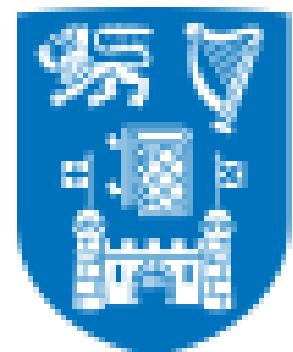


PILOT WELLBEING, STRESS COPING & RESILIENCE

Dr Joan Cahill
Captain Paul Cullen

Dr. Keith Gaynor - Prof Simon Wilson – Sohaib Anwer



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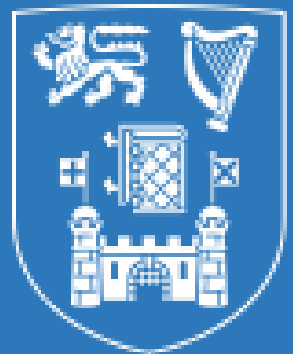


PEOPLE
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PERFORMANCE

Centre for Innovative Human Systems

Hazard Identification

“Say ... what’s a
mountain goat
doing way up here
in a cloud bank?”



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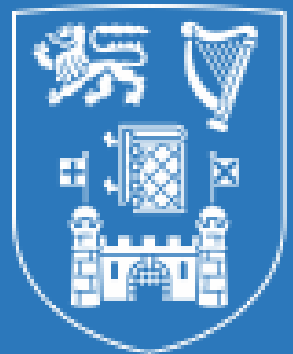
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Risk Management

Predictive & Reactive



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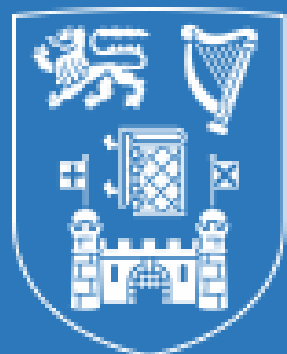
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PILOT LIVED EXPERIENCE PROJECT

- Understanding measuring impact of Work-Related Stress (WRS) on wellbeing, performance and safety?
- Why do some pilots cope better than others? - **Resilience**
- Change - solutions for pilots and industry?



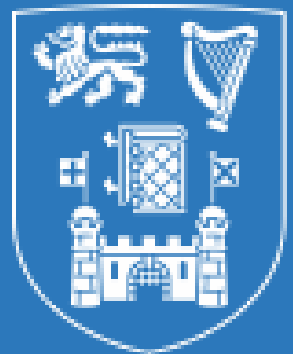
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3 Pillars of Health



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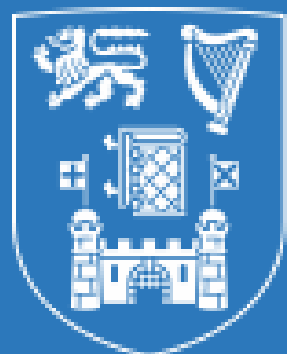
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Stress Coping & Self Management

- People vary in relation to their ability to cope successfully with stress (including WRS)
- The practice of healthy behaviours strengthens the person's resistance to stress
- Substitution of maladaptive coping with more adaptive coping
- Common stress coping strategies include exercise, the practice or relaxation techniques and seeking social support and/or social participation.



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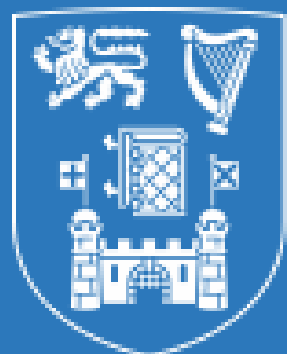


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What is happening with Pilot Wellbeing?

- Semi-structured informal interviews (n=103)
- Workshops (n=33)
- Interviews and workshops with industry stakeholders (n=7)
- **Anonymous online health questionnaire (n=1,059)**
 - Depression
 - Anxiety
 - Suicidal Ideation
 - Burnout
 - Disengagement
 - Emotional Exhaustion

Susceptibility vs Resilience
Wellbeing I vs Wellbeing II



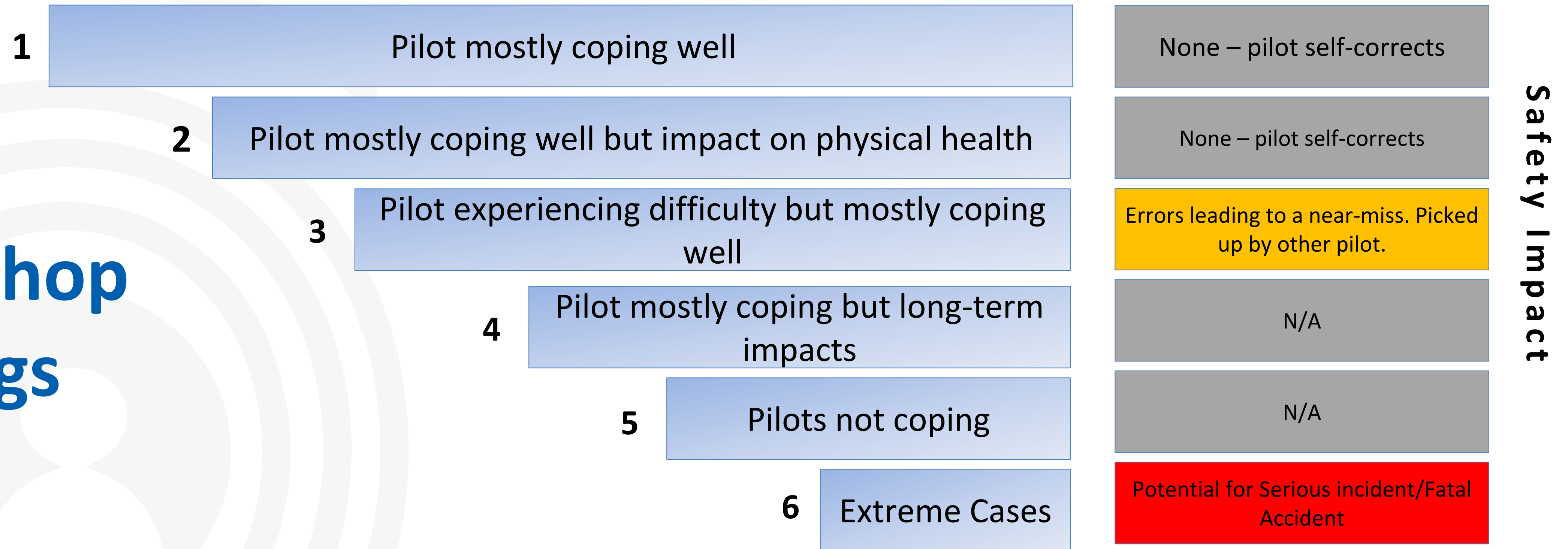
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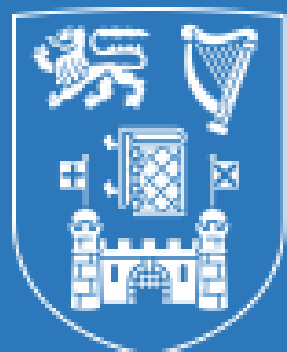
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Workshop Findings



Impact Scenarios Identified by Pilots

(Cahill, Cullen & Gaynor, 2018)



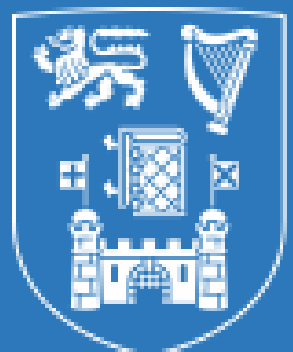
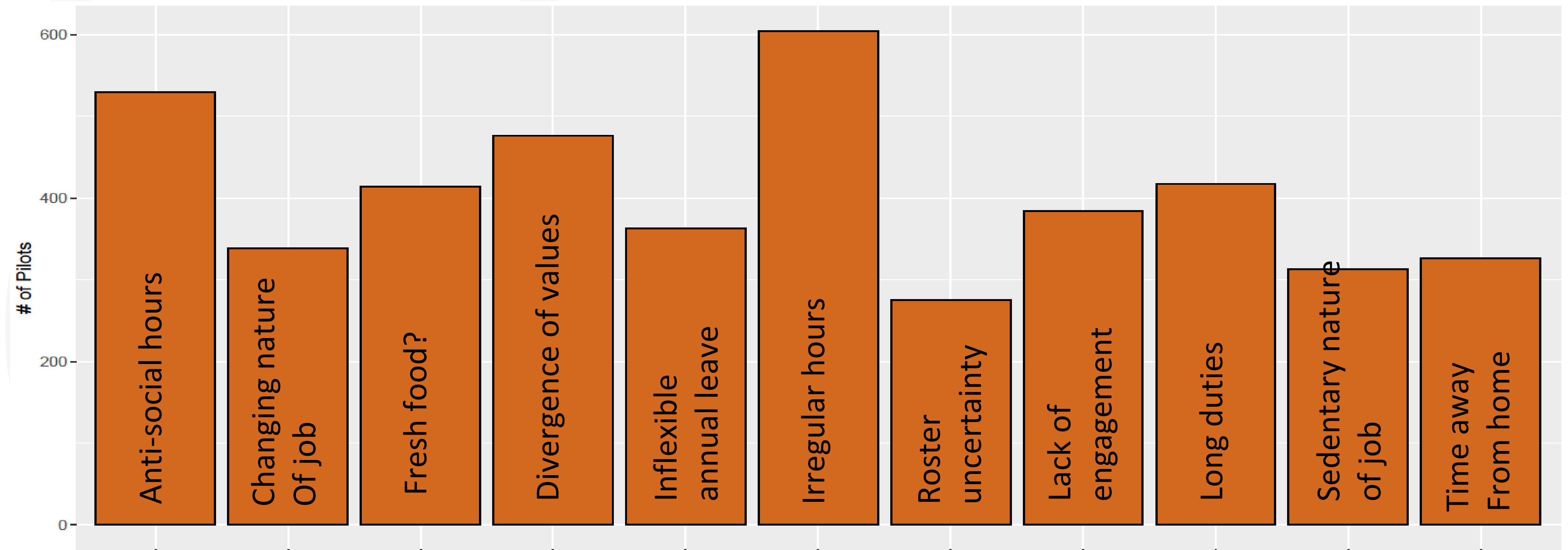
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Sources of Work Related Stress



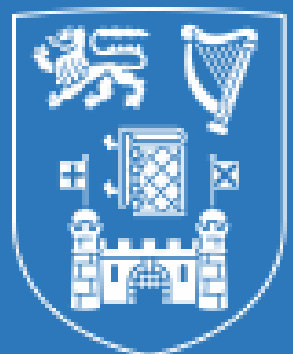
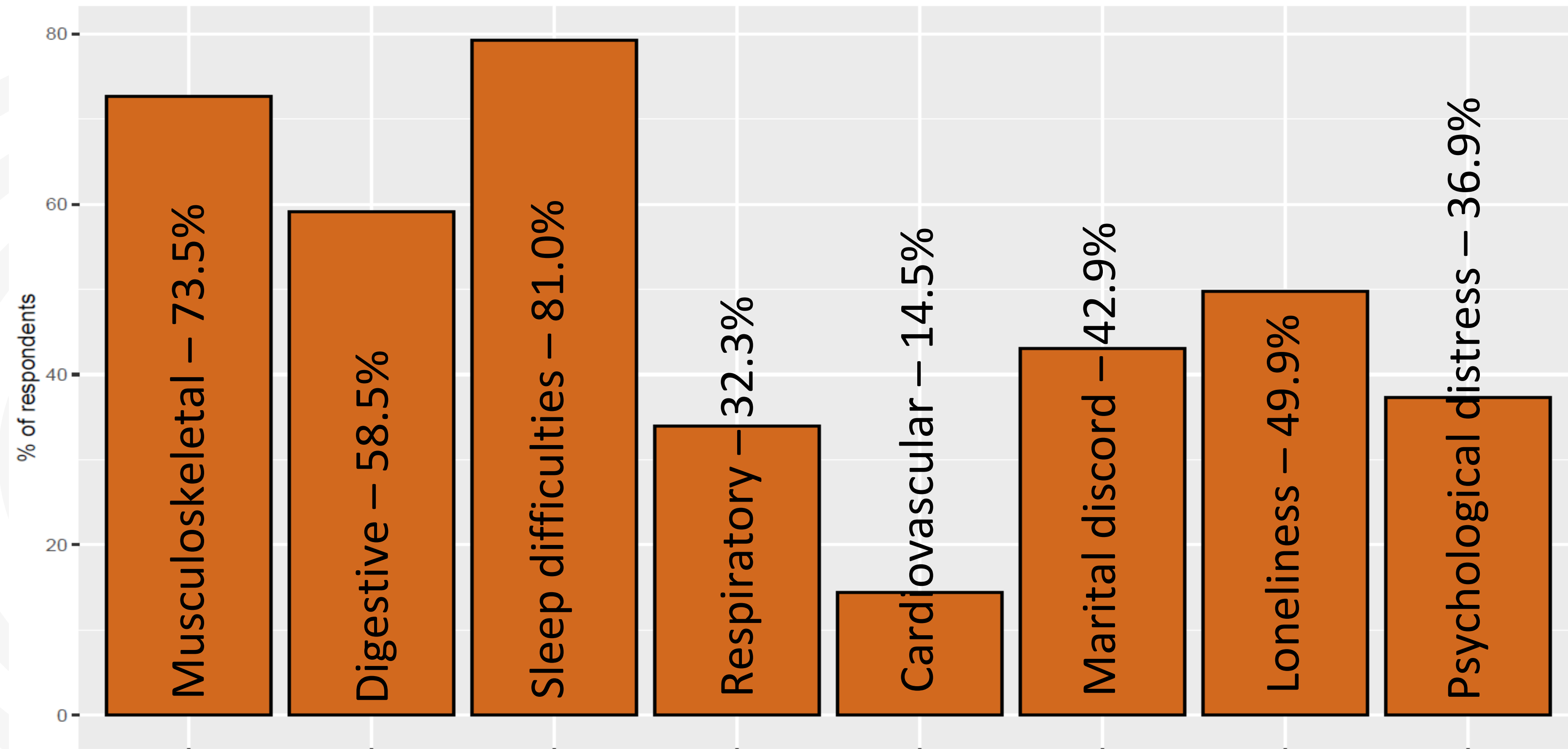
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Wellbeing Issues suffered due to job



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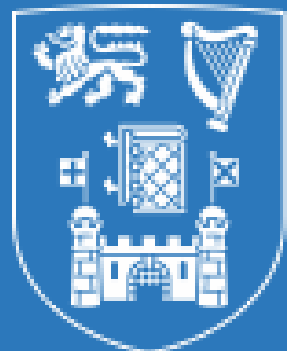
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Pilot Lived Experience Survey & Stress Coping

- Not all pilots are suffering
- Nearly **60% are using coping mechanisms** to manage WRS and its impact on wellbeing
- Pilots using coping mechanisms were found to have lower depression severity levels.



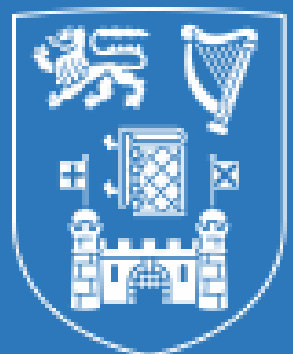
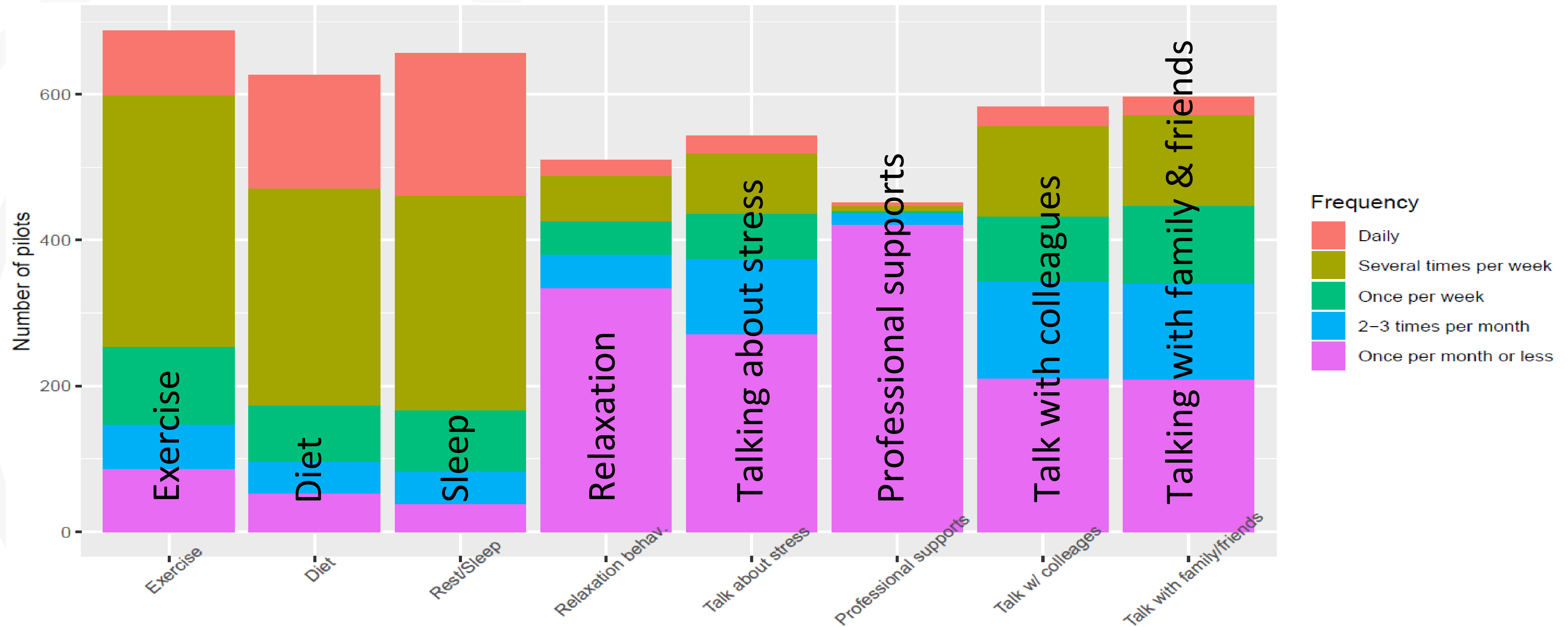
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Pilot Lived Experience Survey & Stress Coping



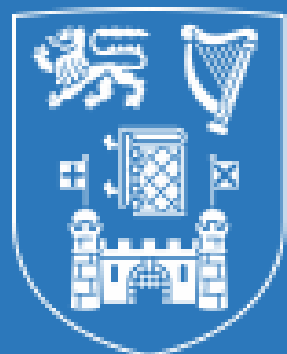
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How to Fly Straight & Level in Turbulent Times



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COVID Situation & Need for Resilience

Pre COVID-19, pilots experiencing WRS and wellbeing challenges

COVID: OPERATIONAL SCENARIOS (FSF)

1: In work

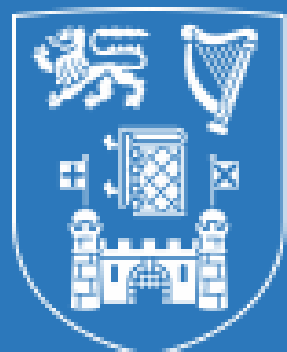
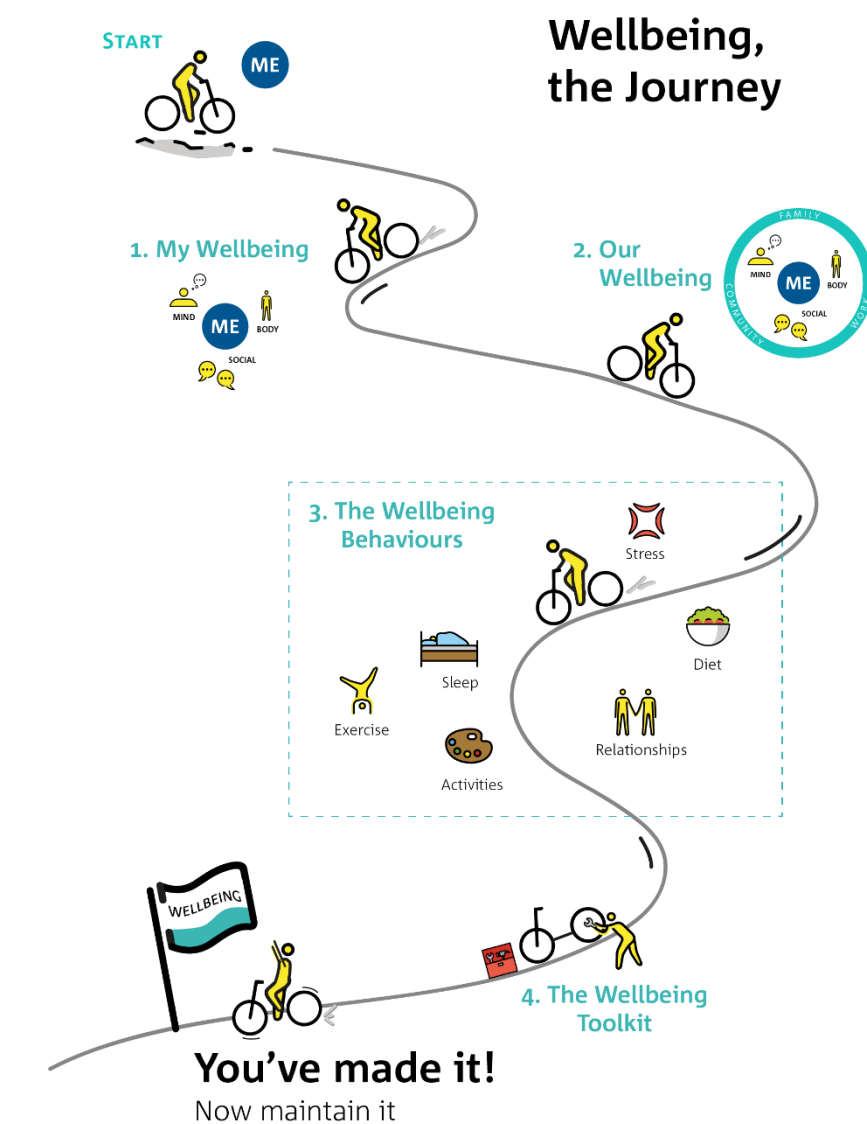


2: Off work



3: Going back to work

Is EASA IR/Guidelines Enough?
Have we the right tools to cope (Pilots, Airlines, Industry)?



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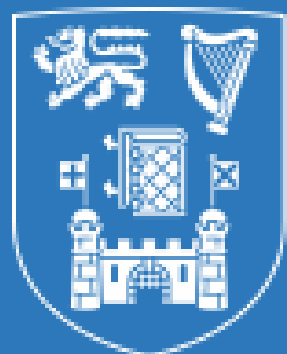
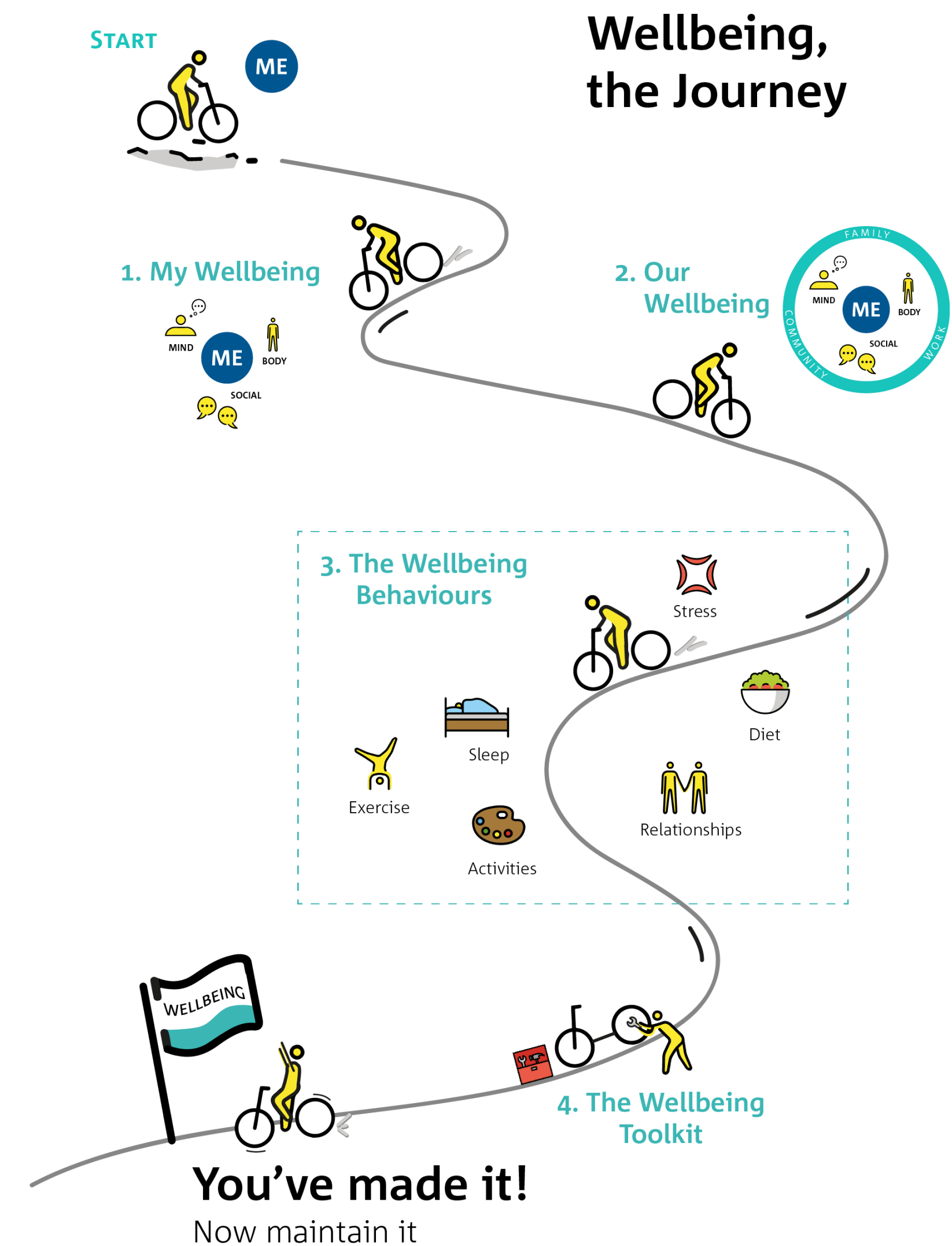
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Resilience & Wellbeing Journey

- **Resilience** is defined as the ‘demonstration of positive adaptation in the face of significant adversity
- It is a response to stressful circumstances, as opposed to a trait or capacity residing in the person (Fikretoglu and McCreary, 2012)
- **Process**
- **Wellbeing Journey** (FSF, 2020)



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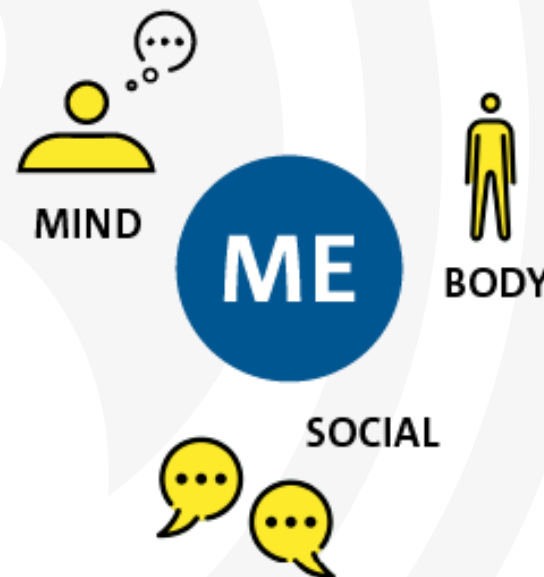
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Wellbeing, the Journey

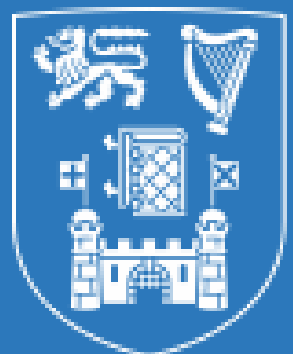
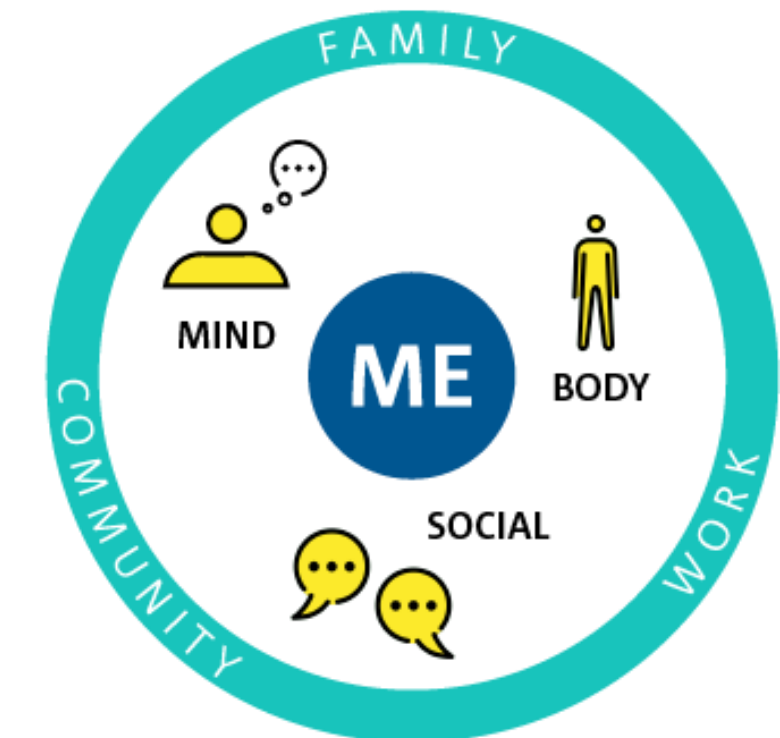
START

ME

1. My Wellbeing



2. Our Wellbeing



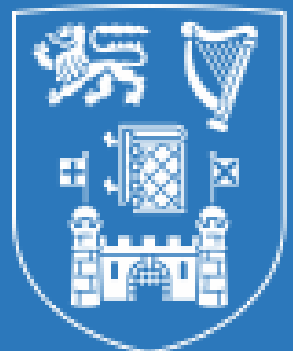
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3. The Wellbeing Behaviours

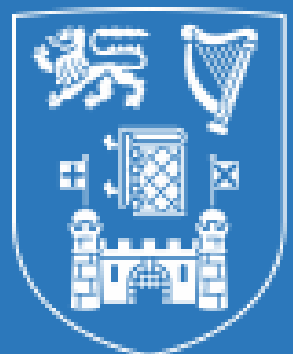
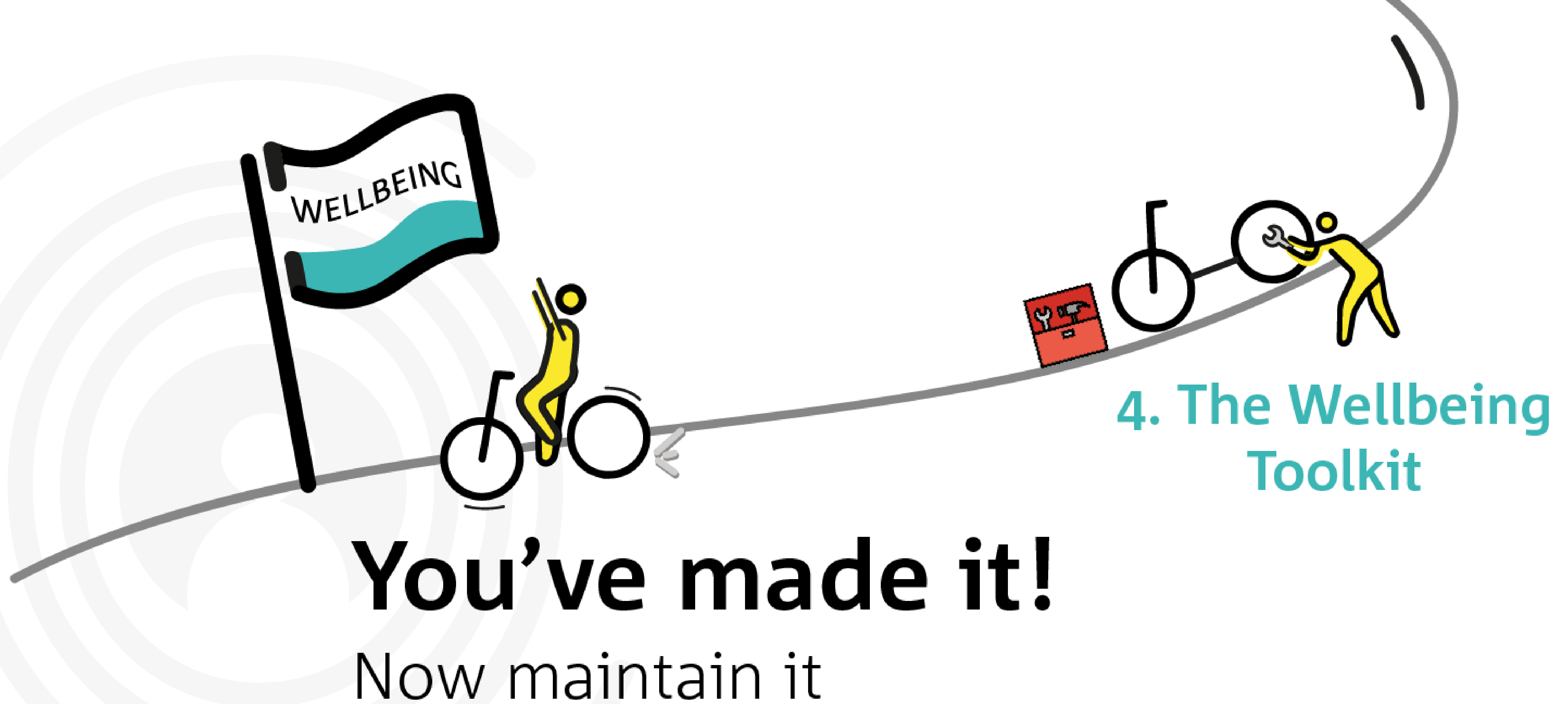


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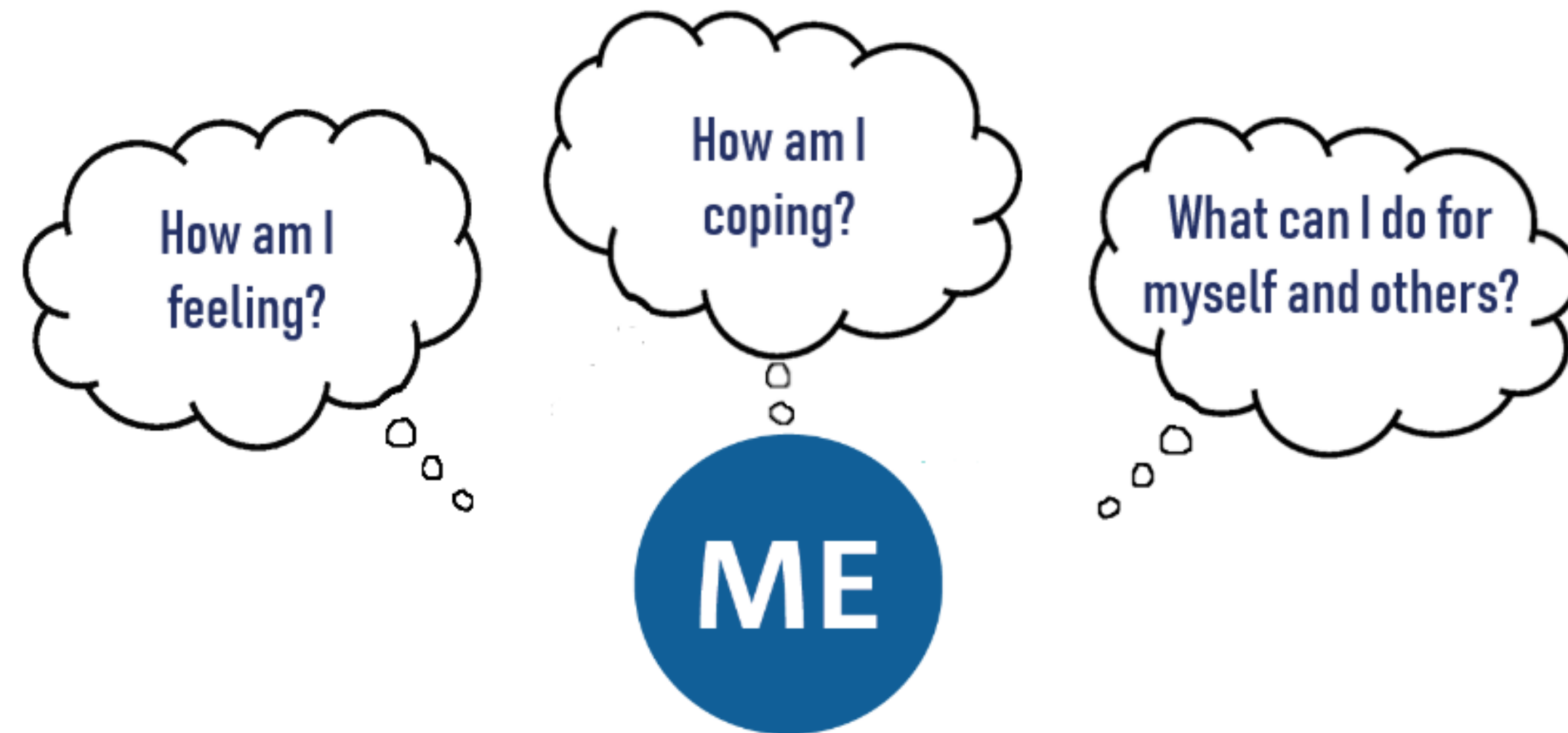
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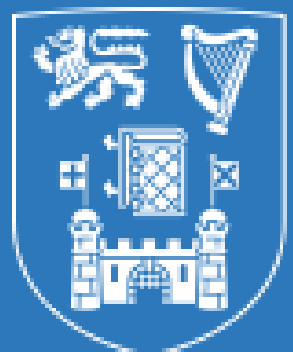
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3 Wellbeing Questions



Flight Safety Foundation: An Aviation Professional's Guide to Wellbeing (2020)

<https://flightsafety.org/wp-content/uploads/2020/04/Guide-to-Wellbeing.pdf>



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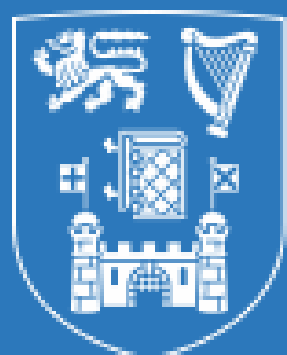
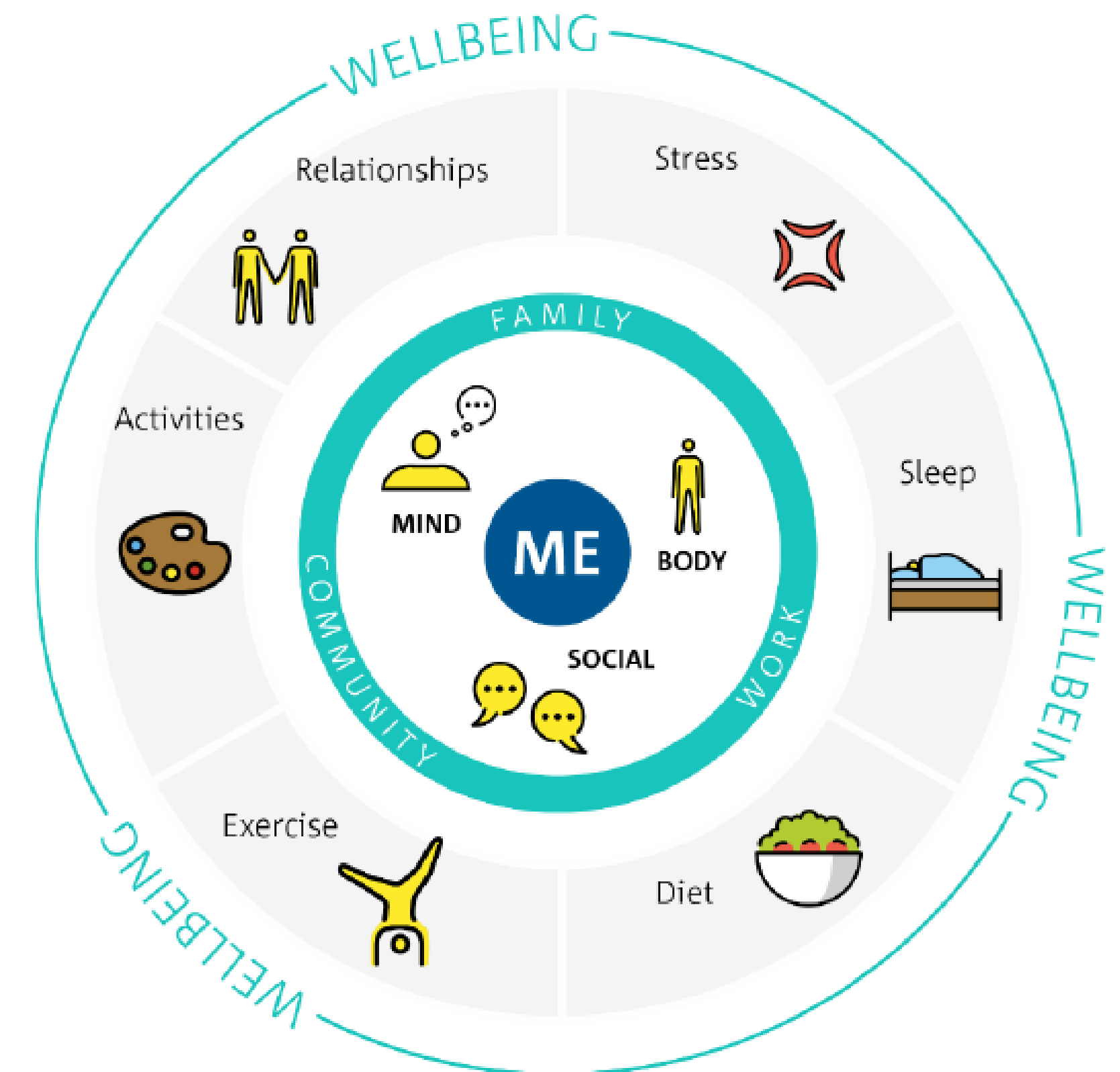
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Wellbeing Management Across the Three Pillars

Pillar	Example	How Am I Doing? Current Rating/ Status? (Good, Ok, Poor)	What Can I Do to Improve this? What Am I Currently Doing to Improve this?
Biological	Sleep, Diet, Exercise		
Psychological	Attitude to life, Mood, Stress Management, Use of Coping Strategies		
Social	Support network, social support		



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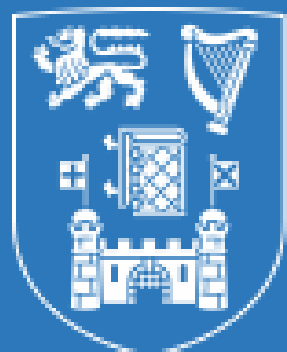


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Weekly/Daily Checklist

WEEKLY TO DO

AREA	MON	TUE	WED	THU	FRI	SAT	SUN
Stress							
Sleep							
Diet – Breakfast Lunch Dinner							
Physical Exercise							
Activities							
Relationships							



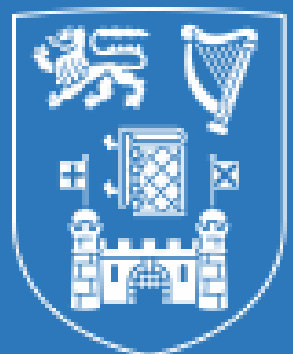
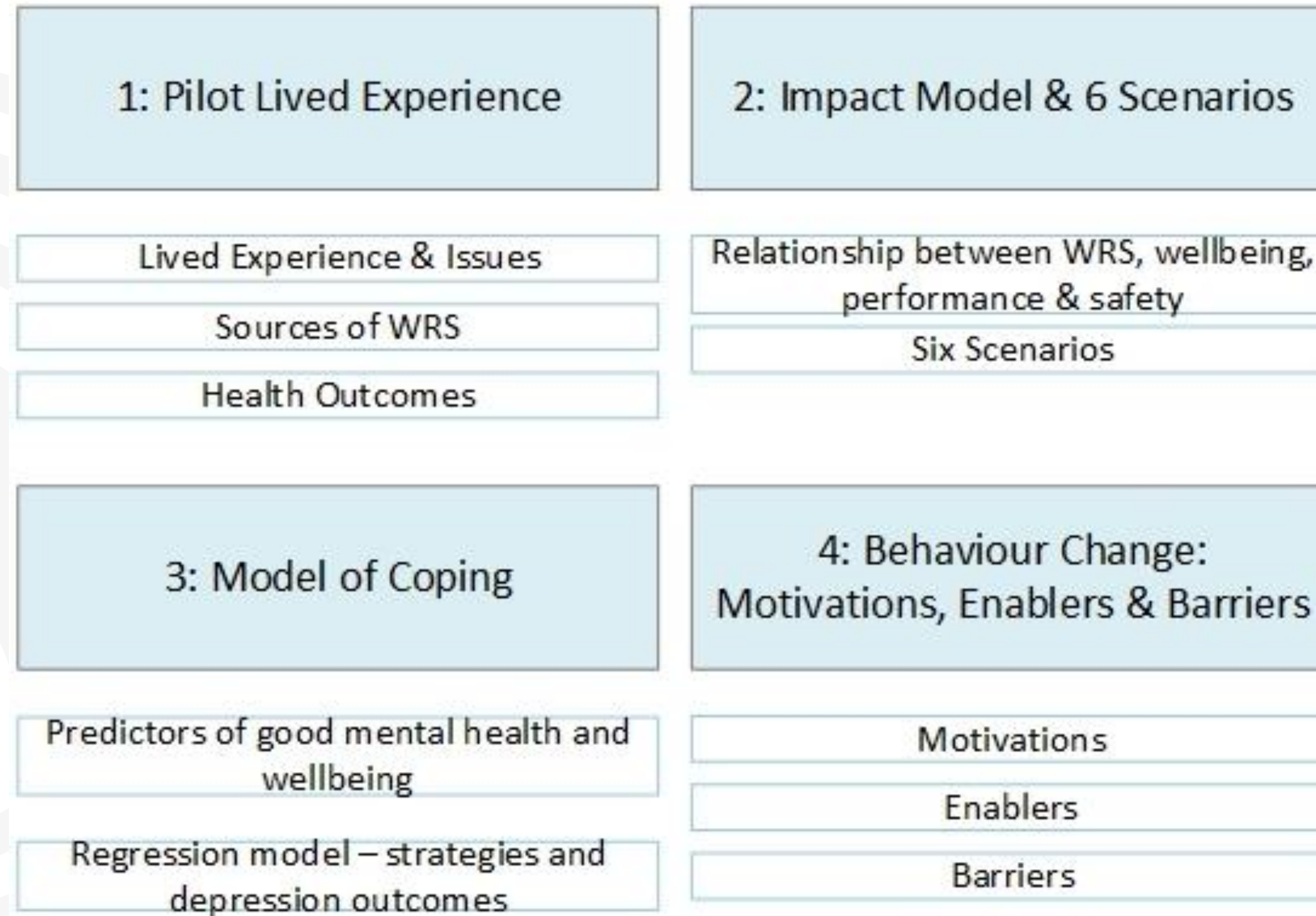
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Pilot Wellbeing Behaviour Model



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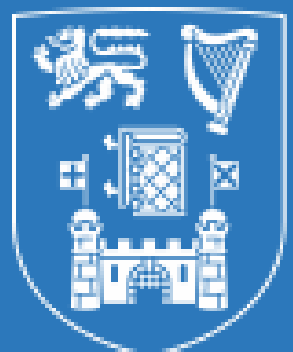
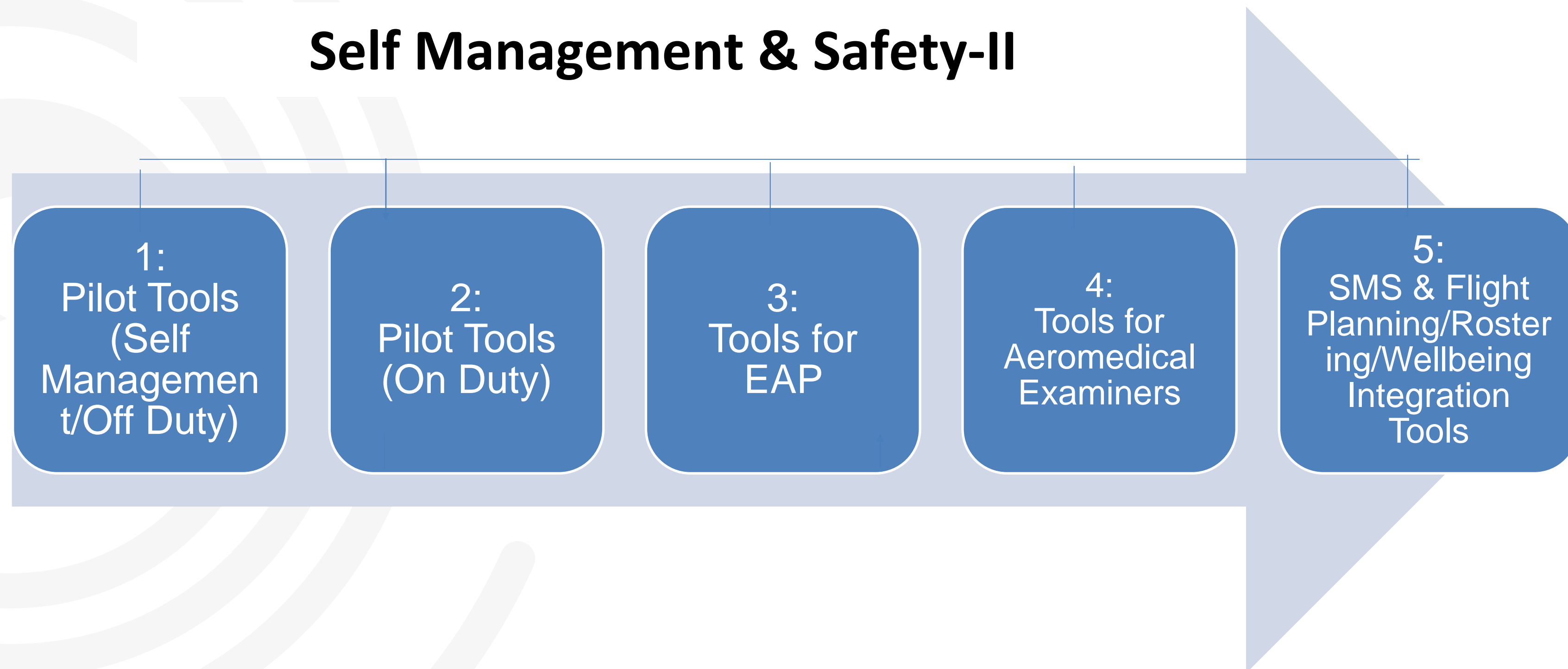
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Research Roadmap: Tools for Pilots, Airline & Industry

Self Management & Safety-II



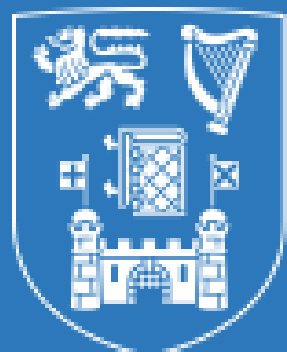
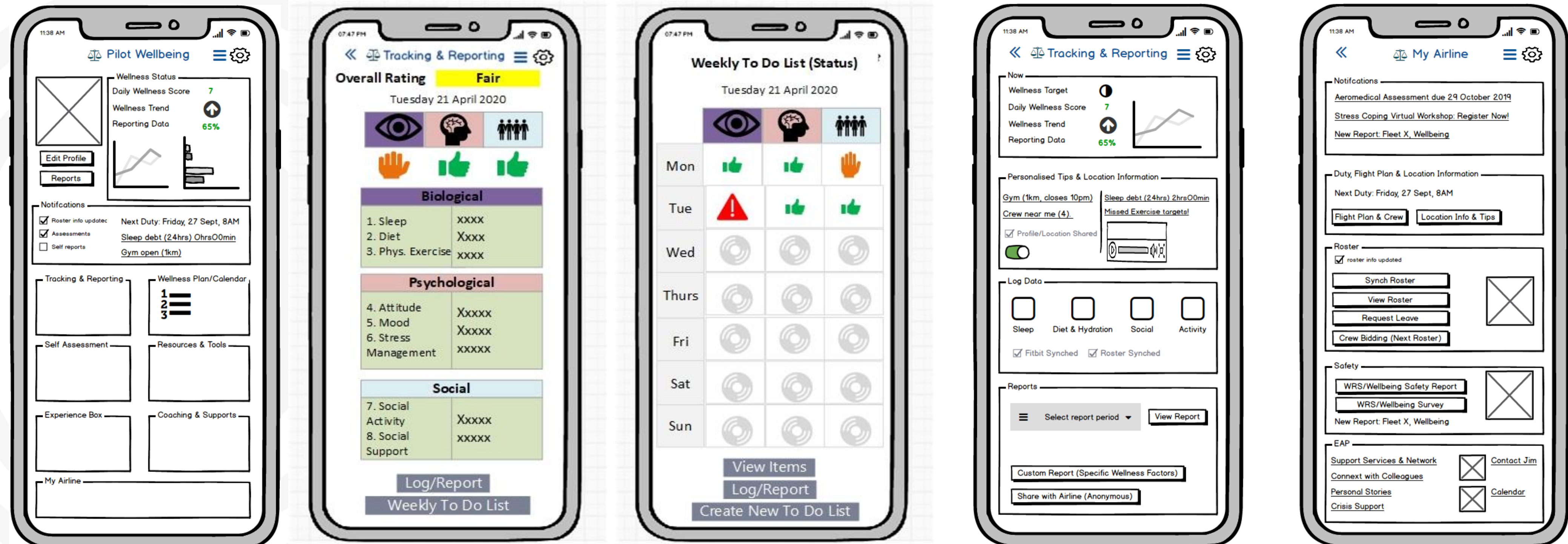
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Research Roadmap: Tools for Pilots, Airline & Industry



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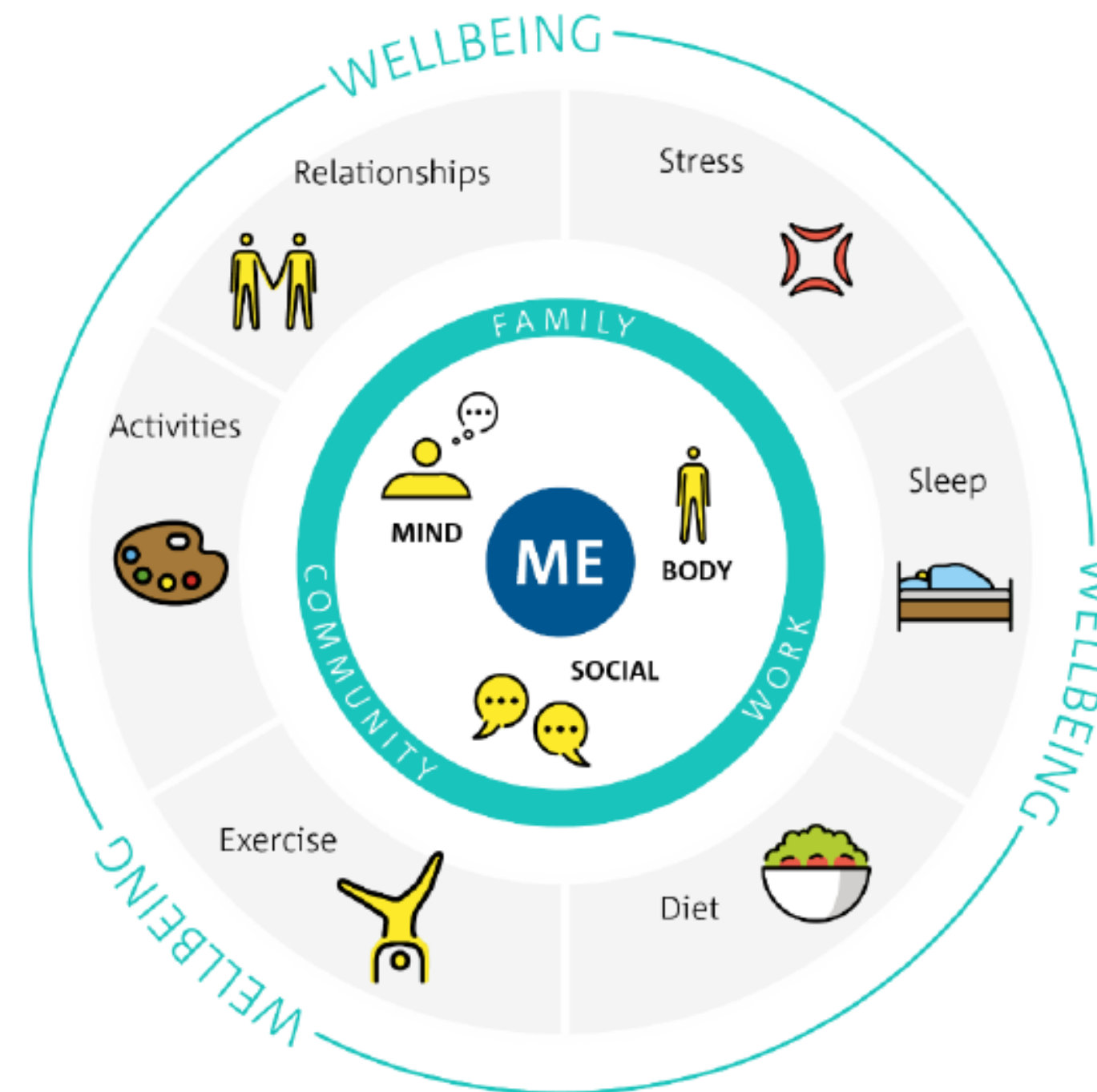
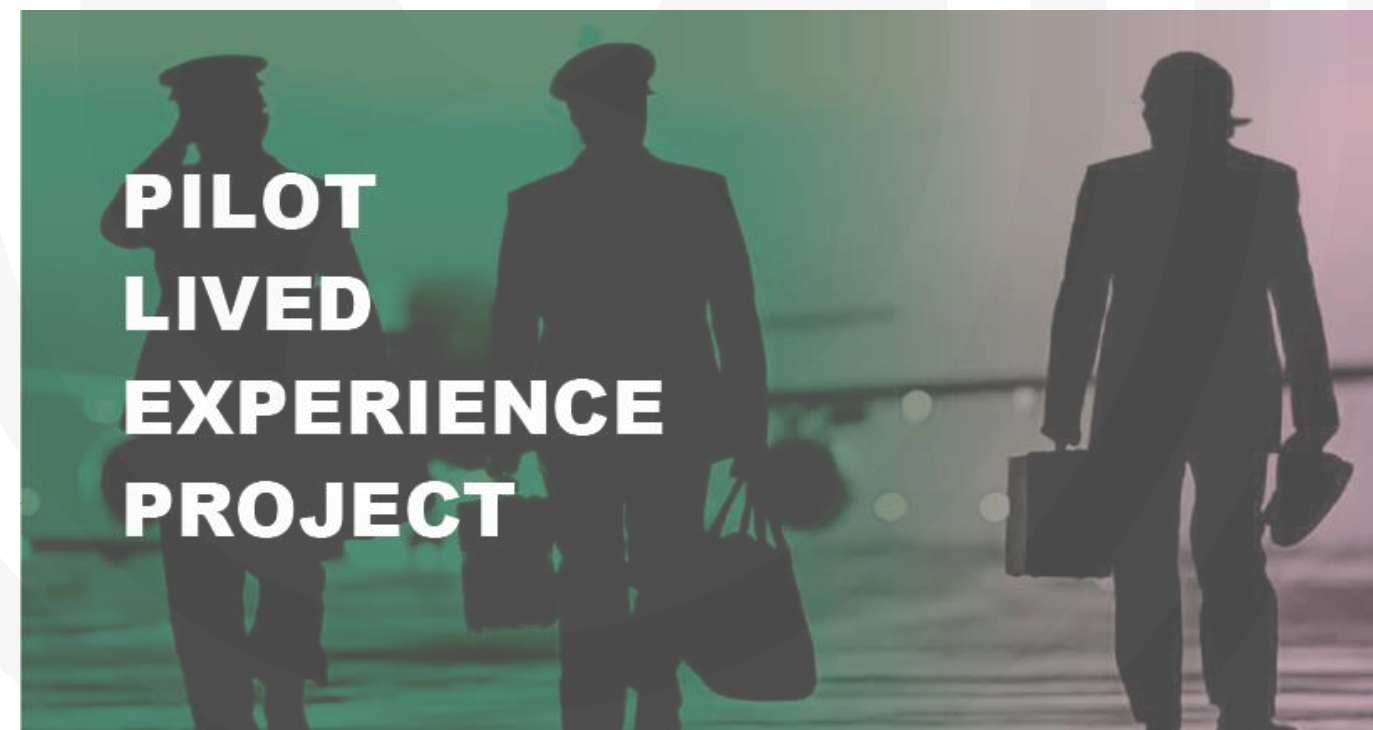
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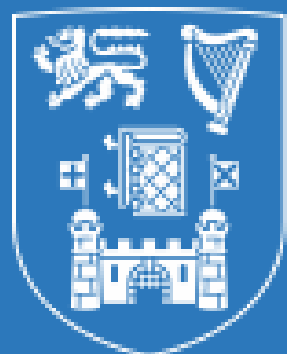
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Next Steps: Wellbeing Community & Virtual Challenge

1. Join a User Community
2. Participate in a wellbeing game/virtual challenge?



- In progress
- For more information, please email aviationwellbeing@gmail.com
- Or see: <https://www.tcd.ie/cihs/projects/pilot-lived.php>



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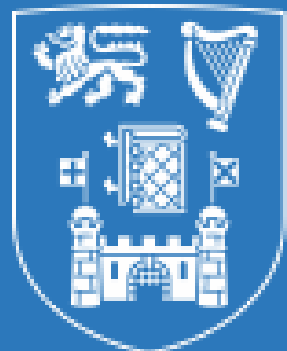
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RAeS 2021 Conference Preview

- **Present our latest research**
- Solutions to support positive wellbeing for pilots
- Progress: wellbeing community
- Wellbeing challenge/virtual game



**ROYAL
AERONAUTICAL
SOCIETY**



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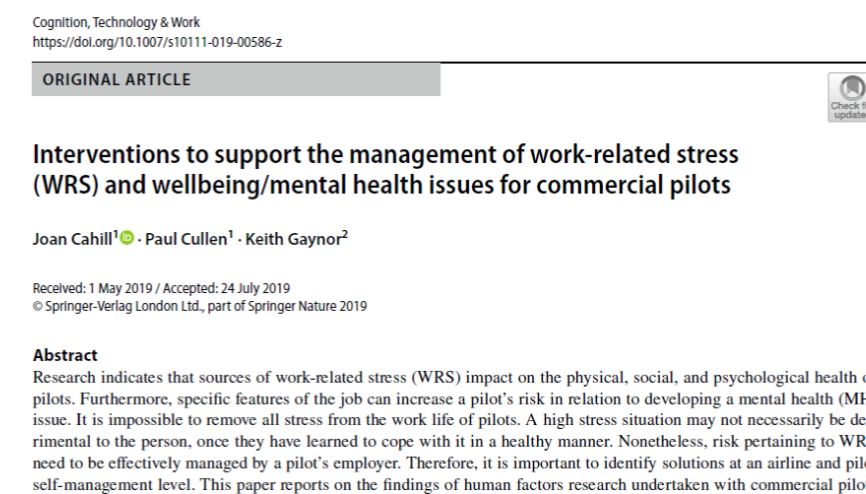
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Resources

Moving Beyond Compliance, Safety-II Approach & Solutions for Pilots & Airlines



Cognition, Technology
& Work
<https://doi.org/10.1007/s10111-019-00586-z>

Stress Coping Booklet

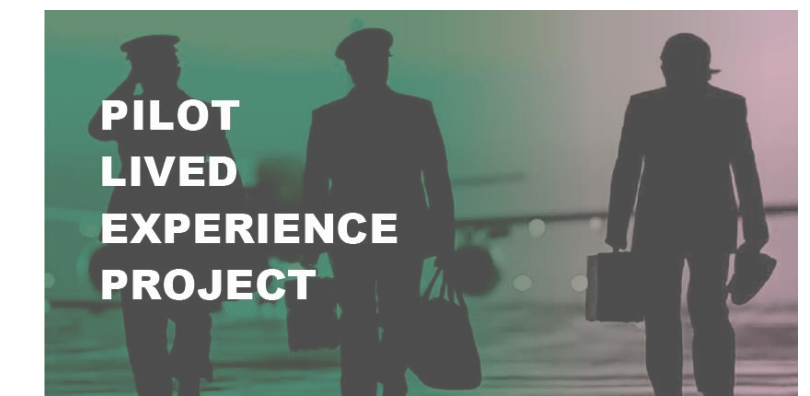


<https://www.tcd.ie/cihs/assets/pdf/TurbulentTimes.pdf>

Aviation Professional's Guide to Wellbeing

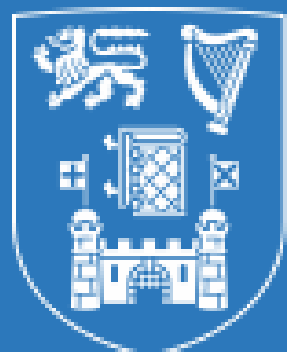


Pilot Lived Experience Project



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aviationwellbeing@gmail.com



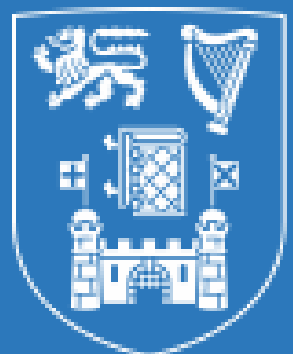
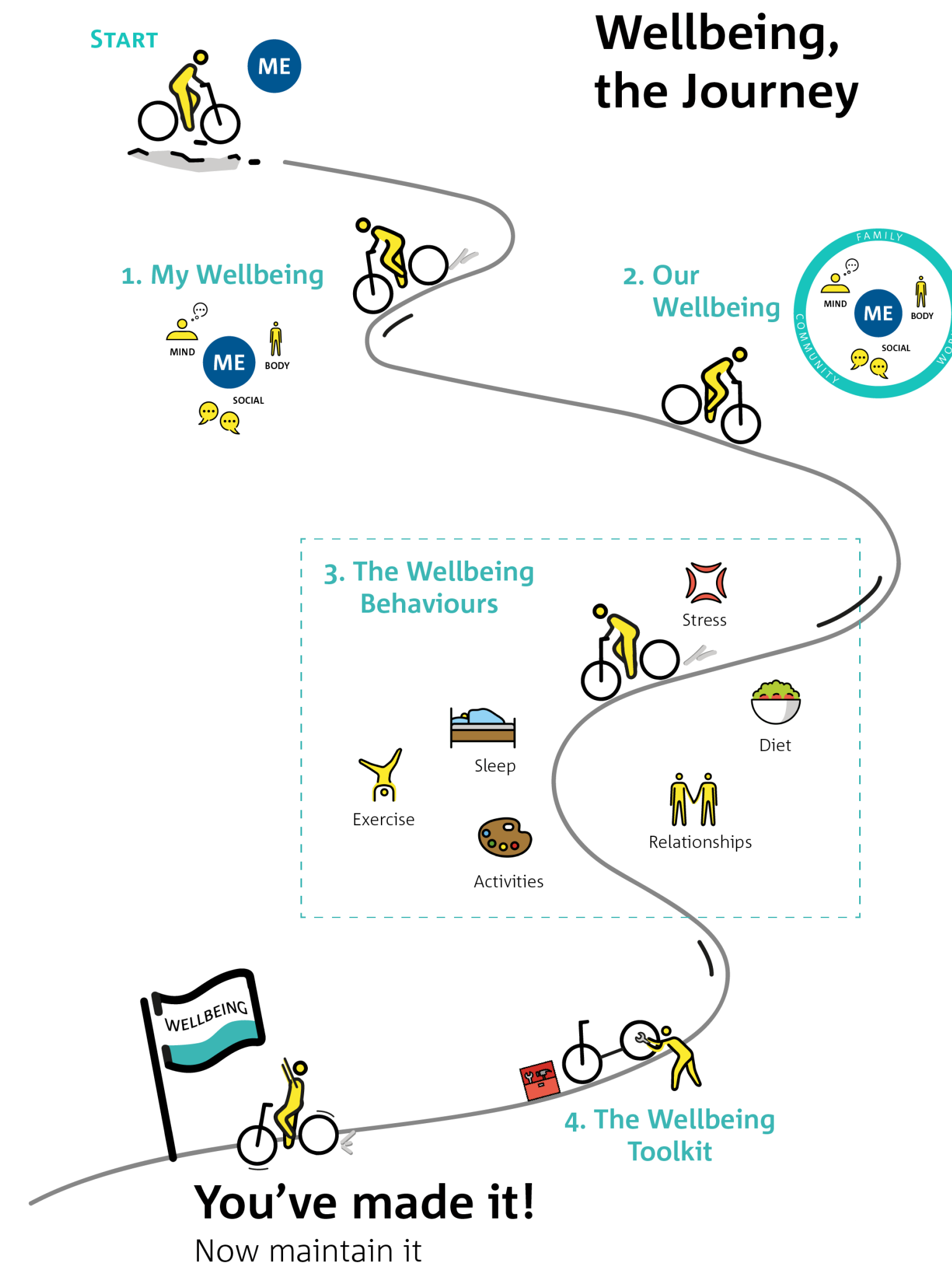
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Questions



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