



Proposed Paralympics Australia Project; development of a deep understanding of the performance impact of tyre choice in wheeled para-sports

Background;

Six Australian para-sports utilise wheeled equipment for propulsion in sport including wheelchair rugby, wheelchair basketball, para-cycling, athletics (wheelchair track and road), para-triathlon and wheelchair tennis. All require a thorough understanding of the impact of tyre selection on performance. There are many considerations including tyre pressure, rubber composition, tyre surface/texture, dimensions, shape, age of the tyre, wheel camber, interaction with the floor surface, weather conditions, influence of temperature and humidity. It is proposed that investigation into current practice and knowledge, benchmarked against world's best practice, might identify areas for performance enhancement in this area. While requiring sport-specific knowledge, there could also be valuable information to be shared between sports.

Method;

1. Discovery, prioritisation and planning – what do our sports do and what do we need to know? What are the gaps or opportunities? This will require interviews/discussions with key people to listen to their ideas, problems, needs, review of published literature. Recognising that requirements for each sport could be quite different, develop an understanding of areas in which we have most performance impact.
2. Source any industry experts or links to be leveraged within Australia or within our sport systems.
3. Discover more about World's Best Practice; who are the world leaders? Where does best practice and best research live?
4. Can we learn from these international leaders? If indicated, go to one or more of the international leaders – use our contacts wisely for best impact. Avoid being on a 'tour' and go with specific requirements and questions in mind.
5. Implementation – research into practice. Establish clear priorities and recommendations for best performance. PA to work in partnership with the sports.

Roles;

PA Performance Services team; Keren, Paul, Tim, Ross, Cathy will drive the project
Matthew Crawford, AIS Paralympic Engineer, will be a key advisor
Sports will nominate relevant people for the discovery/consultation and implementation stages.

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