

Capability Statement

Aligned to ELEVATE 2042 – Brisbane Olympic
and Paralympic Games Legacy Strategy



Foreword

CQUniversity is proud to be a national leader in movement-related education, research, and innovation.

With a strong regional foundation and a vast national footprint, we are deeply committed to improving lives through sport, exercise, physical activity, and occupational and rehabilitation therapy.

CQUniversity's [SPORT Strategy 2025–2028](#) reflects this commitment, showcasing our strengths across teaching, research, partnerships, and community engagement.

It also reinforces our belief that **movement changes lives.**

The revitalised *ELEVATE 2042 – Brisbane 2032 Olympic and Paralympic Games Legacy Strategy* provides a timely and concrete framework to align our efforts. The strategic pillars and priorities closely affiliate with CQUniversity's capabilities and aspirations, and we are determined to play a meaningful role in advancing them.

Through collaborative research, applied science, and innovation, we are committed to helping the Queensland and Australian economy achieve a long-lasting legacy through the power of sport.

Please find an outline of CQUniversity's capabilities in addressing and assisting in the key priorities for this legacy strategy.

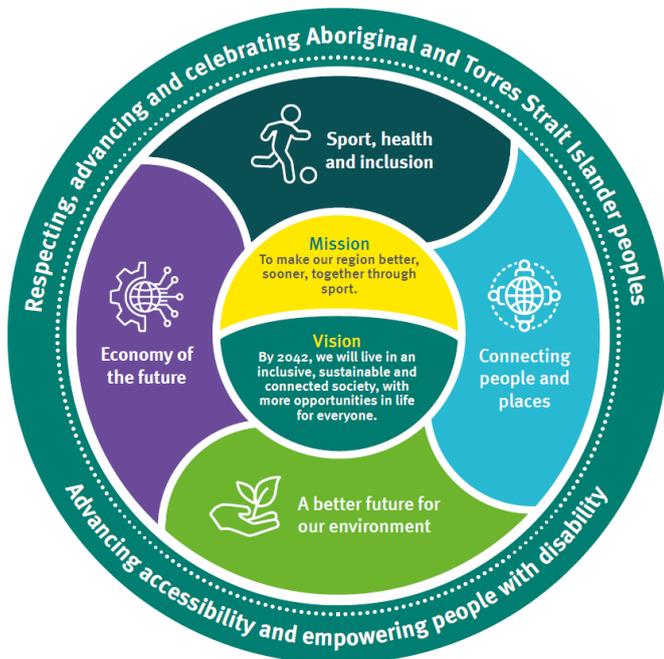
How we align

CQUniversity brings a diverse and impactful set of capabilities that directly support the strategic goals of the ELEVATE Legacy Strategy.

Our expertise includes many different disciplines which align well with the strategic pillars of the Brisbane 2032 Olympic and Paralympic Games Legacy Strategy.

We believe we have the capacity and the experts to fulfill the key Priorities as set out in *ELEVATE 2042* as follows:

- **Sport, health and inclusion:** We deliver world-class research in sport performance and rehabilitation, physical activity promotion, sleep science, and wellbeing to support high-performance athletes and the general population alike.
- **Connecting people and places:** We focus on the use of walking as an active transportation tool, universal design, and the importance of health and wellbeing for our Indigenous groups.
- **A better future for our environment:** We apply our expertise in the areas of green energy transition, marine ecosystem restoration, and the ecological practices of our Traditional Owners.
- **Economy of the future:** Our expertise in regional economic development, access to business opportunities for equity groups, asset management and economic evaluation can after the Games.



Source: ELEVATE 2042 Legacy Strategy



SPORT, HEALTH AND INCLUSION

DESIRED OUTCOME	Higher levels of physical activity leading to a healthier general population	Increased participation in sport with equity targets for identified cohorts	Enhanced sporting achievement at elite competition level
POTENTIAL INDICATORS	<ul style="list-style-type: none"> > Enhanced health and wellbeing in the general population. > Increased levels of adult and child populations achieving desired levels of physical activity including people with disability. > Decreased levels of adult and child populations experiencing obesity. > Increased levels of Aboriginal and Torres Strait Islander peoples achieving desired levels of physical activity. 	<ul style="list-style-type: none"> > Increased participation in sport Australia-wide. > Increased levels of participation in sport and sports administration for target cohorts: (Aboriginal and Torres Strait Islander peoples; people with disability; culturally and linguistically diverse people; women and girls; older Australians) > Numbers of rural and regional Queenslanders who can participate in local sport activities in their own region. > Assistance provided to support a sustainable sports system across Oceania. 	<ul style="list-style-type: none"> > Increased support for training and development of elite athletes, coaches, officials and volunteers including those with disability. > Community perception of athletes, including those with disability, to inspire the next generation of talent.
CQU CENTRE/GROUP			
PHYSICAL ACTIVITY RESEARCH GROUP	Physical activity promotion; benefits of walking; 10,000 Steps program; physical activity literacy, motivators, barriers, behaviour change, digital and wearable technology.	Physical activity participation - informal sports, non-organised sport, walking, recreation to support target cohorts, rural and regional; accessible and inclusive physical activity.	Supporting athletes during preconception; pregnancy and postpartum; performance management; return to play.
SLEEP AND BIOLOGICAL RHYTHMS GROUP	Role of good sleep in promoting health behaviours; wearables to identify 'good' or 'bad' patterns of sleep and physical activity in the general population; Potential negative impact of poor/reduced sleep on levels of physical activity.		Para-athletes and able-bodied athletes: strategies to (i) facilitate sleep and recovery; (ii) minimise the impact of training and competition on sleep. Use of wearable devices to customise sleep strategies for individuals/teams; use of light-emitting devices to facilitate circadian adaptation following transmeridian travel to training/competition venues.

SPORT SCIENCE GROUP	Using traditional and modified sports games for increased activity among diverse populations to improve their health, wellness, and future lifestyles ("sport for health").	Using traditional and modified games tailored for specific cohorts to increase their sport participation along with talent identification strategies to align potential athletes with sporting pathways, particularly within a regional footprint.	Monitoring wellness, training load, fitness, and readiness; nutritional, training, and recovery strategies to promote physical and cognitive performance across various environments including heat.
REHABILITATION GROUP	U-BEACH: Improving beach accessibility to promote physical activity, rehab, and health-wellbeing in older people and people with disability; using innovative methods to improve physical activity and muscular health and development in children with/without disability.		Using remote athlete monitoring systems to reduce injury rates and improve health and performance in elite and sub-elite female cricketers from regional and remote areas.
CENTRE FOR RESEARCH IN EQUITY AND ADVANCEMENT OF TEACHING AND EDUCATION	Education of the general population around health and well-being. Creation of programs delivered in schools aimed at increasing activity level of children.	Outreach to CAULD and First Nations communities; disengaged youth; designs for programs in regional/remote communities; schools linked.	Professional communication and digital media expertise - communication of perceptions. Creation of educational materials for a range of school contexts.
JAWUN RESEARCH INSTITUTE	Support research that improves the health and wellbeing of Indigenous people for optimal quality of life.	Promote participation in physical activity including sport through adequate funding & resourcing of projects.	Through partnerships with communities, raise awareness of opportunities at local and elite competition level.
CLUSTER FOR RESILIENCE AND WELLBEING	Role of physical activity in the physical health of people with mental illness. Scope of practice for exercise scientists and exercise physiologists, sport and exercise in community wellbeing.	Sport and physical activity accessibility and resources for marginalised or vulnerable groups.	Managing off-field parental negative behaviours in junior sport. Athlete wellbeing.

CONNECTING PEOPLE AND PLACES

DESIRED OUTCOME	Increased local and regional connectivity	Advancing liveability and accessibility for all	Greater housing accessibility and affordability in target locations
POTENTIAL INDICATORS	<ul style="list-style-type: none"> > Increased use of public and active transport in SEQ before, during and after the Games. > Proportion of population with good accessibility to a range of services by walking and cycling. > Accelerated upgrades to transport infrastructure in SEQ which supports the region's growing population and a good Games experience for all. > Improved digital connectivity in regional, rural and remote communities. > Improved proportion of residents with access to employment by public and active transport. 	<ul style="list-style-type: none"> > Incorporation of universal design principles in the development of Games-related places and precincts. > Perception of SEQ as a liveable region by residents and visitors. 	<ul style="list-style-type: none"> > Number of affordable and social housing units in Games-related precincts. > Number of accessible housing units in Games-related precincts. > Number of repurposed Games-related infrastructure for housing in Queensland.
CQU CENTRE/GROUP			
PHYSICAL ACTIVITY RESEARCH GROUP	Walkable streets and neighbourhoods (Queensland Walks), 10,000 Steps walkway signage strategy, activation of places and spaces and use of active transport to increase physical activity and daily steps, digital and tech-supported physical activity interventions.	Cool, connected, shaded active transport networks for accessible access to facilities and events; inclusive gyms.	
CENTRE FOR RESEARCH IN EQUITY AND ADVANCEMENT OF TEACHING AND EDUCATION	Support materials for diverse people to assist with the use of digital software and hardware in regional, rural and remote communities. Digital comms team + school-based materials (distance and online learning as well as face-to-face).	Team members have employed universal design principles in places and precincts (e.g., Savannah Way Trail in FNQ, STEM Central in Gladstone). Facilitating co-design workshops and stakeholder engagement.	
JAWUN RESEARCH INSTITUTE	Assist communities to identify, resource and utilise technology to increase health literacy and improve health and wellbeing and educational outcomes.	Addressing the social determinants of health and wellbeing for Indigenous People and promote equity through research. Active collaborative research for community led solutions to improve socio-cultural, health and wellbeing.	Work with stakeholders to provide evidence to support equity in housing and community infrastructure for Indigenous people in all areas.
SOCIAL IMPACT LAB		Facilitating co-design workshops with diverse communities to ensure inclusive, trauma-informed and locally relevant infrastructure and service design. Supporting universal design principles through lived experience engagement and stakeholder collaboration	

A BETTER FUTURE FOR OUR ENVIRONMENT

DESIRED OUTCOME	Maximising sustainability benefits and embedding best practice circular economy principles	Ecosystem protection and regeneration	Accelerated transition to clean and renewable energy
POTENTIAL INDICATORS	<ul style="list-style-type: none"> > All new or significantly upgraded competition venues and athlete villages used for Brisbane 2032 will target a world-leading 6-star Green Star rating from the Green Building Council of Australia, where relevant. > The community is actively Caring for Country through the choices they make. > Embed best practice circular economy principles to reduce the environmental impacts and embodied emissions from products materials and buildings. 	<ul style="list-style-type: none"> > Increase in protected areas and world heritage areas across Queensland. > Habitat protection and restoration has been accelerated. > Riverine, estuarine and marine water quality demonstrates continual improvement. > Maintain or improve the ecological character of Queensland’s Ramsar sites. 	<ul style="list-style-type: none"> > Increased percentage of energy from renewable sources by 2032 and 2042, in line with Australian Government targets and best practice. > Above trend progress made towards net zero emissions in line with Science Based Targets.
CQU CENTRE/GROUP			
PHYSICAL ACTIVITY RESEARCH GROUP	Planetary health, physical activity and caring for the local environment (e.g., picking up rubbish whilst walking or running). Links between active transport and pollution.		
CENTRE FOR HYDROGEN AND RENEWABLE ENERGY	Developing new low and zero emission electricity, energy, fuels and chemicals from renewables, biomass and waste resources.		
COASTAL MARINE ECOSYSTEMS RESEARCH CENTRE	Use of seagrass meadows, shellfish reefs, and microalgae as natural filters for water quality; Low-cost, real-time water quality sensors; Ecological restoration frameworks, seed enhancement trials, and site selection criteria to fast-track restoration and reduce failure; Hands-on training to Traditional Owners, students, and industry in marine habitat restoration; Restoring seagrass resilience in the Great Barrier Reef; Water quality monitoring in estuarine and marine zones.		

CENTRE FOR REGIONAL ECONOMIES AND SUPPLY CHAINS	Non-market values of environmental conservation and restoration of GBR catchments. Creating people and policy awareness.		
CENTRE FOR RESEARCH IN EQUITY AND ADVANCEMENT OF TEACHING AND EDUCATION	Educational programs and incentives/challenges/competitions for schools and community to actively care for country.	Ecosystem protection and regeneration Education and community programs to ensure GBR is protected in regional Queensland.	Accelerated transition to clean and renewable energy REP program creating solutions for renewable transitions in Gladstone and CQ.
CENTRE FOR RAILWAY ENGINEERING			Developing practical adoption, adaptation and support designs for using the new low and zero emission energy systems in rail and road vehicles.
JAWUN RESEARCH INSTITUTE	Continue to learn from traditional ecological practices of Indigenous peoples. Embed ecological sustainability at all levels of the education system Resource Caring for Country programs and acknowledge its impact on positive cultural and health outcomes.	Biodiscovery, biodiversity and ecosystem protection in partnership with Traditional Owners; Research with Indigenous Ranger Programs in environment and ecosystem regeneration; Work with Traditional Owners in cataloguing animals and plants; Active research projects between Traditional Owners and Linguists to identify language names for places/animals/plants.	Support research that identifies Indigenous traditional practice contribution to clean and renewable energy through deep understanding and management of the land and environment and ongoing stewardship of ancestral lands.
SOCIAL IMPACT LAB	Partnering with local governments and communities to co-design circular economy initiatives and zero-waste strategies. Applying social innovation and human-centered design to environmental challenges with community-led solutions.		

ECONOMY OF THE FUTURE

DESIRED OUTCOME	Greater unity and a stronger global identity for the region	A more inclusive and resilient future economy	A thriving and equitable local business community	Increased jobs and growth in target industries and sectors
POTENTIAL INDICATORS	<ul style="list-style-type: none"> > Brand recognition of Brisbane, SEQ, Queensland and Australia. > Collaboration with Oceania nations. 	<ul style="list-style-type: none"> > Increased economic participation for Aboriginal and Torres Strait Islander peoples, people with disability, women and culturally and linguistically diverse communities. > Increased sustainable sourcing/procurement. > Improved performance of Queensland as a place of choice for innovation and investment. 	<ul style="list-style-type: none"> > Share of economic opportunities flowing to small businesses. > Share of economic opportunities flowing to regional businesses. > Procurement targets for employment of, or businesses owned by, Aboriginal and Torres Strait Islander peoples and people with disability. 	<ul style="list-style-type: none"> > Growth in jobs, investment and economic contribution of Queensland's critical industries. > Growth of the business of sport. > Increased share in the global visitor economy.
CQU CENTRE/GROUP				
SPORT SCIENCE GROUP	Potential collaboration with sporting bodies and teams across Oceania nations through applied sport science inquiry.			
CENTRE FOR HYDROGEN AND RENEWABLE ENERGY	Helping local businesses, workers and communities benefit from the investments and technologies of the energy transition.			
SUSTAINABLE PROJECT & ASSET MANAGEMENT RESEARCH GROUP	Potential collaboration with project management bodies (e.g., PMI, CIOB, AACE, Engineers Australia) across Oceania through applied project/asset management research.	Driving sustainable, digital, and circular economy practices in construction and infrastructure delivery.	Applying Value Management and project optimization to enhance opportunities for small, regional, and Indigenous businesses.	Supporting growth and optimization in Queensland's construction and infrastructure sectors.

CENTRE FOR REGIONAL ECONOMIES AND SUPPLY CHAINS	Research and policy development around workforce growth, supply chains, economic impact and environmental analysis.	Community engagement and promotion; regional and environmental economic analysis; regional workforce development.	Local buy or procurement strategies development for government and industries.	Job growth in regional Qld, and its attraction and retention factors analysis.
CENTRE FOR RESEARCH IN EQUITY AND ADVANCEMENT OF TEACHING AND EDUCATION	Digital and creative design expertise - including co-designed projects that are responsive to communities.	Increased participation of equity groups - building on projects that include creating materials to support CAULD workers and CAULD students.		Tourism-based certificates in VET; global competence experience.
CENTRE FOR RAILWAY ENGINEERING			Provide mathematical modelling and cost estimates for the various zero emission energy options and so helping to de-risk transition decisions.	
JAWUN RESEARCH INSTITUTE	Recognition of Indigenous people as the first inhabitants of the country.	Research supporting Indigenous nation building to reaffirm traditional governance systems to lead economic development. Research partnerships with communities to collaboratively gather and analyse data to inform community planning including business and economic development.	Support Indigenous communities to take advantage of business ventures which engage people with Indigenous knowledges and practices. Support research and education which increases workforce capacity and capability especially in rural and remote communities.	
SOCIAL IMPACT LAB		The Social Impact Lab supports social enterprise and business-for-good approaches to solve complex social and environmental challenges. Working with government, industry, and the for-purpose sector, the Lab empowers communities to create sustainable solutions that deliver real impact. As Australia's first and only university accredited as a social enterprise by Social Traders Australia, CQUniversity plays a vital role in strengthening the regional social enterprise ecosystem through education, research, and collaborative engagement.		
CLUSTER FOR RESILIENCE AND WELLBEING	Economic evaluation of the impacts of infrastructure use and of wellbeing initiatives.			

Our experts

CQU CENTRE/GROUP	MEMBERS
PHYSICAL ACTIVITY RESEARCH GROUP	Corneel Vandelanotte, Anetta Van Itallie, Danya Hodgetts, Stephanie Schoeppe, Stephanie Alley, Sasha Job, Sabi Kaphle, Sam Cassar, Katie de Luca, Matt Fernandez, Tim Budden, Elise Rivera, Thomas Doering, James Czencz, Mel Hayman, Saman Kahlesi, Georgina Whish-Wilson
SLEEP AND BIOLOGICAL RHYTHMS GROUP	Greg Roach, Charli Sargent, Michele Lastella, Dean Miller
SPORT SCIENCE GROUP	Joshua Guy, Nathan Elsworthy, Rogan Bartlett, Fabio Serpiello, Aaron Scanlan, Thomas Doering, Dean Miller, Michele Lastella, Geoff Warman, Sam Fien
REHABILITATION GROUP	Luke Heales, Steve Obst, Anthony Schneiders, Ben Peterson, Michael Wilkinson, Tanya Palmer, David McNaughton, Katie de Luca, Sasha Job, James Czencz, Matt Fernandez, Georgina Whish-Wilson
CENTRE FOR HYDROGEN AND RENEWABLE ENERGY	Paul Hodgson, Jonathan Love, Mohammad Rasul, Jamshid Aghaei, Sanath Alahakoon, Saif Al Ghafri, Tienneke Trotter, Michael Opolot, Ashfaq Chowdhury, Xin Chang
SUSTAINABLE PROJECT & ASSET MANAGEMENT RESEARCH GROUP	Ahmed Kineber, Xianbo Zhao, Qilei Zhang, Roksana Tumpa, Fatima Afzal, Osama Dawoud, Kaveh Mirzaei, Bode Ogunmakinde, Ziyad Abunada, Philip Langat, Ashkan Memari, Mohamed Bashir, Ray Biplop
CENTRE FOR REGIONAL ECONOMIES AND SUPPLY CHAINS	Delwar Akbar, John Rolfe, Hurriyet Babacan, David Pearson, Jay Ananda, Jeremy De Valck, Imran Ali, Reza Akbari, Houng Le, Quamrul Alom, Tasadduq Imam, Prikshat Verma, Galina Williams, Amlan Haque, Upamali Amarakoon
COASTAL MARINE ECOSYSTEMS RESEARCH CENTRE	Emma Jackson, Manoj Kumar, Angie Capper, Charles Cadier, Larissa Valerio, Amie Anastasi, Nicole Flint, John Rolfe, Jeremy De Valck, Iain Gordon, Andrew Irving, Grace Blackburn, Guy Carton, Shaneel Chandra,
CENTRE FOR RESEARCH IN EQUITY AND ADVANCEMENT OF TEACHING AND EDUCATION	Linda Lorenza, Linda Pfeiffer, Jo Dargusch, Margaret Kettle, Corey Bloomfield, Nadia Mead, Bree Kitt, Miriam Ham, Karena Menzie-Ballantyne, Angelina Ambrosetti, Amy Johnson, Fae Haselgrave, Steve Pace, Andrew Couzens, Jan Cattoni, Michelle Vanderburg, Robert Vanderburg, Trixie James
CENTRE FOR RAILWAY ENGINEERING	Colin Cole, Maksym Spiriyagin, Qing Wu, Esteban Bernal, Sanjar Ahmad
JAWUN RESEARCH INSTITUTE	Greg Pratt, Adrian Miller, Yvonne Cadet-James, Mani Naiker, Gary Fry, Alexandra Aikhenvald, Bea Stanley, Komla Tsey, Lesley Baird, Kylie Radel, Katrina Rutherford, Janya McCalman, Ruth Fagan,
CLUSTER FOR RESILIENCE AND WELLBEING	Robert Stanton, Chris Doran, Adam Gerace, Amy Johnson, Cassy Dittman, Dawn Dane, Desley Simpson, David McNaughton, Julie Bradshaw, Jenni Judd, Kerri Jackson, Kirsten Russell, Lauren Miller-Lewis, Michael Bowles, Maria O'Reilly, Robyn Preston, Sam Fien, Stephen Haines, Talitha Best
SOCIAL IMPACT LAB	Francois Gallais, Olav Muurlink, Sara Brown, Steve Williams, Ruby Smith, Elise Rivera

Our locations



CQU Capabilities in Focus

Groundbreaking research guides Australian sport to support parent athletes



Australia's elite athletes can be supported right through the parenthood journey, thanks to new national best-practice recommendations designed for sporting organisations.

Backed by some of Australia's top sportswomen, sports administrators, and health and performance professionals, the comprehensive recommendations are applicable across all sports and codes.

CQUniversity researchers developed the *[AIS Best-Practice Recommendations to Support Elite Athletes from Preconception to Parenthood](#)* guide with the Australian Institute of Sport (AIS), Queensland Academy of Sport (QAS) and athletes themselves, to give clubs and organisations a best-practice approach to support athletes from preconception through to parenthood.

[Find out more](#)

How do sleep trackers work, and are they worth it?



CQUniversity's sleep research, led by researchers at the Appleton Institute for Behavioural Sciences, explores the evolving accuracy of wearable sleep trackers. While traditional polysomnography remains the gold standard, modern wearables use accelerometry and photoplethysmography (PPG) to estimate sleep stages and duration. Validation studies show wearables can detect sleep with over 90% accuracy, though staging remains less precise.

CQUniversity contributes to advancing these technologies, supporting better sleep health through accessible, data-driven tools. Our research empowers individuals to track long-term sleep trends and adopt healthier sleep habits, bridging clinical science with everyday wellness.

[Find out more](#)

25 years and counting for 10,000 Steps



Queenslanders will continue to take steps towards better health with CQUniversity's 10,000 Steps program receiving renewed funding for the next two years.

The 10,000 Steps program is one of six evidence-based preventive health initiatives, funded by the Queensland Government through Health and Wellbeing Queensland.

10,000 Steps has inspired hundreds of thousands of Queenslanders to move more, promoting all movement matters through step-counting tools, online challenges and community campaigns.

[Find out more](#)

First Nations research institute officially launched



CQUniversity has officially launched the First Nations Jawun Research Institute during National Reconciliation Week in Cairns.

Initially opened as a research centre in 2017, the upgrade to an institute is in recognition of its success in contributing to improving the health and wellbeing of First Nations peoples using principles and methodologies based on First Nations knowledges. It's the first research institute in North Queensland dedicated to realising First Nations prosperity, social and economic inclusion and cultural continuity.

[Find out more](#)

SeagrassRestorer launch marks new era of global collaboration



From scientists to conservationists, community groups to environmental funders - everyone will now have access to an innovative new knowledge-sharing platform. SeagrassRestorer is the result of an international partnership comprising some of the world's leading seagrass scientists that aims to accelerate global progress in marine habitat restoration and contribute to the resilience and sustainability of coastal ecosystems. Director of CQUniversity's Coastal Marine Ecosystems Research Centre (CMERC) Prof. Emma Jackson explained that seagrass meadows faced significant losses across the globe and the platform was an important development when it comes to managing seagrass research, conservation and restoration.

[Find out more](#)

Smart tech driving Australia's circular economy for plastics



CQUniversity researchers are tapping into Artificial Intelligence (AI) to address our planet's plastic addition – so plastic waste is better identified for recycling or upcycling, and so consumers realise the impact of their habits.

Dr Anwaar Ulhaq is a Senior Lecturer in Artificial Intelligence at CQUniversity and is driving new technology to help Australians rethink how they approach the problem.

Plastic GPT is an AI-powered educational tool developed at CQU to help users recognise, classify, and better understand plastic waste.

[Find out more](#)

[Read more stories here](#)



Contact us.

CQUniversity invites you to learn more about our Sport Strategy, our Strategic Partnerships and our Regional Commitment.

Visit our [Sport Strategy website](#) or email us at sport.strategy@cqu.edu.au

For more information, please contact Professor Fabio Serpiello, Director, Sport Strategy

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