports:

- The opinion about the use of **data** varies a lot (30-100).
- The use of **expert opinion** becomes more important (50-100) with a median of 80.

Whereas relay events seem to maximise all of the themes, with scores ranging from 50-100. The use of **performance tests** for actual selections is less important.

The same six visuals are made for NFs and can be found in Appendix I. Generally speaking, the radar charts look the same, with two important differences:

1. **Athlete preferences** score higher for NFs across all three events (median of NOC between 60-66 versus NF between 70-79).
2. Use of **data** in team sports scores much lower (NOC median 91 versus NF median 67).

The box-plots for NFs differ from NOCs:

1. Individual event: although **data** scores very low 2 times (0 and 16), this theme still has more importance than the other 3 themes, who have become more alike (roughly between 0-80).
2. Team events: NFs agree stronger on the importance of **expert opinion** (smaller range)**.**
3. Relay events: NFs highly agree on the extreme importance of **data** (90-100) where there is more variance in the other 3 themes (both compared to data and to NOCs opinion).

In accordance with the literature about clinical decision making, all four themes are considered, both by NOCs and NFs. All themes except performance tests score medians between 60 and 100 and are therefore deemed important for selection. Performance tests still were considered but at a lower rate (medians between 50 and 60).

In the next sections of the chapter, a deeper dive is taken into how NOCs and NFs select athletes for the Olympic Games and what their main goals are, highlighting the key findings from the interviews.

7.2 Theme 1: Data from competitions / ranking lists

The first theme identified from the survey and the interview data, is the use of data from competitions, ranking lists, and comparable sources. First, additional results of the survey are presented followed by the key findings from the interviews that relate to this theme.

To take a deeper dive into the use of Data from competitions and ranking lists, respondents were asked in the survey:
"*In your NOC/organisation, how important are the following categories of data for the selection of athletes for the Olympic Games?"*

The list of possible data sources used were derived from the review of literature, policy documents and information from Dutch performance managers with the resulting list provided in Table 14:

Possible data sources	Abbreviation
Result at World Championships	WCh
Result at World Cups	Wcup
Result at Continental Championships	ContCh
Result at trials	Trial
Competition performance (time, distance, points, weight etc)	Performance
Competition result (1st ,2nd ,3rd ,….., n)	Result
Competition result related to the strength of the participants in that specific contest?	StrengthField
Ranking of athletes (e.g. World Ranking)	RankingList
Personal Record / Personal Season Best	PR_PSB
Event where the PR/PSB is set (e.g. during training vs big event)	Event_PR_PSB
Frequency of performing at PSB/ PR – level	Freq_PR_PSB
Years of experience in global competitions at senior level	Yrs_Exp_Global
ELO-ratings (or comparable)	OwnRating
What, if any, other data from competitions / rankings lists etc do you use?	

Table 14. Survey questions regarding the use of data from competitions etc.

The survey responses of the 7 NOCs are displayed in Table 15. The table should be read as follows:

- The number in the cell displays the *frequency* of the answers. For example: 3 respondents mentioned that Result at World Championships (WCh) are *Extremely important.*
  The greener the cell, the more often a specific answer was chosen.
- If the total response (last column) is below 7, this means that the respondent answered "not applicable" for this item.
- The answers are ordered like a medal-table: from *extremely important* to *not at all important*.

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	*# Responses*
WCh	3	4	0	0	0	***7***
Perfomance	3	4	0	0	0	***7***
Wcup	2	4	1	0	0	***7***
Result	1	5	1	0	0	***7***
StrengthField	1	4	0	1	1	***7***
RankingList	1	2	4	0	0	***7***
Trial	1	2	1	1	1	***6***
Freq_PR_PSB	1	1	1	2	1	***6***
PR_PSB	1	0	1	3	1	***6***
Event_PR/PSB	1	0	1	2	2	***6***
ContCh	0	4	2	1	0	***7***
Yrs_Exp_Global	0	1	2	3	1	***7***
OwnRating	0	1	2	2	0	***5***

Table 15. Importance of competition data (and alike). Frequency of responses: 7 NOCs.

If you order the responses of the NFs in the same manner, the order is *exactly* the same except for three items:

1. Ranking lists
2. World Cups
3. Continental Championships

Ranking lists are considered extremely important by 6 NFs (summarized in Table 16): judo, football, athletics (2 countries), rowing and swimming. **World Cups** are considered very important by both NOCs and NFs. Here, the order of the tables could be somewhat misleading. The opinion about **Continental Championships** varies within NFs. This is probably the result of the different pathways to earn quota places for the Olympic Games. The importance of the qualification pathway through continental quota, may differ a lot between sports/NOCs.

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	*# Responses*
WCh	8	2	2	0	1	**13**
Perfomance	7	1	0	2	0	**10**
RankingList	6	0	2	1	0	**9**
Result	5	4	1	3	0	**13**
StrengthField	3	5	2	1	1	**12**
Trial	3	4	1	2	1	**11**
Freq_PR_PSB	3	4	1	0	0	**8**
Wcup	2	5	3	1	0	**11**
ContCh	1	4	5	2	0	**12**
PR_PSB	1	3	2	0	1	**7**
Event_PR/PSB	1	3	1	0	1	**6**
Yrs_Exp_Global	0	3	4	3	2	**12**
OwnRating	0	0	2	0	3	**5**

Table 16. Importance of competition data (and alike). Frequency of responses: 13 NF-respondents.

7.2.1 Key findings from survey responses

These responses gave a first impression of the agreements and disagreements within and between NOCs and NFs, regarding the use of data from competitions:

- Both NOCs and NFs agree to the importance of the following data-sources:
  - results at World Championships and World Cups,
  - competition performance (time, distance, points etc) and result (rank).
- However, they totally disagree on the importance of **trials**: answers range from *Extremely important* to *Not at all important* and all answers in between. Even *Not applicable* was chosen once by an NOC.
- The use of ELO-ratings or comparable **(own) rating-systems** seem not that important, although NOC6 answered at the open question (other data used): *"Importance of ELO rating is growing in limited number of sports."* Moreover, NOC3 confirms the use of *"sport specific simplified ranking on national level for internal selection."*

The open questions and interviews revealed several deeper and extra insights which are discussed in the next section.

7.2.2 Interview analysis

7.2.2.1 World Ranking

The importance of world ranking lists is disputed in literature (Johansson and Fahlén, 2017). Several NOCs confirmed that in several sports, world rankings are not reliable: "*Just looking at someone's world ranking may not give you any picture of how good they actually are"* (NOC1). This was also found in the Guidelines for selection (Australian Sports Commission, 2007, p. 18): "*Issues to be considered include: do ranking methods accurately reflect the ranking of athletes for the specific event?*"

As an example, NF11 uses their own ranking systems, mainly based on points related to ranks in two or three predefined events during the qualification period, as shown in Table 17.

Rank	1	2	3	4	5	6	7	8	9	10	11,12,…
Points	10	9	8	7	6	5	4	3	2	1	0

Table 17. Example of an event-specific point system.

Apparently, NF11 found a way to cover their expert opinion with these kind of systems (that differ per medal-event): "*We have been using this for a long period and if I just did it completely with expert opinion, something like this would come out*".

7.2.2.2 Strength of the field / opponent analyses

One question in the survey was: *"How important are competition results **related to the strength of the participants** in that specific contest?"* As this was judged very/extremely important by the majority of both NOCs and NFs, during the interviews the question was asked: *"Do you use a formula to measure the strength of the field?"*

- NOC3 revealed an explicit formula. It is used for individual events in track cycling and can be found in paragraph 8.2.7.2.
- NOC2 referred to an application from the Gracenote company (formerly known as Infostrada): *"Infostrada obviously have that ability to and so you can calculate now almost the value of a performance at an international event relative to the international competition there."* However, this NOC has her own sport intelligence team, who has developed her own version of that.
- NOC1 does an opponent analysis: "*We look at actually who have they played, who are they competing against and what were the scores? Did they beat someone who's in the top 50 or did they lose to someone by one point?*"

All other NOCs/NFs seem to base this judgement on expert opinion. For example, NF8 looks at "*athletes who raced each other three times. Maybe an athlete only won one out of the three, but that was at [a big event for that country/sport]. So maybe that has a little more weight. It's up to the panel to weight things as they see fit*". Other NOCs/NFs confirm that the national coach/NOC judges the strength of the field by expert opinion, based on the absence of top-athletes.

7.2.2.3 Events: Single / multiple

Another theme that was identified from the interview data, was the use of single or multiple events for qualification. NOC2 uses results trajectory over a set period:

"*So what I mean by that is rather than taking one off events and a single-results-format, it might be over a period of time. […] by doing that, results over a period of time could be 12 months. That helps inform the kind of the competitiveness of each individual athlete. […] It's always based on* ***at least two or three events rather than a single standalone trial****. A lot of what we push our sports to have is consistent performances and obviously if you just had a single event, it doesn't demonstrate consistency. Some sports do use 'first past the post'. What I mean by 'first past the post' is officially you win that event and you're guaranteed to go to Games."*

The Guidelines for selection (Australian Sports Commission, 2007, p. 20) point out the advantages of trials / 'first past the post is in the team' as they:

1. *"…create an overall atmosphere of certainty in relation to the selection policy.*
2. *replicate the big occasion 'pressure' ".*

The advantages and disadvantages of this approach are provided in more detail in Chapter 8 Recommendations.

7.3 Theme 2: Data from performance tests

The second theme identified from the survey and the interview data, is the use of data from performance tests. First, additional results of the survey are presented followed by the key findings from the interviews that relate to this theme.

To take a deeper dive into the use of data from performance tests, respondents were asked in the survey:

"In your NOC/organisation, how important are the following categories of tests for the selection of athletes for the Olympic Games?"

The list of possible tests has been compiled with the help of a strength & conditioning coach with the resulting list provided in Table 18:

Possible data from tests	Abbreviation
Strength test (e.g., One-Repetition-Maximum (1RM) bench press / back squat, broad jump)	Strength
Endurance test (e.g., Coopertest, MAS (Maximal Aerobic Speed) test)	Endurance
Agility test (e.g., 5-10-5 pro-agility test, Illinois agility test, T-test)	Agility
Speed test (e.g., sprint test, maximum speed test.)	Speed
Mobility test (For hamstring, quadriceps, shoulders etc.)	Mobility
Anthropometric (e.g,. Skinfold thickness, BMI, DEXA scan, Body size / -dimensions)	Anthropometric
Physiological (e.g., VO2-max, Lab tests with oxygen uptake and lactate measurements)	Physiological
Medical tests	Medical
Mental tests	Mental
Interviews	Interview
What, if any, other data from performance tests do you use:	

Table 18. Possible data from performance tests.

The survey responses of the 7 NOCs are displayed in Table 19. The table should be read as follows:

- The number in the cell displays the frequency of the answers. For example: 1 respondent answered that medical tests are *Extremely important*.
- The answers are ordered like a medal-table: from *extremely important* to *not at all important*.

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	*# Responses*
Medical	1	1	1	1	2	**6**
Endurance	0	1	1	0	4	**6**
Physiological	0	1	0	1	4	**6**
Strength	0	0	1	0	5	**6**
Agility	0	0	1	0	5	**6**
Speed	0	0	1	0	5	**6**
Mobility	0	0	1	0	5	**6**
Interview	0	0	0	1	5	**6**
Mental	0	0	0	0	6	**6**
Anthropometric	0	0	0	0	6	**6**

Table 19. Importance of performance tests (and alike). Frequency of responses: 6 out of 7 NOCs.

NOC1 answered *Not applicable* at every question and explained: *"The only reason we would use the above is in event of injury or extenuating circumstance."*

Most NOCs agree that the use of performance tests are not important at all, for the purpose of selection, with some exceptions for medical, endurance and physiological tests.

Although the general opinion of the NFs is the same, all tests (except Physiological) score *"Very important* at least once, as can be seen from Table 20:

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	*# Responses*
Medical	2	3	2	3	1	**11**
Mental	1	2	3	0	4	**10**
Speed	0	2	1	0	5	**8**
Interview	0	2	0	2	5	**9**
Endurance	0	2	0	2	4	**8**
Agility	0	2	0	1	5	**8**
Anthropometric	0	1	1	2	5	**9**
Mobility	0	1	1	1	5	**8**
Strength	0	1	0	3	4	**8**
Physiological	0	0	2	1	4	**7**

Table 20. Importance of performance tests (and alike). Frequency of responses: 13 NF-respondents.

7.3.1 Key findings from survey responses

These responses gave a first impression of the importance of performance tests for the purpose of selecting athletes:

- Generally speaking, both NOCs and NFs agree that performance tests are not used for nominating/selecting athletes for the Olympic Games. NOC4 explained the common opinion: *"Some of the measurements listed above are used to gauge progress and measure fitness and ability to endure, of course, but they typically won't be a large part of evaluation to make an Olympic Team."*
- Moreover, NOC6 noted: *"Every athlete needs a medical test result. Without you cannot compete at the Games."*
- However, NOC5 and NOC3 both talked about *sport specific protocols*, for example in cycling and rowing (seat races), which was confirmed by the rowing federation: *"These tests give the picture of athlete capability, tested with maximal testing and onwater trialing, crew*

capability." This importance of performance tests was highlighted by two team coaches (NF1 and NF3) who stated that strength plays an important role in the selection of the team.

7.3.2 Interview analysis

7.3.2.1 Mental tests

The survey for the NFs revealed that mental tests are sometimes important. This is in line with Johansson and Fahlén (2017), who summed up **mental toughness** as one of the factors that are considered important in predicting future performance, in many literature studies.

The NF12-coach explicitly asks the opinion of the mental coach (no advise), about the motivation and mental wealth of the athletes. For example, the opinion *"if the teenager is mature enough to assume this pressure"*.

The NF3-coach tries to simulate the pressure by challenging the athletes, making them experience discomfort, e.g., by becoming "angry" (pushing boundaries without transgressing these) or by giving a super intensive training, followed by practicing a tactical concept.

7.3.2.2 Retention of form

One NOC highlighted the use of performance tests, especially in track cycling and rowing, to determine the ability to maintain performing on a certain level. The internal policy document of track cycling (Belgian Olympic and Interfederal Committee npo, 2023, p. 5) states that: *"athletes should, irrespective of previous results in the qualifying period, in the Olympic year 2024 demonstrate "retention of form". For all disciplines, therefore, **test data** in 2024 will be compared to test data from the qualifying period (1 January 2023 – 30 April 2024), whereby the test times in 2024 may not be more than three percent (3%) higher than the best times from the qualifying period.*
These tests will be carried out at the [official test centre], with the same standardized modalities, and to be realized from 1 May 2024 at times 2024 that are announced at least 1 month in advance by [the NF]."

This practice is in line with the statement of Johansson and Fahlén (2017) that players' current form is one of the important factors for selections. Conversely, NOC6 has removed "retention of form" from their selection policies about ten years ago, because it conflicted with an optimal preparation for the Games.

The Australian Guidelines for selection (Australian Sports Commission, 2007, p. 24) report these type of criteria as part of conditional selection: *"Conditions may involve attainment of a performance standard or the successful fulfilment of a fitness assessment"*.

7.4 Theme 3: Expert opinion

The third theme identified from the survey and interview data, is the use of expert opinion. Experts are the group of people involved in the process like coaches, selectors, high performance managers, technical directors, etc.

In the survey, respondents were asked:

"In your NOC/organisation, how important are the following categories for the selection of athletes for the Olympic Games?"

The list of possible answers was derived from the review of literature, policy documents and information from Dutch performance managers with the resulting list provided in Table 21:

Possible Expert opinion	Abbreviation
Coaches eye / experts "discretion"	Coaches_Eye
Consistently follow a (coaching) philosophy / game plan	Coaching_Philosophy
Coach-athlete relationship: established versus not established (as someone is chosen to be the Olympic coach)	Coach-athl_relation
Pressure (e.g. from media, agents, general public, sponsors, parents)	Pressure_from_Others
Athletes' behaviour (be kind, use manners, respect, etc) - either good or bad	Behaviour
Personality (Optimistic/ Pessimistic/ Trusting / Envious)	Personality
Commitment to the (centralised) programme	Commitment_Centralised
Current form	Current_Form
Performance under pressure	Perf_Pressure
Goal setting	Goal_Setting
Ability to organise their daily life in such a way, that they can optimise their elite sport results (E.g. time management and a social support network)	Daily_Life
Skill in relation to position & game plan	Skill
Technique	Technique
Balance between players with different skills	Balanse_betw_Players
Impact on other athletes	Impact_Other_Athl
Role model for younger athletes	Rolemodel
X-factor	X-factor
What, if any, other expert opinion do you use:	

Table 21. Survey questions regarding the use of expert opinion.

The survey responses of the 7 NOCs are displayed in Table 22:

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	*# Responses*
Current_Form	2	4	1	0	0	***7***
Perf_Pressure	2	3	1	0	1	***7***
Coaches_Eye	1	4	1	1	0	***7***
Goal_Setting	1	2	2	0	1	***6***
Balance_ betw_Players	1	2	2	0	1	***6***
Skill	1	2	2	0	1	***6***
Technique	1	1	2	0	2	***6***
Coach-athl_relation	0	4	1	0	1	***6***
Commitment_Centralised	0	4	1	0	1	***6***
Impact_Other_Athl	0	4	0	1	1	***6***
Coaching_Philosophy	0	3	3	1	0	***7***
Personality	0	3	2	0	1	***6***
X-factor	0	3	0	1	2	***6***
Behaviour	0	2	2	2	0	***6***
Daily_Life	0	2	2	1	1	***6***
Pressure_from_Others	0	2	0	1	3	***6***
Rolemodel	0	1	2	1	2	***6***

Table 22. Importance of expert opinion. Frequency of responses: 7 NOCs.

The response of the NFs show some differences, as will be explained below Table 23:

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	# Responses
Perf_Pressure	8	0	2	0	2	12
Skill	5	4	0	0	2	11
Coaching_Philosophy	5	1	1	1	3	11
Current_Form	4	5	1	1	1	12
Coaches_Eye	4	3	0	2	3	12
Behaviour	2	3	3	1	3	12
Personality	2	3	2	2	3	12
Daily_Life	2	1	4	1	4	12
Commitment_Centralised	2	1	4	1	3	11
Impact_Other	1	5	1	2	2	11
Balance_ betw_Players	1	4	0	1	4	10
Goal_Setting	1	3	3	1	4	12
Rolemodel	1	1	3	2	4	11
X-factor	1	1	3	1	4	10
Technique	0	5	2	1	4	12
Coach-athl_relation	0	3	2	1	5	11
Pressure_from_Others	0	2	0	1	7	10

Table 23. Importance of expert opinion. Frequency of responses. 13 NF-respondents.

If we compare what's in the upper and lower half of these tables, the following differences occur between NOCs and NFs as listed in Table 24:

NOCs value higher than NFs:	NFs value higher than NOCs:
Balance between players	Coaching philosophy
Goal setting	Behaviour
Technique	Personality
Coach – athlete relation	Ability to organise their daily life

Table 24. Relative differences between NOCs and NFs with respect to importance of expert opinion.

7.4.1 Key findings from survey responses

Besides the conclusions in Table 24, we learned the following:

- NOCs agree that it differs from sport to sport and these would all be criteria for the NFs to assess when nominating to the NOC. NOC1: *"The key for us is how this is manifested in their performances."*
- NF11 answered *Not applicable* on every question with this explanation: *"The only 'expert opinion' involved in the system that **we customize the selection procedure per [medal event],** depending the level and size of the group of athletes in this [event], e.g. Late vs early selection or possibility to force an early selection by dominant results. But after customizing the system, in all cases **the selection is objective and 100% based on results (point system).** So no individual 'protection', but equal opportunity (everybody starts with 0 points)."*
- Both NOCs and NFs ticked these three boxes in their top5 priorities:
  - Performance under pressure.
  - Current form.
  - Coaches Eye.

7.4.2 Interview analysis

7.4.2.1 List the expert opinion

Both NOC4 and NF8 talked about listing your expert opinion. NOC4: *"Most of our team sports… when they put those other skills in that are less measurable, yeah… they provide a brief definition of what that means. Like: receives feedback from coach, makes change, right? Coachability. It's supportive of teammates, right? So they'll put a brief couple of explanations in those less measurable skills."*

The Australian Guidelines for selection (Australian Sports Commission, 2007, p. 31) acknowledge this method but also highlight a disadvantage: *"The disadvantage of listing the factors is that athletes, and coaches, historically look on the nominated factors as criteria in themselves."*
They also provide a tip (p. 32): *"...add explanatory statements to the clause that set out clearly, in plain English, that the factors are not selection criteria, they are purely matters to be taken into consideration by the selectors, and that those matters can be taken into consideration on their own, in combination or with any other matters not listed but relevant to the selection of such a team."*

7.4.2.2 Create decision rules

NOC3 explained that they were trying to find decision rules for rowing, combining test results from an ergometer test with competition results at different levels and seat racings.

This aligns directly with the view of Den Hartig et al. (2018, p. 1191) who confirm the use of explicit decision rules by citing the study of Kahneman (2011) on how this could look like: *"First, determine a set of relevant variables to measure. These are preferably relatively easy to assess, with a maximum of seven variables. Second, determine how you will combine the variables, for instance, do some variables have more weight than other variables? Third, determine how these variables will be scored (e.g. on a five-point Likert scale). Fourth, combine the scores based on the pre-defined formula. Fifth, use the final score to make your selection decisions."*

7.4.2.3 Create role descriptions (team sports / relay events)

The NF1-coach is in a process where he tries to create role descriptions for every team player: *"It means that I put down some criteria that this is the item from you.., then I wish also that you did develop in this area.. And then we have like an agreement, not like contract, but like an agreement… […] Then we sit down and we talk… and I present to you, this is what I want from you and you say: "Ok, [Coach], this is fine... But this thing I cannot. Maybe this is tough for me". "Ok, remove". So yeah.., the things on this agreement is something that we feel both comfortable with. I expect you to be the one who shoots from outside or the one who is very tough in the defence."*

This is exactly what Bradbury & Forsyth (2012) introduced, by translating a HRM selection process to sport (p. 9) as shown in Figure 11:

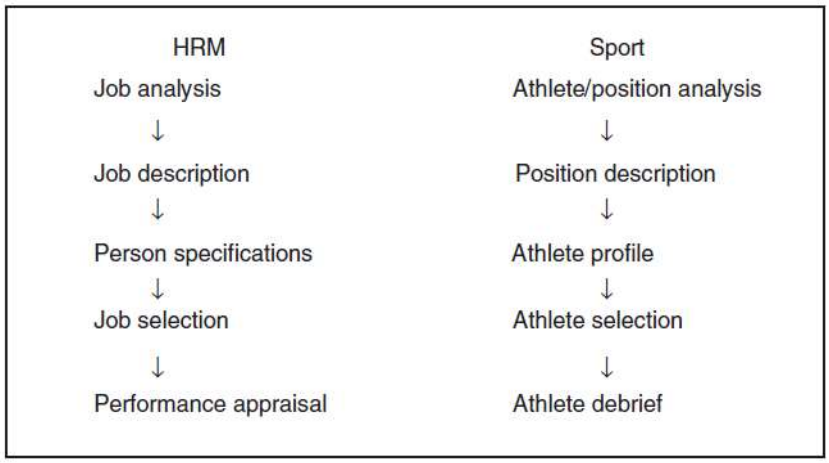


Figure 11. HRM selection process translated to a sport context. Reprint from Bradbury and Forsyth (2012).

7.5 Theme 4: Athlete preferences

The fourth theme identified from the survey and interview data, are the athlete preferences. It's derived from the medical decision framework (Van den Heuvel et al., 2020) where patient preferences are important.

In the survey, respondents were asked:

"In your NOC/organisation, how important are the following categories for the selection of athletes for the Olympic Games?"

The list of possible answers were derived from the review of literature and policy documents, with the resulting list provided in Table 25:

Possible Interest of athlete	Abbreviation
Transparent process	Transparency
Timely process	Timely_Process
Clear communication	Communication
Perceive selection criteria as fair	Fairness
A process which built trust to the athletes	Trust_Process
What, if any, other preferences from athletes do you consider:	

Table 25. Survey questions regarding the athlete preferences.

The survey responses of the 7 NOCs are displayed in Table 26.

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	# Responses
Transparency	7	0	0	0	0	**7**
Communication	7	0	0	0	0	**7**
Fairness	7	0	0	0	0	**7**
Timely_Process	6	1	0	0	0	**7**
Trust_Process	6	1	0	0	0	**7**

Table 26. Importance of the athlete preferences. Frequency of responses: 7 NOCs.

The responses of the NFs are very similar, as shown in Table 27:

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	# Responses
Transparency	10	2	1	0	0	**13**
Trust_Process	8	4	1	0	0	**13**
Communication	7	6	0	0	0	**13**
Fairness	5	7	1	0	0	**13**
Timely_Process	5	6	2	0	0	**13**

Table 27. Importance of the athlete preferences. Frequency of responses: 13 NF-respondents.

7.5.1 Key findings from survey responses

This is the only of the four themes, where *all* NOC and NF-respondents answered *all* the questions. Moreover, every item was deemed at least *Moderately or Very important*. This is possibly due to survey bias, meaning that respondents feel encouraged to give certain answers. It's a worldwide trend that athlete involvement is changing. Everybody knows that athletes should be centred. More research is needed to find out how this is really happening, taking the athletes perspective into account.

7.5.2 Interview analysis

7.5.2.1 Communication

NOC7: *"I've been through this as an athlete. And as a coach. I've been through all this different roles. So I know how important communication is".*

All interviewees agree that communication is key. It's important to bring the right people together, like sports experts, lawyers, and athletes. Communication should start very early, especially with athletes. For example, athletes could be involved in the discussion if early or late selection is preferred for their specific medal event.

NOC2 advised to physically present the selection policies to all stakeholders. NF4 even advised communication twice yearly. Guidelines for clear communication were also found in Guidance Notes

on Selection (High Performance Sport New Zealand, 2018, p. 6): *"Direct communication of the Selection Policy is recommended to all of the athletes who may be considered for selection rather than via general publication on the NSO's website."*

The Guidelines for selection (Australian Sports Commission, 2007, p. 41) talk about: *"publish, promote and educate."* Tips can be found in Chapter 8 Recommendations.

Last but not least, it's important to manage the expectations of athletes. NOC7: *"After a while I understood that I should spend most time with the people that were not selected, in advance of the actual selections, to tell them why they were not part of their team. And then I told the people that they're selected last. Because it said the intuition is to tell the best ones: "You are in the team." […] That's a good message to deliver. But there is something else going on, that is maybe even more important to make this a good solution for everybody or a best possible solution for everybody."*

7.5.2.2 Athlete representation

Several NOCs talked about the importance of athlete representation and possible conflicts of interest because some athletes are under consideration themselves. NOC4 reported a required minimum of 33.3% athlete representation (coming from recently 20%), with athletes that are not conflicted. NF8 suggested to: *"Put in some time limits. Must be retired for a minimum of one year but not more than eight years or things like this."*

Athletes' commissions should cross check with their own athletes: are they happy with both the content and the communication process? (NOC2).

NOCs and NFs could make athletes sign off the final selection policy as stated by High Performance Sport New Zealand (2018, p. 3): *"The athlete's agreement to be bound by the Selection Policy. This agreement can be achieved by the athlete signing an application form to be considered for selection, in which they agree to the Selection Policy. This process is recommended as it ensures athletes expressly agree, and sign up to, the Selection Policy and there can be no doubt about their agreement to the Policy."*

7.5.2.3 Transparency

NF8: *"If the athlete decides to challenge the selection, we're very transparent. Here's all of the factors, and here's how we came to the decision. And then, for the most part, athletes decide, "Ok. I don't agree with the decision, but they had all of the right information, so I won't pursue an appeal.""*

This was also confirmed by NOC5. They rely on the most transparent data they have and when it's the coaches' eye, they try to make it as transparent as possible. The coaches need to explain to the athletes and the NOC on the criteria they used. For example, if they do it with an unofficial rating, they need to explain.

NOC6 mentioned the importance of matching the national criteria with the ones of the international federations: *"Say if the international standards are rankings and we were to require tournament performance, that could make that athlete's life very complicated."*

7.6 Goals of selection

The last part of the survey was reserved to learn more about the goals of selecting athletes for the Olympic Games.

In the survey, respondents were asked: *"How important are the following goals?"*

The possible answers were derived from the review of policy documents, with the resulting list provided in Table 28:

Possible Goals of selection	Abbreviation
Selecting the athletes with the highest probabilities to win GOLD	Gold
Selecting the athletes with the highest probabilities to win ANY MEDAL	Medal
Selecting the athletes with the highest probabilities to finish TOP 8	Top8
Selecting the athletes with the highest probabilities to finish TOP 16	Top16
Selecting the best athletes (e.g. based on world ranking)	Best_Athlete
Selecting athletes to build experience at the Olympic Games, to increase their winning probability at the next Games.	Build_Experience
A 100% defendable process, to avoid lawsuits	Defendable_Process
Other goal(s)	

Table 28. Survey questions regarding the goals of selection.

The survey responses of the 7 NOCs are displayed in Table 29:

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	*# Responses*
Gold	5	1	0	0	0	**6**
Medal	5	1	0	0	0	**6**
Defendable_Process	4	3	0	0	0	**7**
Top8	2	3	1	0	0	**6**
Best_Athlete	2	1	3	1	0	**7**
Top16	1	0	2	4	0	**7**
Build_Experience	0	1	2	3	0	**6**

Table 29. Importance of the goals of selection. Frequency of responses: 7 NOCs.

The responses of the NFs are shown in Table 30:

	Extremely important	Very important	Moderately important	Slightly important	Not at all important	*# Responses*
Medal	9	3	0	0	0	**12**
Gold	5	3	2	1	1	**12**
Best_Athlete	5	3	0	0	3	**11**
Top8	3	5	5	0	0	**13**
Defendable_Process	3	1	3	2	3	**12**
Top16	2	2	3	3	3	**13**
Build_Experience	0	2	2	5	4	**13**

Table 30. Importance of the goals of selection. Frequency of responses: 13 NF-respondents

7.6.1 Key Findings from survey responses

- One NOC has a **top16-goal** whereas the six other NOCs valued **gold, any medal and/or top8** higher. The ambitions of some federations are sometimes higher than their NOC. Five federations of the "top16-NOC" filled out the survey; only two of them deemed **top16** *Very/Extremely important*. All of them valued **any medal** or **top8** as *Very/Extremely important* goals (note: they could choose more than one goal).
- All NOCs valued a **defendable process** as *Very/Extremely important.* Conversely, the majority of NFs chose *Moderately important* or less.
- For five NF-respondents, selecting the **best athlete** is *Not at all important* or *Not applicable*. This is seen across all categories of sports: CGS (1), H2H (2) and MC (2).

Other goals, reported at the open question:

- NOC2: *"team selection to consider supporting the overall aim of the process, such as **Number One nation** in that sport",*
- NOC3: *"protect integrity in high performance sports",*

- NF7: *"fair and transparent process for athletes, with expectations outlined, that is well communicated and understood",*
- NF11: *"to learn to perform on demand".*

7.6.2 Interview analysis

NOC6 explained their top8 ambition as follows: *"Athletes, who compete in finals…, they are meaningful to the team and they are meaningful to the inspiring value of elite sport."* Inspiration was also reported by one of their federations.

Some NOCs and NFs talked about selecting athletes to build experience at the Olympic Games. Especially in team sports, coaches think about the short and long term. NF3 mentioned the development of the athletes: *"Besides the performances, it's also the process that counts".*

NOC6 pointed out the impact on the use of scarce resources: "*You can focus on one side on… who are you sending to the Games? But the fact… if you introduce some selectivity there, you also see that federations will also do the same for their World Championships and for their [Continental] Championships and for their choices: who they include in national selection… Who they give access to training activities et cetera, so it also has a funnelling function towards the whole sport."*

The importance of defining the goals was also emphasised by Johansson and Fahlén (2017, p. 476): *"From a validity perspective, it is important to identify the goal of the selection."*

This is confirmed by the Australian Sports Commission (2007, p. 16) who also report the impact on the performance at the Olympic Games itself: *"The first step in the development of the selection policy is to determine what the aim of the selection process itself is to be. […] Consideration must be given not only to how to enable the best team to be selected but also how the selection process enhances the optimisation of performance at the event itself."*

8 Recommendations

"Selection is a difficult process, with many contributing factors, interests and emotions involved. If the selection process is clearly and widely understood, seen to be fair, transparent and unbiased, then selection disputes will be minimised and results will be optimised." (Australian Sports Commission, 2007, p. 6).

The recommendations of this project are translated into four practical checklists:

1. Plan
2. Do
3. Check
4. Act

In the next sections, the checklists are displayed in four tables.

8.1 Plan

NF1-coach: *"The dream is to take a gold… to take a medal in Olympic Games or in the World Championships 2025."*

Start with the end in mind: what is the **goal** of your nomination / selection policy?
For example (most probably, more than one will apply), choose from Checklist 1:

Checkbox	Goal
✓	Fair and transparent process which builds trust to athletes
	Nominating /selecting the athletes with the highest probabilities to win GOLD / ANY MEDAL
✓	Nominating /selecting the athletes with the highest probabilities to finish TOP 8 / TOP 16
	Being the number one nation in a specific sport
	Nominating /selecting the best athletes (e.g. based on world ranking)
✓	Nominating /selecting athletes to build experience at the Olympic Games, to increase their winning probability at the next Games.
✓	A 100% defendable process, to avoid lawsuits
	Protect integrity in high performance sports
	To learn to perform on demand

Checklist 1. Plan: setting the goals of nomination / selection policies.

The next section describes actions that could help achieving these goals.

8.2 Do

NOC5: *"Maybe it's all about the structure and you can't copy everything that other countries do. But it helps to have some input."*

Depending on the goals chosen, the following actions could be performed as summarized in Checklist 2. In the next sub-sections, the actions are explained in more detail. Checkmarks are meant as examples:

Checkbox	What to do	See Do #
✓	Involve the right people, take care of diversity and athlete representation	1
	Make a communication plan, from start to finish	2
✓	Avoid conflicts of interest	3
	Manage expectations of athletes	4
	Optimise the use of expert opinion, e.g. using the IDEA protocol	5
✓	Choose what kind of expert opinion you want to consider	6
✓	Choose what kind of data you want to consider	7
✓	Define how to combine expert opinion and data	8
	Choose if you want a 100% data-driven policy	9
	Match the criteria of your NOC/NF with the international criteria (IF)	10

Checklist 2. Do: possible actions to be undertaken.

8.2.1 Do #1: Involve the right people

NOC1: *"That would definitely be a mix of people. […] a mix of process and experience and knowledge within the sport. Because that person may not know the sport, but they'll ask the right questions. And that person may know the sport but may not follow process. So having a combination of selectors is really valuable in terms of the overall result."*

Comparable jobs have different titles in different countries. These were mentioned the most:

- Athlete representation, preferably athletes who are not under consideration themselves. Both athlete commission and Olympians commission (alumni).
- (Head) coaches, preferably without conflict of interest.
- Other sports experts, preferably with long period experience with selecting athletes.
- A lawyer / process person.
- High Performance / Technical Director / Managers.
- Sports Intelligence Team.
- A judge / skills expert / technical controller IF (e.g., for artistic swimming).
- Other: Chief Operations Officer, Head of Sport Engagement, Olympic Performance Advisor, General Manager Performance, High Performance Operations Lead, Elite sport manager.

8.2.2 Do #2: Make a communication plan

Clear communication is part of good governance of the IOC framework. NF4: *"You educate your athletes and your stakeholders to the highest repeatedly and to the highest level of clarification that you can."*

- Communicate from start to finish. NOC2: *"The more positive communication you can do in advance, the less likelihood of an appeal through lack of understanding knowledge at the back end, which is when the times are tight."*
- Communicate frequently, could be even twice yearly although others suggested it distracts athletes from their focus.
- Include an appeals process, including quick decision making. A good relationship with the tribunal is key. More guidance can be found in Guidelines for selection (Australian Sports Commission, 2007, chapter D).
- Construct clear timelines, including the timing for federations to draw up internal criteria. For example (Belgian Olympic and Interfederal Committee npo, 2023, p. 1 (General Regulations)): *"no later than 90 calendar days after the date of dispatch of the Selection Regulations of the BOIC and the International Qualification Regulations of the International Federation […]".*
- Ensure that all those involved have the necessary information about what they must/can do to be selected. E.g. which matches count as selection matches? What weighting do they get (if applicable)? What timeline is important?

    - See Guidance Notes (High Performance Sport New Zealand, 2018, p. 4): *"In fairness to athletes and to minimise uncertainty and appeals, the Selection Policy should be developed and communicated to athletes as early as possible, and prior to the events from which results will be used in any selection decisions."*
- Shape all documents in an athlete friendly way. Use simple language. Put pictures in it.
- Physically present the documents to athletes. See Guidance Notes (High Performance Sport New Zealand, 2018, p. 6): *"TIP: Hold a meeting with the athletes when the Selection Policy is finalised to explain it and how it will work. […]. Keep a record of who attended the meeting".* Otherwise, organise webinars.
- The Guidelines for selection (Australian Sports Commission, 2007, p.41-42) state *"Publish, promote and educate."* Selected tips:
    - *"Publish the policy document as soon as possible on the organisation's website.*
    - *Communicate and advertise the fact that the policy is available and consider mailing electronic copies to all interested parties.*
    - *Carefully explain the concept of discretion and how it operates and, importantly, how it impacts on an athlete's right of appeal.*
    - *Consideration should be given to the publishing of* ***selection memorandum*** *setting out a summary of the selection criteria, the intended operation of the policy and all the important dates".*

8.2.3 Do #3: Avoid conflicts of interest

- At the beginning of every meeting: ask athletes, coaches or any others with a conflict of interest to leave the room. Try to find substitutes without conflicts of interest.
  NOC2: *"Ensure independent representatives are present during the selection panel meetings to guarantee the process is followed."*
- Implement a conflict of interest policy. An example can be found in Guidelines for selection (Australian Sports Commission, 2007, Appendix 4).

8.2.4 Do #4: Manage expectations of athletes

NOC7: "*Spend most time with the people that are not selected."*

- Consult athletes from the beginning (initial criteria). Make sure athletes feelings are considered.
- Discuss with the athletes if early or late selection is preferred for a certain medal event. Early selection could be used to protect the expected medal contender and to provide him/her a better preparation for the Games. Alternatively, if there is more than 1 quota place in the event, one could cut the qualification period in two parts: if an athlete qualifies before January 1st of the Olympic year, he/she is certainly selected and the other quota will be assigned later. The option of *pre-selection* is also described in the Australian Guidelines for selection (Australian Sports Commission, 2007, p.23) with a caution (p. 24): *"This must be balanced against eliminating the pathway for new and rising talents."*
- Consider a minimum of 33.3% athlete representation, with athletes that are not conflicted. Tip (NF8): *"Put in some time limits. Must be retired for a minimum of one year but not more than eight years or things like this."*
- Make sure athlete commissions cross check with their own athletes: are they happy with both the content and the communication process?
- Make athletes sign off the final selection policies.

8.2.5 Do #5: Optimise the use of expert opinion

Hemming et al. (2018) describe the IDEA protocol for *"structured expert elicitation"* in four steps:

1. Investigate

2. Discuss
3. Estimate
4. Aggregate

The four steps are explained in Figure 12:

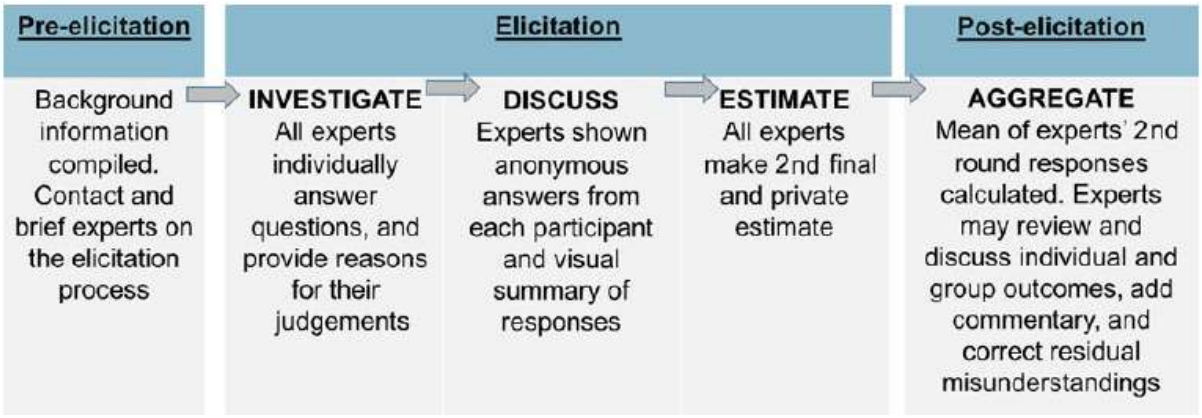


Figure 12. "The IDEA protocol adapted from Burgman (2015)". Reprint from Hemming et al. (2018).

In step 2, Investigate, *"a diverse group of experts is recruited to answer questions with probabilistic or quantitative responses*" (Hemming et al., 2018, p. 171).

In the view of the practitioner, these questions could be formulated as displayed in Table 31:

Four-step elicitation	Answer (example)
Realistically, what do you think the **lowest** plausible probability for athlete A / relay team A to meet the goal (e.g. medal at OG) will be ?	50%
Realistically, what do you think the **highest** probability for athlete A / relay team A to meet the goal (e.g. medal at OG) will be ?	90%
Realistically, what is your **best guess** for athlete A / relay team A to meet the goal (e.g. medal at OG) will be?	80%
How **confident** are you that your interval, from lowest to highest, could capture the true value of athlete A/ relay team A to meet the goal (e.g. medal at OG)? Please enter a number between 50% and 100%.	70%

Table 31. Four step elicitation, inspired by Hemming et al. (2018).

Repeat questions for athlete B / relay team B etcetera, to find the athlete / relay team that has, according to the experts, the best chance to meet the goal.

8.2.6 Do #6: Expert opinion to consider

NF1: *"But I think in this job I have as a coach, you cannot learn… you can study, you can go to lectures, yes…, but there are some things you can never learn if you have not been in the situations."*

Make a description of how discretionary decisions will me made: list out. However, be aware that these factors will not be interpreted as criteria, but as factors to be considered amongst others that may not be listed but deemed important when the athletes are selected (Australian Sports Commission, 2007, p. 31-32).
Provide examples, e.g. "receives feedback from a coach and makes changes accordingly".

Table 32 provides inspiration for possible factors to consider:

Factor	Factor (continued)	Factor (continued)
Ambition	Direct qualification by name	Performance under pressure
Attention to detail	Discipline	Personality (Optimistic/ Pessimistic/ Trusting / Envious)
Attitude	Experience / Age	Player's opponents
Balance between player and team	External and internal pressure	Players who can be supportive to the ones who play
Balance between players with different skills	Fitness (e.g. ability to endure a whole tournament)	Players who work best together as a team
Be ego (sometimes)	Focus	Potential
Behaviour (be kind, use manners, respect, etc) – either good or bad	Game understanding	Pressure (e.g. from media, agents, general public, sponsors, parents)
Being close to the coaches' eye	Goal setting	Psycho-behavioural skills
Coach-athlete relationship: established versus not established (as someone is chosen to be the Olympic coach)	Good character	Put the team before themself
Coaches Eye / experts "discretion"	Group dynamic	Role model for younger athletes
Commitment to the (centralised) programme	Gut feel (of the coach)	Skill in relation to position & game plan
Committed to the training / Feeling very responsible	Human Skills	Skill to belong to a team for 30 days in a row even if you don't play so much
Confidence	Hunger	Spending a lot of time with an athlete
Consistently follow a coaching philosophy	Impact of competition schedule	Tactics
Consistently follow a game plan	Impact on other athletes	Team sport: investments in high-profile players
Cope with & control anxiety	Intuition (of the coach)	Technique
Course profile	Late/ early selection	Weather / Water conditions
Creativity	Mental toughness	X-factor
Current form	Organise their daily life in such a way, that they can optimise their elite sport results	
Deal with stressors	Perfectionism	

Table 32. Possible factors for subjective criteria.

8.2.7 Do #7: Data sources to consider

NOC6: *"Depending on the sport, we make an athlete profile. Based on competition results, ranking lists, performances (e.g., times), etcetera. This leads to our national selection criteria."*

Table 33 lists possible data sources to consider:

Data source
Bookmakers' predictions
Competition performance (time, distance, points, weight etc)
Competition result (1st ,2nd ,3rd ,….., n)
Competition result related to the strength of the participants in that specific contest
Current & past performances
ELO-ratings (or comparable)
Event where the PR/PSB is set (e.g. during training vs big event)
Frequency of performing at PSB/ PR – level
Head-to-head results vs. athletes in competition for selection
Mental tests / interviews
Number of competitions (e.g. in qualification period or another timeframe)
Number of matches won (e.g. in qualification period or another timeframe)
Participation in previous Olympic Games
Performance tests (strength, endurance etc)
Personal Record / Personal Season Best
Predictions of future performances
Ranking of athletes (e.g. World Ranking)
Result at Continental Championships
Result at trials / test events / nomination events
Result at World Championships
Result at World Cups
World / Continental record

Table 33. Possible factors for objective criteria.

In the next sections, several criteria are explained in more detail.

8.2.7.1 (World) Ranking lists (WRL)

One of the goals of nominating /selecting could be to choose the **best** athletes. However, the **best** athlete (e.g., based on a world ranking) is not always the one with the highest (medal-) winning probability. For example because another athlete has a better track record against top-athletes.

Before choosing WRL as a selection criterion, the question should be answered what the meaning of the WRL is for the specific medal-event: does an athletes' WRL-position reflects his performance level? If the answer is yes, the predictive value of WRL (with respect to top-n finishes at the Olympic Games) should be high (generally speaking) and can be used for selection criteria.

However, the costs of traveling and the risk of injuries should be considered, when striving for a high world ranking.

If the predictive value of WRL is low, other sport specific ranking methods could be used, like:

- the Austrian point system in sailing.
- Elo-ratings (applicable for both head-to-head sports and multi-competitor sports).
- Self-developed simple methods based on the x best results at predefined events during the qualification period, awarding n points per rank. For example, see Table 34:

Rank	1	2	3	4	5	6	7	8	9	10	11,12,…
Points	10	9	8	7	6	5	4	3	2	1	0

Table 34. Example of an event-specific point system.

8.2.7.2 Strength of the field / opponent analyses

- It's common to use expert opinion to judge the strength of the field.
- An explicit formula was found for individual events in track cycling (Belgian Olympic and Interfederal Committee npo, 2023, p. 5) :

*"To account for the field of competitors, the sum of the UCI points of the respective discipline (ranking at the **start** of the race) of the top 3 riders in the race, are divided by the result of the Belgian rider in the race. This figure represents **the value of the result** and can be used to **objectively compare the result with the performances of other riders"**.*

- The Gracenote company (formerly known as Infostrada) has an application to calculate the value of a performance at an international event relative to the international competition. Sports intelligence teams can develop comparable applications, e.g. based on Elo-ratings.
- Opponent analyses look at:
  - Who are athletes competing against (e.g. ranking list position or current Olympic/World Champion)?
  - What where the scores (e.g. a win? Or a loss by 1 point?)
  - Where these scores achieved at big or small events?

8.2.7.3 Events: Single / multiple

The choice between single or multiple qualifying events carries several advantages and disadvantages that are summarized in Guidelines and Tips (Sport Dispute Resolution Centre of Canada, n.d.) and Table 35:

Notable Observation About…	
Single Qualifying Event:	Multiple Qualifying Events:
> they are usually simple to conduct, however one bad day for your best athlete may mean that he or she is not going to the Games;	> they are likely to help you select athletes who are consistent in their performance over a certain period of time, but it also makes the entire process a lot more complicated;
> strong candidates may be injured at the time of the single qualifying event thereby excluding them from the Games, even though they may recover on time for the Games;	> it may be more costly for athletes when they have to fund their own participation in the various qualifying events;
> choosing a qualifying event too close to the Games will require your best athletes to peak twice in a short period of time;	> admissibility criteria to those competitions should be similar to those of the Games so that you do not exclude potential athletes from qualifying;
> to hold your event too early before the Games carries the risk of athletes' relative performances changing by the time the Games come along.	> may require a weighting of the results of the various competitions to reflect differences in field size and quality, or to give more value to events held towards the end of the qualifying period.

Table 35. Pros and cons of single/multiple qualifying events. Reprint from Sport Dispute Resolution Centre of Canada (n.d.).

8.2.7.4 Mental tests

Mental toughness could be simulated by challenging your athletes, e.g., by giving a super intensive training, followed by practicing a tactical concept. Or by getting "angry", push boundaries without transgressing these.

8.2.7.5 Retention of form

As part of conditional selection, one could define the successful fulfilment of a fitness assessment (Australian Sports Commission, 2007, p. 24). For example, by comparing test data in the Olympic year with test data during the qualification period, whereby the test results in the Olympic year may not be more than 3% higher than the best times from the qualifying period (Belgian Olympic and Interfederal Committee npo, 2023, p. 5 (track cycling)). However, one should consider if this does not conflict with an optimal preparation for the Games.

8.2.7.6 Create role descriptions (team sports / relay events)

Create role descriptions, like "I expect you to shoot from outside" or "I want you to be very tough in the defence." (NF1). Talk with every athlete (individually and/or in a group) and come together to a mutual agreement.

8.2.7.7 Athletes that support others

NOC2: *"They don't necessarily be top eight or win a medal themselves, but they might be helping other athletes achieve that success."*

Consider the selection of athletes who have a wider contribution to the performance environment, especially in team sports and relay events. One NOC even reported a female boxer who only ever did sparring with a male and won 2 times gold at the Olympics.

8.2.7.8 Younger versus experienced athletes

NF4*:"What our data says to us is that most of our medallists… did not win a medal on their first Olympics, which kind of makes sense. They make it really… second or third.. So you actually need them to go to a first Olympics. Even if they're not tracking at that time, you need them to go there to gain experience."*

Depending on you sport, figure out if the above statement is true, because it could be a myth in your sport that debutants don't win medals. Tip:

1. count the number of (individual) starts and the number of corresponding medals (at the Games).
2. Calculate the conversion rates (# medals / # starts).
3. Compare this figure between debutants and the other competitors.

For teams sports, the consideration is often made for the substitute athletes. NF1*: "I would rather pick the one who can fix a long tournament with good energy. […] So maybe not an arrived player who has been in the Olympics and expects to play."*

8.2.7.9 Avoid the Pygmalion effect

Try to avoid the so called Pygmalion effect [https://en.wikipedia.org/wiki/Pygmalion_effect]: *"The Pygmalion effect, or Rosenthal effect, is a psychological phenomenon in which high expectations lead to improved performance in a given area and low expectations lead to worse."*

In other words, try to avoid pre-selection "in your head". Give every athlete equal opportunities to prove themselves to the end of the qualification period. See next paragraph for tips, especially the creation of a decision rule.

8.2.8 Do #8: Combine expert opinion and data

NOC7: *"With all these numbers and all these spreadsheets and all these formulas… [selection] tends to be less humanistic, yeah… and more… technical".*

Despite this finding, several federations reported using spreadsheets. Tip:

- Create a spreadsheet of information for each athlete.

Some data sources and expert opinion apply to (almost) all categories of sports, like *results at big events* and *ability to perform under pressure*. See Table 32 and Table 33 for inspiration. Table 36 shows some specific data sources and expert opinion per sports category:

Category	Possible specific Data sources	Possible specific Expert opinion
CGS	PR, PSB, score of a judge.	Interpretation of a judge score.
H2H	Points for techniques: how often, how fast, etcetera? Number of matches won. Elo-rating or own rating-systems.	Recovery time: could this player stand the whole tournament? Player's opponents. Players who work best together as a team.
MC	Performance trajectory based on percentage distance to podium. Head-to-head results vs. athletes in competition for selection. MC-Elo or own rating-systems.	Course profile. Tactics. Expected weather conditions at next Games.

Table 36. Possible specific data sources (per sports category), to combine with specific expert opinion..

- Create a waterfall system; how would you rank athletes against each other (in case of a tie)? Describe the order of priority, for example (inspired by NF4 and NF11):
  - Primary criteria: a top three placing at a test event + highest placed eligible athlete in their gender.
  - Secondary criteria: a top eight placing at the World Championships.
  - Final criteria (in case of remaining quota places): any eligible athlete who the selectors believe has demonstrated that he/she is capable of a top 8 placing at the Games.
- Create a decision rule, by defining (inspired by NOC3 and Kahneman (2011)):
  - the sport specific parameters (either judged by experts or by high conversion rates from these data sources to top-finishes at Olympic Games), preferably easy to asses, with a maximum of seven variables.
  - the benchmark values for the chosen parameters / how the variables will be scored, (e.g. on a five-point Likert scale).
  - The weights between the parameters, e.g. higher weights for *"more recent results or international level results"* See Guidance Notes (High Performance Sport New Zealand, 2018, p. 5).
- Consider the use of "designated spots", e.g. (in case of two quota places per event): 1 spot based on qualifying standards and 1 based on discretion.
  An example is found in Dutch speed skating (Sierksma & Talsma, 2021), where the number of quota places is limited. Therefore, an algorithm is used to find the optimal so-called "selection ranking". For example: the winner of the 1000m - men (in trials) is most likely to win a gold medal at the Olympic Games for TeamNL. The winner of the 5000m – men (in trials) is the second most likely person to win gold at the Games, etcetera.
  The outcome of this algorithm is combined with the trials, which form the base of selecting athletes for individual events. After the trials, experts will make the final selection, considering the optimal combinations for the team pursuit and mass start. By their discretion, maximum 3 men/women could replace other skaters after the trials.

8.2.9 Do #9: A 100% data-driven policy

If it is deemed important to have a 100% defendable process, to avoid lawsuits, then a 100% data-driven policy could be chosen. This could be deferred from conversion rates from (Olympic) ranking lists, World Championships etcetera. Based on these conversion rates, a decision tree could be made.

From a mathematical point of view, the highest conversion rates should form the top of the tree. However, in consultation with athletes and coaches, other priorities can be chosen. A decision tree is shown in Table 37 (inspired by Judo Bond Nederland, 2022, p. 6):

Layers (in order of priority)	Criteria
1	Athlete in top-x of Olympic ranking
2	World Champion during qualification period
3	Silver or Bronze medal at World Championships during qualification period
4	Fight off / Trial / Any final decision that suits the sport

Table 37. Example of a decision tree.

However, an important side node should be made: if a federation prefers a decision tree, to avoid lawsuits but their NOC has a top-8 ambition, one should discuss whether the decision tree leads to the nomination of the athletes with the highest probability to finish top 8 at the Games. Is this possible without any expert opinion, at the moment of selection…?

8.2.10 Do #10: Match with international criteria

NOC6 mentioned the importance of matching the national criteria with the ones of the international federations: *"Say if the international standards are rankings and we were to require tournament performance, that could make that athlete's life very complicated."*

8.3 Check

NF1-coach: *"..And some of the questions that you asked me is also... I reflect on… because you go on every day, every week and sometimes… because it's also up to me to maybe also think about how do I present the squad? How do I tell a player who will not come there…, how do I? So I think you opened for me…, you opened things so I can reflect."*

After the Games, you should check whether your goals were met, using the tips in Checklist 3:

Checkbox	Pre-defined Goals	Check
✓	Fair and transparent process which builds trust to athletes	Organise an athlete survey: do they perceive the process as fair and transparent?
✓	Selecting the athletes with the highest probabilities to win GOLD / ANY MEDAL / Top-8 / Top-16	Calculate the conversion rates from #Starts to #top-n finishes at the Games. Compare with previous Games
	Being the number one nation in a specific sport	Create medal tables for that sport (gold/silver/bronze and total medals). Compare with World Championships, to determine your dominance
	Selecting the best athletes (e.g. based on world ranking)	Calculate the conversion rates from (world) ranking positions to #top-n finishes at the Games. Compare with previous Games
✓	Selecting athletes to build experience at the Olympic Games, to increase their winning probability at the next Games.	Count the number of debutants in your Olympic team. Compare with previous Games. Compare the conversion rates of debutants with the experienced Olympians.
✓	A 100% defendable process, to avoid lawsuits	Number of (un)successful appeals
	Protect integrity in high performance sports	Number of complaints related to integrity resulting from selection processes
	To learn to perform on demand	Compare the performances with your expectations: did they perform on demand?
✓	All / other	Do a massive evaluation: see tips below this table

Checklist 3. Are the pre-defined goals (from the Plan-phase) met?

8.3.1 Evaluate

Besides the checks in Checklist 3, a broader evaluation can be made. See Guidelines and Tips (Sports Dispute Resolution Centre of Canada, n.d., p. 10):

- *"Test your criteria against performance results from previous years and look at what would have happened had this selection policy been in place. Would it have yielded the best team possible?*
- *Test your criteria by asking a neutral but experienced person in the domain to evaluate them. This person can be a former athlete, coach or technical director in your sport. He or she could also have experience in a different sport, such as one that uses similar competition formats or scoring/ranking schemes."*

8.4 Act

Based on the checks, there are two ways to go as stated in Checklist 4:

Checkbox	Action
✓	Standardize proven practices
✓	Identify points of improvement. Start the PDCA-cycle again, by describing the obstacle: what problem needs to be solved / which goal should be achieved?

Checklist 4. Act, according to the outcomes of the checks.

Other recommendations are summarized on the next page in Table 38. Recommendations.

Priority	Recommendation	Action	Lead	Resources	Timescales	Critical success factors
1	Implement the four checklists from Plan- Do – Check – Act.	Present the checklists to all stakeholders. Most policies for Paris 2024 are already in place. After Paris, the actual CHECKs can be made and the PDCA-cycle will start from there.	High Performance director & Data Analyst	Part of normal job	Oct 2023	Commitment of stakeholders
2	Start knowledge sharing between Dutch federations / with University of Groningen	Get in touch with the University of Groningen and discuss mutual ideas about decision rules for selections.	Data Analyst	Part of normal job	Started July 2023	None
3	Create a document with guidelines for selection for the Netherlands	Inspired by the guidelines from New Zealand and others, create a comparable document for the Netherlands	High Performance director	Other colleagues of NOC*NSF	Sep 2023 – March 2024	Commitment of stakeholders
4	Do further research, especially regarding athlete preferences	Create an athlete survey. Ask about their preferences and if -in their opinion- the process is fair, transparent and unbiased.	High Performance director	Other colleagues of NOC*NSF	Sep 2024 – Dec 2024	Commitment of stakeholders
5	Change the communication with the international federations: impact of their timelines on the NOCs and national federations	Join the forces of the NOCs and NFs that contributed to this project: is there a willingness to work together on this?	High Performance director	Other NOCs and NFs	To be discussed	Sense of urgency within other NOCs / NFs
6	Create a MEMOS database with contact details, including kind of expertise	Create a MEMOS database with contact details, including kind of expertise to optimise the MEMOS-network and facilitate future MEMOS students	MEMOS tutors	IOC trainee	To be discussed	Sense of urgency within MEMOS network

Table 38. Recommendations.

9 Appendix I: Importance of the 4 Themes for National Federations

Figure 13 shows the overall importance of the 4 themes, for national federations:

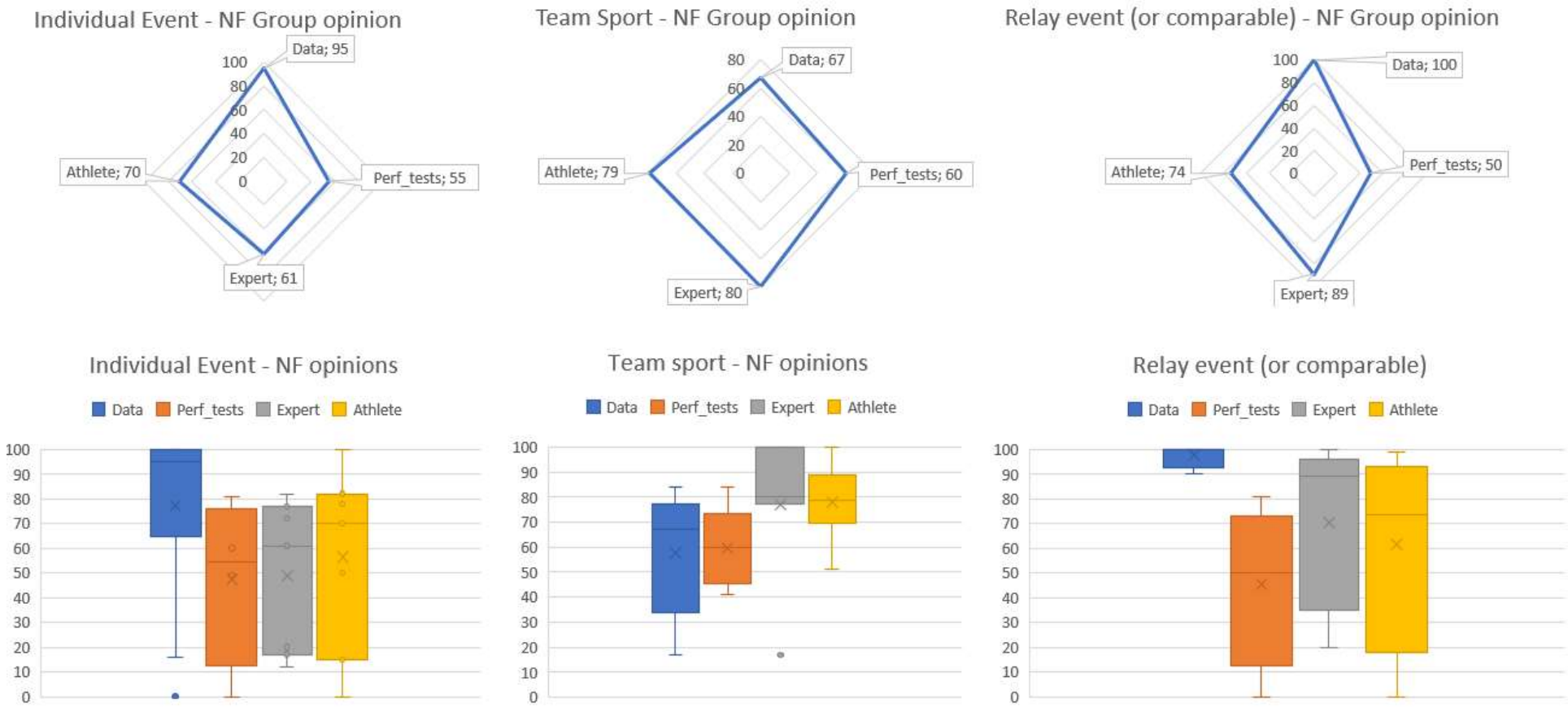


Figure 13. Overall importance of the four themes, per event: Individual event, Team sport, Relay event (or comparable). (13 NF-respondents).

10 Appendix II: Example of an interview transcript (with an NOC)

When I asked about the use of data, you answered that you use results trajectory over a set period. Could you elaborate or could you give some examples of that? Yes, no problem. And just for clarity, are you asking for normal National Federation selection policies, so to attend European Championships, World Championships or were questions purely around the Olympic Games? *We chose to narrow it down to the Olympic Games to get some more focus*. Perfect. OK. So the results trajectory. So what I mean by that is rather than taking one off events and a single results format, it might be over a period of time, so in a sport such as sailing they'll be looking at regatta results over a period of four identified regattas per boat class that will inform. So if there might be 2-3 in some categories there's no contest really, but in other categories there could be only one boat can go to a Games you'll be looking at 3-4 boats maybe. So by doing that, results over a period of time could be 12 months. That helps inform the kind of the competitiveness of each individual athlete. *OK. Yeah. Interesting. So it's not about your result in one event, but more?* Correct. Some sports do use "first past the post". What I mean by "first past the post" is officially you win that event and you're guaranteed to go to Games. So athletics will look to employ that for many of its events in July or end of June next summer to be selected for Paris. I think it's the top two, in that case, from each of the events. However, some of the events there might have pre-selected athletes in them. So if you're going in with a world champion or a Diamond League champion, one of those spots might already be gone, but that's the next stage is that "first past the post"- trials event. *How do you call that? First post? "*Past the post first". So crossing the finish line effectively first, "past the post" is the phrase that is used for that. Particularly where it's race. You know it's a timed event. *Yeah, OK.* But for there's not many sports that do apply that. Rowing can't do that because it's crew formations. So they can't afford to do that and they got to put together the best crews. Even canoe slalom, which is, now this kind of a more obvious one to go with. It's always based on at least two or three events rather than a single standalone trial. *Yeah. OK. Thank you. Interesting* And sorry, just fill you on that: that is because a lot of what we push our sports to have is consistent performances and obviously if you just had a single event, it doesn't demonstrate consistency. *No. OK. Yeah. As an example of a sport in which data is combined with expert opinion, you mentioned gymnastics. Do you know how they combine data and expert opinion?* So a good example is if they're trying to win a medal in the team events, they're looking at what's apparatus each individual athlete can contribute points towards to accrue what they think is going to be the team total score. So therefore knowing what their individual conversions are data wise and there's certain apparatus is key to that. However, there is the subjective coach opinion then tied into the athlete's ability to execute under pressure and deliver when it counts the most. So yes, you can take results, and some of those results might be taken from closed events. However, it's then discussion point of the flexibility to then deliver that such performance in a 20,000 seater arena. *Hmm. Yeah. True. OK. Thank you very much. And when I let you tick which boxes are important, you chose competition results related to the strength of the participations in that specific contest. Are there any formulas to measure the strength of the fields?* Yeah. So the sports don't necessarily do that directly and I'll bet you'll be familiar. So Infostrada obviously have that ability to and so you can calculate now almost the value of a performance at an international event relative to the international competition there. So rather than just saying well, yeah, let's stick with rowing as an example. Australia and New Zealand haven't travelled to this World Cup courts in Europe, so therefore the competitiveness of that World Cup isn't as strong. There's actually now a rating system that can be applied to inform the data coming out from that. So rather than just saying, subjectively, where we know these nations weren't here, you can then look at it actually from previous results of those competitors, should they have been in it and would they have made a difference to the outcome of that? *Yeah. So you use a rating system of Infostrada or…?* I think, [our countries'] Sport intelligence team, have developed their own version of that. So the federations work together with [that organisation] when it comes to a selection, sport intelligence team there. *Nice, yeah, just to check: if I understand things correctly, if an athlete*

qualifies for the games by name, you will not automatically send him. He needs to meet extra criteria? In some sports, yes. Normally it is a formality, but it's not that they're definitely going as a result of it. They still have to go through a sport and selection process. For every one of our sports going to the Games, we have a meeting with them. We did this back in September 2022 for Paris. But is there any requirement for any enhanced standards? Or actually [our country], to select athletes in that sport? And so therefore, rather than just say it's the review of that name, place against whether we've done that or not. Yeah. *Yeah. OK. Thank you. And I think it's also very interesting that you mentioned that you consult athlete representative groups. I was wondering, uh. Does this include athletes who are under consideration themselves?* So it's twofold. When we sit down and go through that process with all the national federations, we have a representative of our [NOC] Olympians Athletic Commission that will sit on each of those meetings. More so, not challenging the technical merits of whether it's right or wrong for each of the individual sports to have it, but actually to talk around the communication of such decisions with athletes and making sure that the athlete feelings considerations it would stand the test of is this right in the performance of the team. So that's one say. The second stage is for every sports selection policy for the Olympics. We've asked that they've gone through their own athletes groups to cross check, they're happy with both the content and the communication process so that it's shaped and presented in an athlete friendly way so that no athlete could turn around and say, well, they actually understand how I qualify or get selected for the team to go to the Games. *Yeah, because I learned from [another NOC] that they exclude at least who are trying to get to the Games themselves. We don't have that in the Netherlands. They are included in the athlete commissions*. So, they're included in that consultation process to set up the policy. When it then comes to actual selection panel meetings, athlete representatives can be present, however not if they have a conflict of interest and might be competitive in that event of which they might be selected for. *OK, so it's 2 layers?* Yeah, *OK. Interesting. You also mentioned for 'other goals': "As a collective team selection to consider supporting the overall aim of the process such as #1 nation in that sport". Could you elaborate on that a bit more?* Yeah, sure. So I'll take a sports such as sailing. So historically our Olympic selection policy agreed between [our NOC] and [our sailing federation] was always: we will only take boats of which we are confident they could reach the medal race. Yep, that's now to a top eight finish given the change in Olympic sailing racing format. However, if an athlete is deemed not to be a top athlete, but contributes to the overall team achievement of trying to be the top nation, such athlete might be considered. What that means is if they are a good, they might be good training partner for other competitors. When out there, they might actually possibly influence the training environment, performance environment. That actually helps towards actually the team achieving that top nation spot. So they don't necessarily win them or be top eight or win a medal themselves, but they might be helping other athletes achieve that success. *Yeah, that's really interesting. So that's asked for a lot of expert opinion from a coach…?* Yes, and that's where subjectivity would come in from the Olympic selection panel for that is understanding the wider contribution and athlete might be making to that performance environment. *Yeah. So maybe when it comes to physical tests, they are #12?* It might be that case, but actually they help... It's unfair to name an athlete's name, but you might have a male and female in the same boat class. The male athlete might be # 12 but the female athlete might be ranked 3rd. And actually, that female athlete could be training alongside that male athlete and racing alongside that male athlete to help that female athlete give her a better chance. *Interesting*. It's not a secret for us. […] *I think we have the same in some sports*. *Generally speaking, what advice would you give to decision makers?* It's amazing that no matter how much you've read a policy, reread it, produced it: he still always get little [Word unintelligible] that come in for it, so that the biggest mistake you make is thinking that your selection policy is completely watertight and done. When always new things come up, new angles come up and we are constantly having to change what are our best selection policies. And even though we standardise recommendations for all of them, things still are constantly changing and evolving. And for sure, and the last cycle and a bit, the athlete presentation of the information is the real change step, change area focus for us, definitely. *That's unbelievable. I heard that sometimes athletes don't read them at all. Until they're not selected and then*

they do an appeal and that's the first time they read them. Exactly, exactly. It's so much an assumption the administrators make by publishing it, thinking that everyone's read it, but not only read it, read it and understood what it actually means. So again, we promote to our sports to try and do athlete consultations and actually physically presenting it to athletes so they have an as best understanding as possible. The more positive communication you can do it in advance, the less likelihood of an appeal through lack of understanding knowledge at the back end, which is when the times are tight, right. *True. And what do you wish you would have done differently, if any?* I think we're pretty content with the process we've now got in place. So the reviewing things, the qualification and then the standards process with the sports sort of 20 months out from the Games seems fair and appropriate. Unfortunately out of our hands: I don't think some of the international federations understand how tight for time they make the whole process towards the end. So World Athletics don't publish until the 30th of June the selection lists, so that makes it really tight then to actually prepare the team appropriately. FISS, the International Ski & Snowboard Federation: they don't publish theirs until a week before when we typically are doing [Word unintelligible]. So then to have that published list go through selection process, appeals process to actually then confirm selection. What would I change might be the communication with the international federations, just what their own timelines actually mean for their NOCs / national federations. We've tried to share that with the IOC, but nothing's changed yet. *Good point. What question did I not ask that you think I should have asked?* I probably would have asked the question, you know, finding a little bit more on the data which are obtaining background. Did you ask at the start how many panels I've sat on? How many selection policies I have reviewed? *No. Only how many years of experience you have.* It will then give you a better indicator of what's the quality of your evidence base. *That's true*. Anyway, I've done it now, so you're ok. *Yes, well, I think our time is almost up. I could talk for this for hours. It's really interesting. Well, it feels like you have a very thorough process and you feel quite comfortable with it. So that's a good thing I think.* Yes, I think a few spots being bitten by it has made sure that everyone needs to be on their best game for you. And it's right in that you need to do right by the athletes, don't you? So it makes sense. Yeah, to best support them through the process. *Could there be any benefits from this project for you*? I think you're having more of a broader understanding if you can share the findings of how others do it as well. Because as I said at the moment ago, the biggest failing anyone could do is think they know all the answers to this topic, which is actually not the case. So yeah, just seeing how others do it, you can always evolve your own would be helpful. *OK. Well, thank you very much.* My pleasure.

11 Appendix III: References

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