

## LEARNED PERSONAL EXCELLENCE: AN OLYMPIC EXAMPLE

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There's something powerful that New Zealand has, and that's what we want to talk [about] today – some of the power of discovering [the difference] between medallists and non-medallists and how we can use that power to improve the goals all of us are trying to achieve. This [is] about lessons in personal excellence, and it's come from New Zealand medallists since 2000. We have collected data for 12 years and now we've added the last cycle, so we've got 16. [We've] separated medallists from non-medallists and looked at how they did what they did, what the difference is and what can we learn about how hard is it to win. We need to know what we're walking into as a medallist – so today we're medallists, what are we walking into? How do medallists prepare, what do they believe, how do they learn and what does this mean for us?

Before I got to New Zealand, I'd been to four Olympic Games as a cyclist and as a coach with Canada. Then I was in Britain for two Olympics and now New Zealand for three. The British programme was around the wellbeing of technology and innovation programme, and that's why I arrived here, to set that programme off, and that's in great hands – in-house engineers, McLaren-based people. We spotted a competitive advantage after London, and that was the collaborative approach to preparing for a pinnacle event. It couldn't happen anywhere else because of size, because of logistics, but you can pick a phone up and find anybody in New Zealand.

It was called the Knowledge for Rio programme, so now it's the Knowledge for Tokyo ... is down the street, so it's right beside the Forsyth Barr Stadium. There's three of us – two analysts, Andrew Paul and David Donovan, who are from the University of Otago, and myself. Between the three of us, in a giant network within the sports of how they review and collect and share their information – the work that makes sense of the patterns and help[s] them learn and prepare for the next pinnacle event.

Let's start with the Rio Olympic team. They're not alone. Behind them is every team that came before, and so they're leveraging all the learning that's come before them. We don't always have a record of that learning, but if you look behind, it's there. If you kept a record ... how we got here is the steps you took, but in front is uncharted goals, so you have no idea what to take, what step to take next – unless how you got to here is clear, and that's kind of the gist of the programme.

**Using a collaborative learning approach, we can keep a record and form the next step and learning from all the Olympians and all the athletes who came before.**

There's a bit of polish in the top end. We can polish, but it's around the talent that exists in people, in coaches, but also in people who haven't realised their potential yet – and that's where the growth is, and that's where we can take this learning and apply it to younger people.

## Performance

So first let's look at the performance. We have all the data from every athlete that's ever competed at a world championship and Olympic Games, so we have two and a half million performances across ... now it's over 400,000 athletes. We can track their exact pattern, individual by individual, every performance they've had [at a] world cup, and we can see how medals are produced in terms of their performance profile – they're not laid down here at top 16, and then paid a medal. There's a growth and there's a pattern that the medallists show – there's a pattern that the best athletes show.

So, what the data tells us is that it's getting harder. The Olympic athletes, they know that, but beginners may not know that. Since 1976 and John Walker, the majority of medallists came from the top 16. Prior to that, you could have people out of the blue you'd never heard of, and suddenly they make medals, and so there was a bit of a randomness before 1976. Science improved, systems improved, like the Australian Institute of Sport (AIS) in Australia. Systems started to kick in in the 1980s, and now it's the top 12 that win the medals. It's tightened now – these top 12 take the majority of the medals. Once you move to [the] top eight in 2000 and Rob Waddell, science has improved again, coaching has become more professional – now it's in the top eight and now it's the top five. Most Olympic medallists are taken from the top five in the world – so that's straight-line rowing-type sports, that's the unpredictable sports for strategy sports like yachting. There's very little room outside, so the focus for an athlete is to get good fast and stay good.

And that's the pattern over the last four Olympic Games, and what that means as you get closer to the Games. The percentage of your conversion is growing. It is a recency effect. If you're a medallist in 2017, but you have no top eight for the next world's and you're heading to Tokyo, your odds of a medal are slim. You're going to stay between 25 and 10%. If you are recent, now you're over 55% if you're in the top five the year before, so there's a recency effect as well. If you get better and you leave one group and move to the next group up, your chances of a medal improve. What that tells the athletes is that [they should] not only get better fast, but get better and continue to get better. The talent ID is [only] two cycles away now, so if you look at the record of medallists and they are top eight in the world [for] four years, people have heard of them, and you get to a world cup or world championship and there they are. One and two years out, they're in the top three, so the rate of progress for talent ID [is accelerating]. If they're not in the top eight, they are already under the gun. It's not impossible, but if you look at it across a collective globe population, this is how it looks.

## Preparation

That's how hard it is at the top, and the success is like that. There is no-one involved in elite sport that doesn't get that, but that's the environment that we're walking into. So, let's look at preparation. That's how good I need to be, so now how do I get there, and how do I get there fast? Every country, it's a machine. The Olympics is about billions of dollars, billions and billions. There's some bad things to say about the infrastructure and the binning process and all of that, and that's another talk. You know the Olympics is – it's got its challenges, that's for sure – but it collaborates countries, it collaborates people, the competition's fantastic.

It's a multi-billion-dollar game. Sixteen million a year is what [New Zealand] put in. We also put in very tight controls, so that we're building systems that will grow a legacy as well as elite programmes. So, every country is looking for

an advantage. A lot of focus is on the stuff outside of the athletes and the coaches. What we're focusing on in New Zealand is the limitations in technology. However, we know that there is no limitation for ingenuity in people in New Zealand. If you look at the history of New Zealand, the number eight wire, all of the things that makes this culture unique. It often doesn't hold up in other cultures, so how do we leverage that and capitalise, how do we collect people's know-how? We are trying to maximise people, and maximising people must be within the rules. New Zealand wants to stay in the rules, that's a mantra for New Zealand – stay in the rules, we can do better, we can think better in the box.

And this goes back to ancient Olympia – the process of winning a medal was about the person and Olympia. I have been to a conference there, with the International Olympic Academy. It's a special place to go and special place to learn, where everybody talks about the social value of the Olympics – so the greater good of the Olympic Games and lessons on how medals are won, so for instance .... This is the entranceway to the stadium, and what those statues are is a statue of cheaters. It started in Olympia because the temples were there, so the learning god for Greece and the Olympics was a tribute to ... every four years to Zeus. And primarily they were warriors, and used to fighting each other, which is why there's an Olympic truce for the games.

Their goal was to win by showing the Greek god great character and great excellence. What they got at the end is an olive wreath, and that is the pinnacle of connection to the Greek god, and that was it – but no cheating. Except there were cheaters. So, what happens when you cheat is you're banned forever from the Olympics, your talent is banned forever. Your trainer, anyone associated with you, is banned forever, and you spend your life savings on a bronze statue of Zeus with your name on it. All of those are the cheaters' statues [that] are lined on the way in to the stadium – so as the athletes walk into the stadium, they look and say, "That's not what I think." The Olympics has this mana associated with it.

**Recapturing and rebuilding that mana is important so [that] we stay within rules. We know high performers are not superhuman, so we've learnt that they need to master what they've got.**

We come back to the Olympic team and how do they prepare; what can we learn from the Olympic team? When we add up the team, they're a system – so there's a lot of theory around systems, how do populations behave? We've learned a lot because we've taken the whole Olympic team, separated medallists from non-medallists, yachting from rugby, team from individuals, streamlined from tactics, coaches from scientists, and we've looked across cycles. We've got some history and some depth and, when we separate the medallists out, there's patterns that appear. The reason they appear is that we've got such a huge population of non-medallists and a small population of medallists, and [the] uniqueness of what they say, what they talk about, what they do and how they do what they do stands out.

There is a small formula in how medals are won. The medallists do it. This is an important concept for a lot of young athletes who fake the prep. All that will eventually get to there – it just keeps going like this, but there's a delivery at the end and the medallists have a special trait on how they deliver. Some of those actions lead to quality actions, but not every action needs to be done well. There are certain actions that count. We wanted to know what these habits were, which ones add up to good actions which lead to an event to be a success.

**Beliefs + Habits + Actions = Medallists**

There's a series of action – like good training with my coach, sport science, altitude camp, eating certain foods – so there's certain actions and those actions haven't happened once, they've happened over time. What do the medallists and the non-medallists show in that path, and under that, and what are their beliefs? We talked about each Olympia, we talked about the tech, beliefs [that] push medallists, any performer, towards performance. Performance doesn't pull but beliefs push, so if you get your beliefs, whatever they are, they don't judge them, they just try to figure them out. That's what the medallists do, just figure it out: "It's a belief I've got, I've got it, there it is, it's the truth, so is this helping me or not – and not all the affirmations [do] – and do I need this belief and this belief, and this? And then I'll just [keep] repeating it till I get it." This is about reality – so what do I believe and what beliefs are impacting these habits? Because those beliefs are going to impact the actions. There is your success. If you want to know what your beliefs are, pay attention to what you do and how you speak, and that's telling you a lot about how you see yourself and how you see life. And that's the form of medals, and we're going to dig into that.

## **The team**

We've narrowed our review down to seven questions. Questions like: What's not going well? What are you worried about being the next pinnacle event? What surprised you with your last pinnacle event? Before there were hundreds, and we looked prior to London and we collected all the data which was just about the two Olympic Games and the data that no-one found useful. Once we got it, [we] added up the questions – 600 questions across 14 sports in 12 years. You need to know 1), what you're looking for, and 2), [if] you would recognise it if you found it.

So, we needed to restructure things, bring sports along with us, you know ... they've been hammering with all these questions so ... so now we narrow it down. Now, why would that be? That's right, fewer factors, and they've learned about those fewer factors so there's a combination of performing, helping to perform few factors and fewer to trial and error; which may have been talked about at the beginning. We've got people still learning and other people who are learning and the circle can still tighten – so what we wouldn't do is take the medal circle and say to the top 12-placed athletes, "Here you go and do that, you're in." It's around the learning – so how do we accelerate narrowing the circle, even for the medals that might not be ideal for the medallists.

It's the same for team sports, so we divide by caps. So that's how the analysis works for a team sport, for 15/15 or 40/40 overs, and so what they talk about, how they talk ... and we can talk a bit about what they talked about as well in the team sports, some of the differences between the team individuals.

When we look at it and we analyse it and take it apart, there were seven things, seven things, seven categories, seven themes of all those things that are important. Now it's just like a house. Every house looks different, but there's window themes and wall themes and roof themes and all that, so it's not a cookie-cutter. It's not like fast food where it looks like that, tastes like that, packaged like that, but there are categories and the categories over 16 years keep reinforcing themselves. What's in the categories?

## **The seven things that medallist do better than non-medallists**

### **1. Stable environment**

Medallists' environment is stable – it's not changing, it's not shifting, it's not complicated and they know what matters. They're not alone. So, in the language, non-medallists talk about "I and me."

### **2. Tight support team**

Medallists always refer to team support, coaches, other people, and they've got a tight crew [that] then supports you – not “giving it a go” – they're on a mission, they know what to do and they're ... they've got history together.

### 3. Clear routines

All the medallists that have a handle on the routine know that the environment shifts. If you look at Rio and the food and the travel and the climate – and you can't know everything – and if you've got preparation routines ... the medallists rely on the preparation routines.

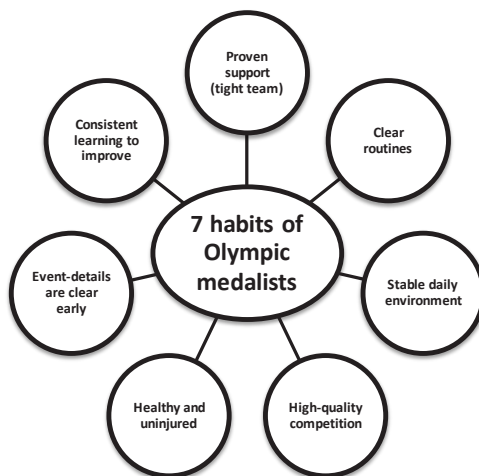


Figure 1. The Seven Habits of Olympic medalists

### 4. High-quality competition

High-quality competition is the difference between medallist and non-medallist, and so that's a frame of reference. What a non-medallist is ... they're building up their CV. They want to go places where they can win, but the medallists are finished with that – it's around tough competition, they want to know where the gap is, so they do this by competing against the best. “I'm not going to that world cup, it's only the top 16 in the world. I'm top eight, I want to go where the top four are and I want to learn, even if I get beaten, because I believe I can close the gap and I know the gap.”

### 5. Healthy and uninjured

Medallists are healthy and uninjured and have sound basics. Non-medallists are over-training. They don't know their bodies. Everyone is ... as you know as a coach, or if you've been an athlete, it's easy to over-do it, whatever new thing you're onto, it's easy to over-do it, that's the easiest way. When we look at the language in [use by] non-medallists, and we search for a word like “training intensity,” etc., the word they use most is “hard,” and the word

that medallists use most is “smarter.” They’re trying to polish, they’re trying to fix, they’re trying to improve; the non-medallist is still trying to learn, and they’re putting a massive effort in and that builds other capacities within them, but not forever. There needs to be a point where health, readiness and injury come into play in that balance. See what the medallist ... very few are injured; you look at non-medallists – lots of fractures, stress fractures, over-use.

## 6. Event planning

Event details are clear, so they’ve done their Reiki. Military-level Reiki is history in rowing, multiple repeat visits exploring the timing and the climate. When they realised there was an hour forty-five trip from the accommodation, the venue, [they] talked to Australia, sorted out a competition in Sydney, stayed an hour forty-five from the venue and Boston, competed against each other every day, just so both of, say, a combined effort could get used to sitting, and for a long period of time. Understanding what you’re walking into and preparing for it.

## 7. Learning

When I talk about the gap, the one and only gap, and they constantly polish, constantly reviewing, the non-medallists are ... were rare, but they’re learning routines.

It’s about these seven things, but also how you bring them together – the interaction with you, the athlete and the coach – so [that] the support people, my ... and my health, my body, my fitness and the environment, so [that] all the interactions, even social media, everything, all, everything adds up – new family, new house, all that is your eco-system and your environment and the event details over here, these are the pieces outside of these three. Am I clear on the event, do I have routines that work and are proven to me, and [do] I have quality competition? And then the link between those is the learning.

Beliefs drive success. They drive the process, and habits aren’t re-arranged by force. You can see that in life, where people try to do something different and every day they’re trying harder to do something different, but their belief is the same – and the belief changes habits. The easiest, smoothest downhill road is to figure out what the beliefs are that are driving the habits.

A learning belief can drive success in some, not the pinnacle of their success. For some, there’s a fear of learning and a fear of failure – so when I fail, I learn, when I fail, I’m no good – and you can see that in people and you can see that in athletes, the ones that have the belief and that power of that coaching to help lift an athlete out of that into, you know ... that’s just exposing a gap. Everything’s re-wired, there’s learning happening all the time and endless beliefs. It just shows the power of a sport belief.

Some of you recall the four-minute mile. There was a heavy belief that [run] 24km an hour and you would die, so you were just ... it’s physically impossible to run under four minutes, and so there was a systematic belief across sport this couldn’t be done. Roger Bannister breaks it. The next ... ten days later the Aussie – John Landy – breaks it, the next week at the Empire Games. Now we’ve got high-school athletes running this. This happens repeatedly now – the belief gone and sure, there’s a lot of science and there’s a lot of medicine, that’s improved, but training and coaching and ... but the belief, the fundamental belief has shifted.

## **A growth mindset asks: “How good could I be?”**

For medallists, a concept that encapsulate a lot of this belief bubble is the ‘growth vs fixed’ mindset. The ‘growth and fixed’ mindset seems to encapsulate a lot around learning, approach and the sense of self. We’re finding things like the dialogue that the medallists and their coaches are having around effort and challenge (e.g., failing) being vital for

learning. Sport is full of wins and losses, lots of judgement, and this process is around learning. Athletes with a fixed mindset don't do so well in this programme, where we're sharing data and talking about patterns. Fixed mindsets have a lot of resistance to this, because learning from others requires an open mindset, and the question: "How good could I be?"

## The process

We are looking to accelerate the learning, and how we do that is [by] clarifying the habits, beliefs, and improving the rate of acceleration into the centre of the circle. That's what we do with the sports and helping to prepare for pinnacle events. For example, with the pre-brief before the event – discussing what you expected to happen [during] the debrief (after the event), where we discuss what happened and the gap between the expectations and what happens – that is the learning. Why did it happen like that? And that's the conversation we have.

It's not a judgement, but its "Here's some insights." For three years, that's how 14 sports have participated. All the athletes and sports agreed – no more anonymity. Previously – London through to Sydney – everyone ticking an honest box: "I don't want anyone reading that." It's a problem there, but it's a fact that what I think of this programme, what I think of my performance. Now it's "Can I get some benefit by sharing that?" There is no anonymity and that means that we can track athletes. Our barrier for [the] past three years, it's been the same barrier; you've been trying new ways to work around this barrier ... Every pinnacle event for three years now is that, so we help them keep records and we help them on that edit process and what happened previously was this.

**"In the absence of good measures, it is human nature to pay attention to the things that are wrong; they are even trivial."**

**Lord Kelvin**

As you know, in sport we [have] got a lot of opinion in high performance sport. A lot of opinion and experience, but very little data, so very little happens. We are heavy on performance monitoring, but not on people and how people are moving through the system, until we've started collecting this. We started to shed some light on how these performance markers are happening, because they're happening through people. Our main focus is on the people. You may have been at meetings where the problems become emotions and people start doing stuff off the bat. We've got this Olympic review where some perform, some underperformed – heavy emotion here, heavy happy ending over here. The review is completely different, but what we can show is the past. We can say, "Well, it's emotional, but what you've got is this systematic process and it looks like a couple of points are right here." That's it.

Decisions can't be made on emotions. We need data to back up the emotion, and that's where we are. We're not leaving it to the chance, trivial things, or people trying to get problems to go away. That's exhausting. In most of our reviews, [the discussions] were around that – identifying what's an 'event' and trying to understand why it keeps repeating. "Well, the leadership in the group isn't good enough, and the athletes never talk to this person, so he's just on his own, he just thinks he's his own man." Well, what belief do we have in a team that's driving that, so [that] the beliefs shift the team and so we can help with a record? And that's where the learning's coming in. These are the processes we go through.

## Summary

The same way [that] the sports are using the seven behaviours [outlined above] ... and we show what's the

difference for us, the athlete, the coach, the leadership – and we try and work out how it works on the ground. It can't be system forever. We just keep a record of the enablers (i.e., what's going well), barriers, worries, etc. To get the truth we ask, "What do you love? What are your worries? What's a distraction to performance?" You get all sorts of things – e.g., "I'm constantly injured, and I really don't know how to monitor injuries, and I don't like the doc, etc." It's around writing it down and paying attention to what the habits are and what the weaknesses are. There's no advice from us. We never advise. All we do is relay the evidence – it's just what we're noticing and what does it mean.

It's not a cut and paste. We can't take the lessons from Olympic yachting over to Olympic rowing. Instead it's: "Here's what they do – what does this mean to you and is there any learning here?" When we add the whole system up, and all the system across the national network here, what does this mean for us? What does this mean for every single sport? Are there some things that we're not getting right and they could be polished? *Edit* – that's the mode we are in now as an organisation. We are interviewing everybody right now. We have another project called Rio 1-8. All sports have endorsed one-on-one interviews with everyone who finished one to eight in Rio – every athlete, every coach – and combining the data across the sports and events. There is more work to be done.

Part of Canada's Olympic cycling team at Seoul in 1988, **Richard Young** has a strong background in coaching as well as performance. He established the first National Cycling Training Centre in Canada (Calgary) and coached at the Olympics in Atlanta in 1996. After helping set up elite coaching programmes in the UK, he moved to New Zealand where he worked as a performance director with SPARC, then joined HPSNZ to develop the Knowledge Edge for Rio Programme (K4R). He has a BSc in human physiology, an MSc in biomedical engineering (both from McGill) and a PhD in medical science from Calgary.