Rail Wellbeing LIVE

Inspiring healthy lives across the railway

BACK-on-LINE ™

Digital Health Intervention for Personalised Self-management of Back Pain in Workplace

Dr Liba Sheeran
Researcher and Physiotherapist
Cardiff University

What is BACK-on-LINE™

Digital health intervention helping workers better manage their back pain in work

Developed by CU researchers along with occupational health practitioners and workers in the NHS and GB rail industry

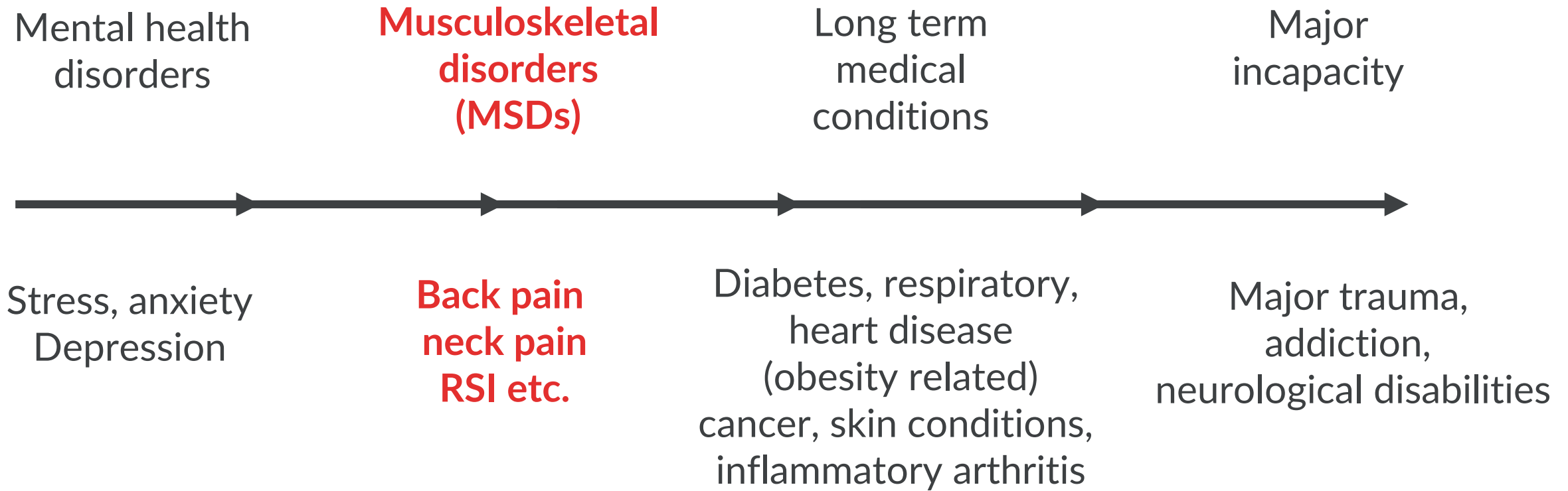Funded by UK Gov Health Challenge Fund and Versus Arthritis

BACK-on-LINE™ video and access

https://youtu.be/FIpdOCoULMs

Health issues preventing people from working or working well

Mental health disorders

Musculoskeletal disorders (MSDs)

Long term medical conditions

Major incapacity

Stress, anxiety Depression

Back pain neck pain RSI etc.

Diabetes, respiratory, heart disease (obesity related) cancer, skin conditions, inflammatory arthritis

Major trauma, addiction, neurological disabilities

Top 5 health related problems in rail industry

2016:
1. Mental Health Disorders
2. Musculoskeletal Disorders
3. Endocrine disorders
4. Heart & lung disease
5. Sleep disorders (e.g. apnoea, shift working)

2020:
- Similar picture with 1 in 4 of sickness absence due to mental ill-health & MSK problems

- Ageing workforce, COVID-19 related ill-health, rising obesity presents added challenge

- Sickness absence in rail sector **4x higher** than national average
- 1.1m working days lost through absence each year
- Costing £320m per year   (RSSB, 2019)

a) Costs of Impaired health across the network (RSSB); b) Closing the gap on health, Office of Rail and Road (2019)

Your Vision, Strategy and Impact – April 2020

Vision: The railway will become an industry in which everybody takes responsibility for Health and Wellbeing and benefits from it'.

Strategy: Proactive management of workforce health and well being with health and wellbeing key priority area

Progress:
- Britain's Railway leading on safety
- Railway Health and Wellbeing Roadmap and operating model to deliver it
- MSDs in sharp focus as leading cause of sickness absence particularly in combination with mental health

How BACK-on-LINE™ works

Access BACK-on-LINE™ at work

Fill in online BACK-on-LINE™ self-assessment

Get instant feedback and personalised self-management resources based on dominant features

Self-evaluate confidence & ability managing back pain
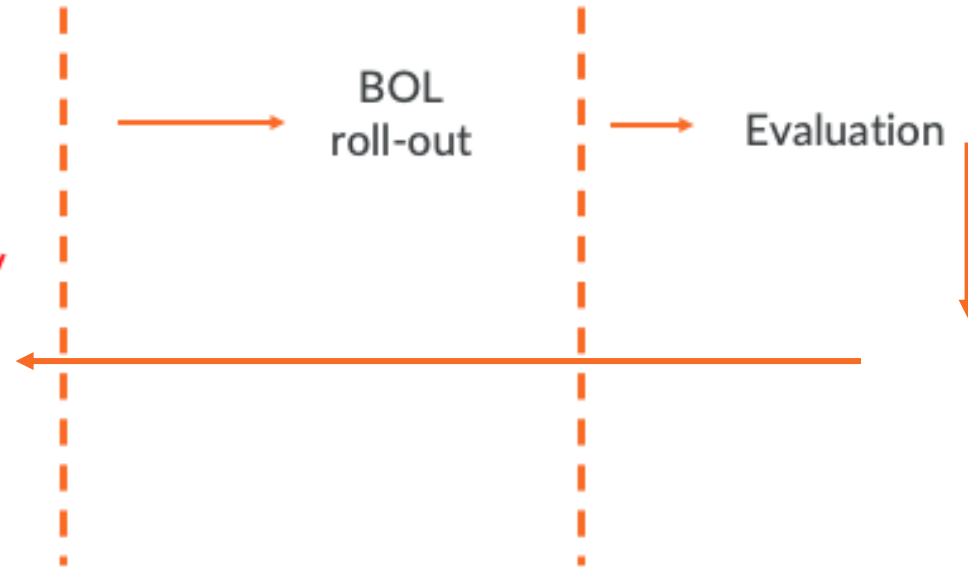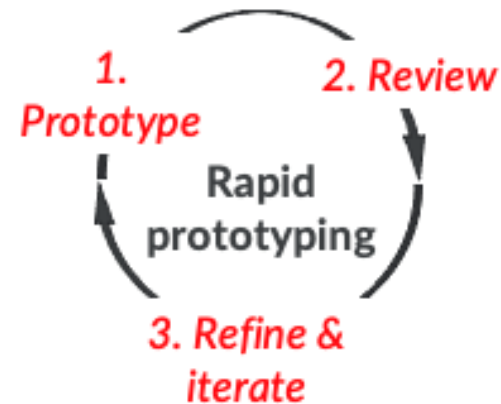
BACK-on-LINE™ USP

self-assessment
Helps a person to find out their dominant pain drivers

physical disorder dominance (e.g simple back strain)

psychological features dominance (e.g. fear, anxiety & movement avoidance)

Advice and resources
Tailored to your back pain type

5 Facts: Back Pain and Work

Education
Quizzes and multiple choice

Library of exercises
Searchable by your job type, level and type of exercise

BACK-on-LINE™ development & evaluation

BACK-on-LINE™ Usage

364 visits per month

Visiting times over 18-month

Stage	Value
Welcome Page	6552
Eligibility Check	2995
Not Eligible	252
Self Screen	1715
Self Screen Fail	187
Participant Information Sheet	981
E-Consent	887
Opt Out	197
Participant-choice	489
Consented	232

Sheeran et al preliminary analysis
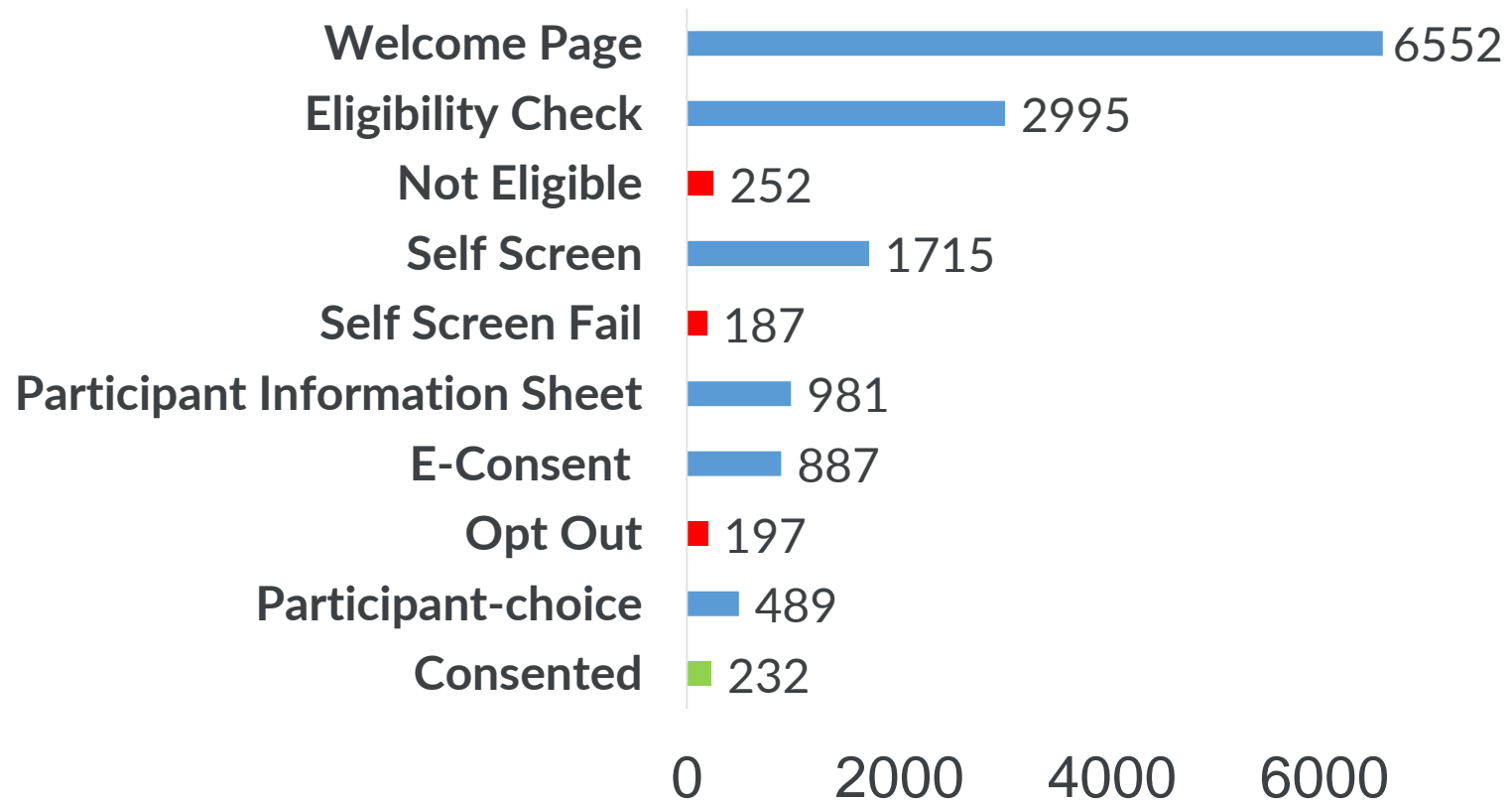
BACK-on-LINE™ users and recruitment
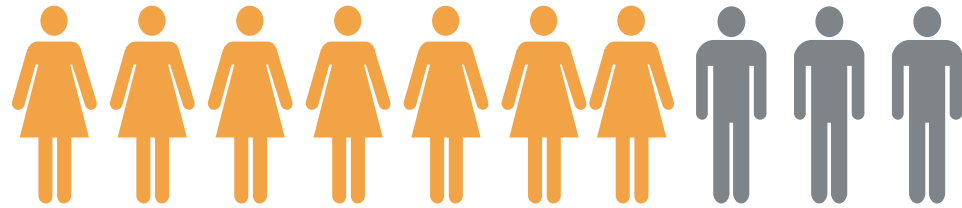
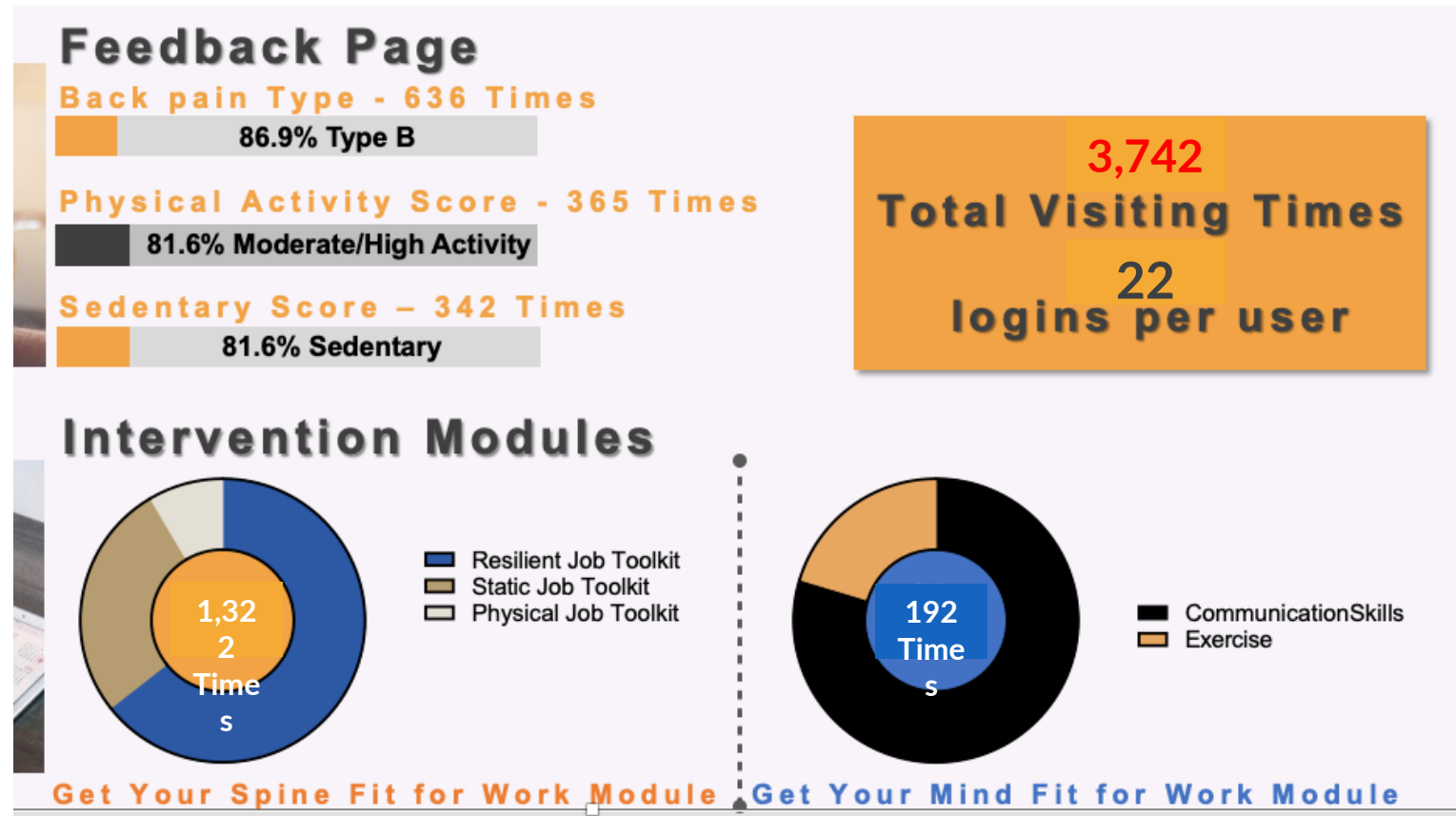70% female, 30% male
Age 43 year ± 19

5.4
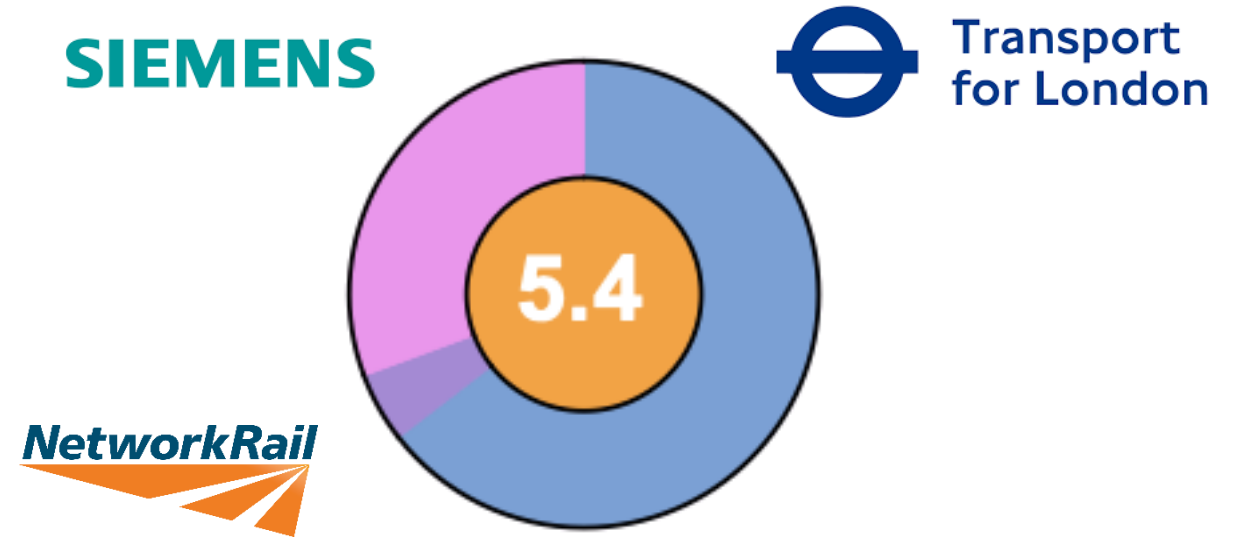
Participants recruited per site/month
84.6% recruitment rate
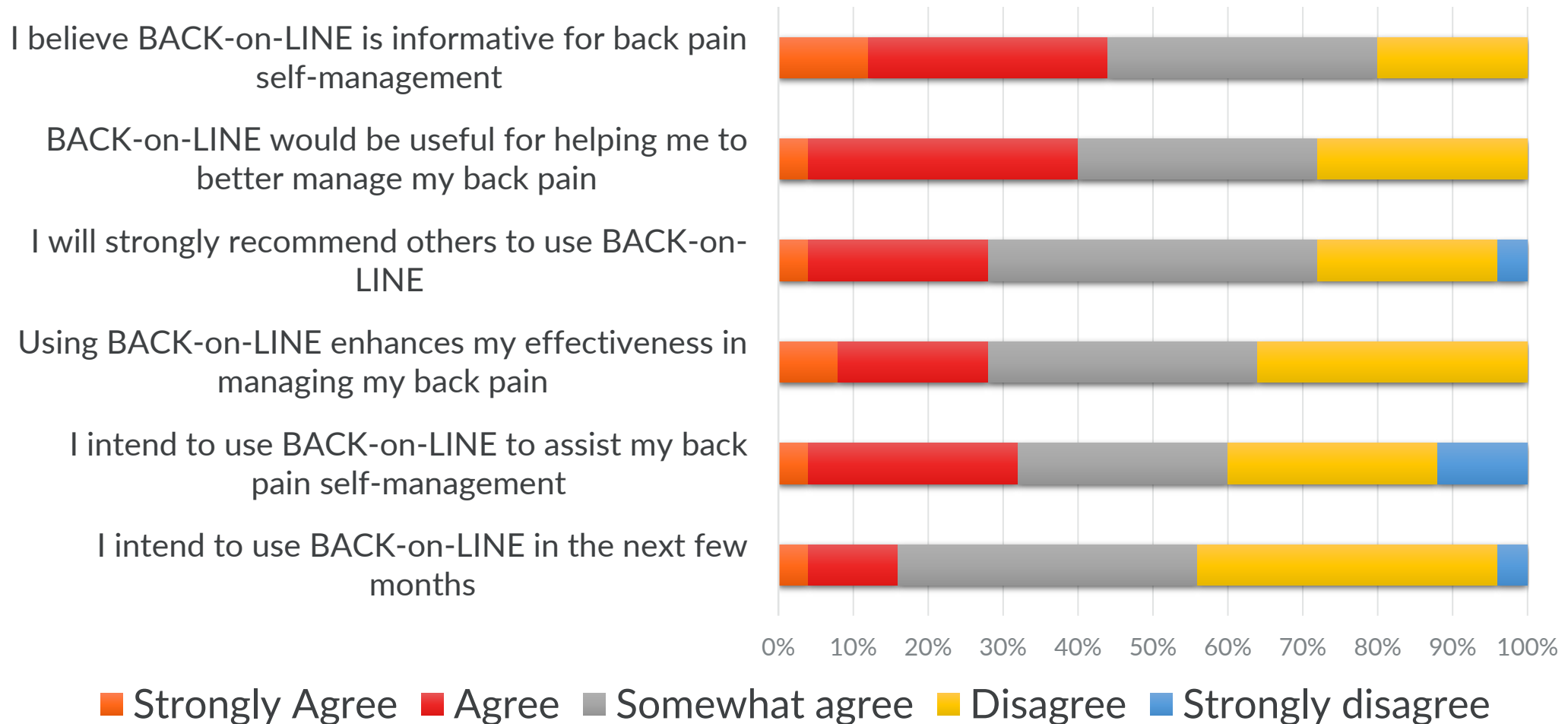
BACK-on-LINE™ visits and resource use

Feedback accessed 1,343 x (7.9x per user)
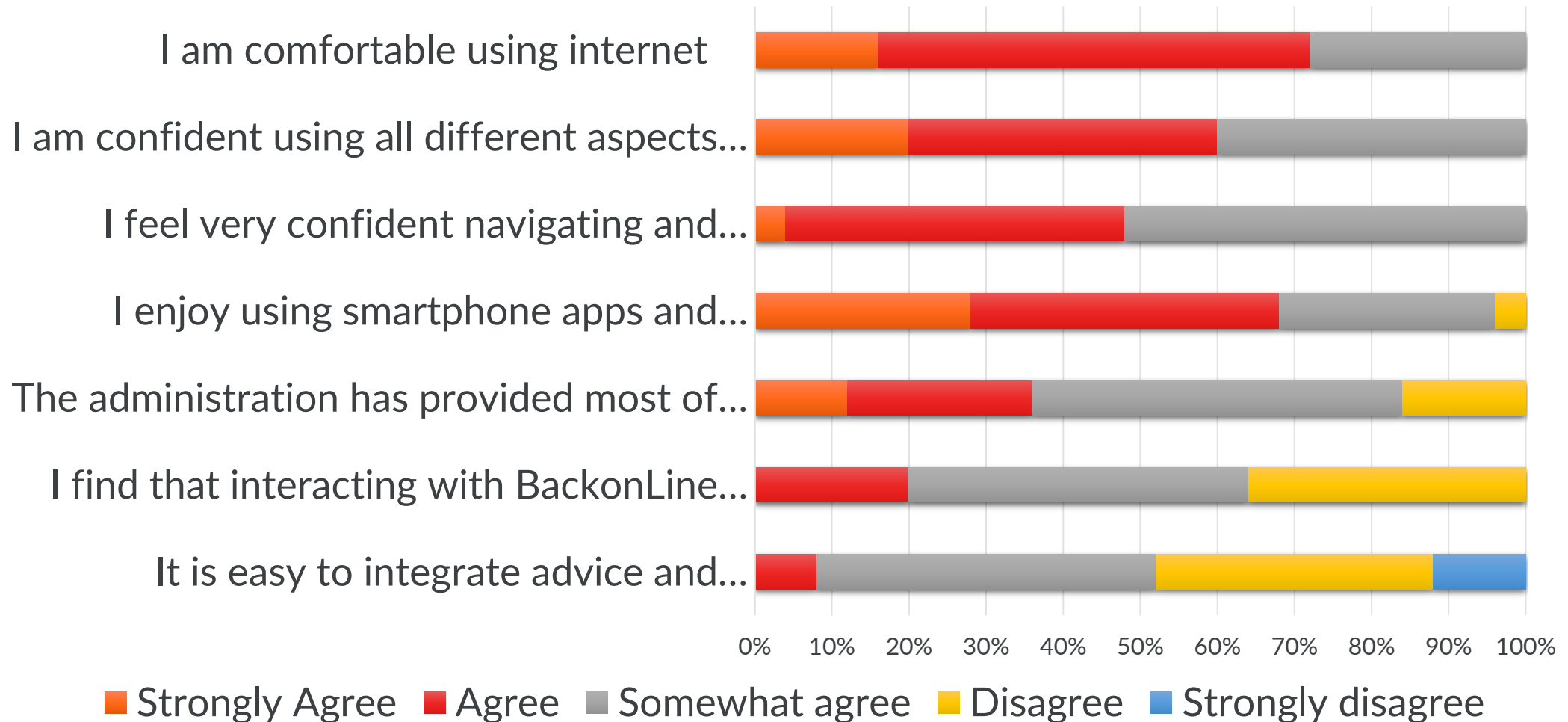
Modules Accessed 2,399 x in total (14.1x per

Feedback Page

Back pain Type - 636 Times
86.9% Type B

Physical Activity Score - 365 Times
81.6% Moderate/High Activity

Sedentary Score – 342 Times
81.6% Sedentary

3,742
Total Visiting Times
22
logins per user

Intervention Modules

1,322 Times

- Resilient Job Toolkit
- Static Job Toolkit
- Physical Job Toolkit

192 Times

- CommunicationSkills
- Exercise

Get Your Spine Fit for Work Module　　**Get Your Mind Fit for Work Module**

Sheeran et al preliminary analysis

BACK-on-LINE™ technology usefulness

71%

- I believe BACK-on-LINE is informative for back pain self-management
- BACK-on-LINE would be useful for helping me to better manage my back pain
- I will strongly recommend others to use BACK-on-LINE
- Using BACK-on-LINE enhances my effectiveness in managing my back pain
- I intend to use BACK-on-LINE to assist my back pain self-management
- I intend to use BACK-on-LINE in the next few months

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ Strongly Agree ■ Agree ■ Somewhat agree ■ Disagree ■ Strongly disagree

Sheeran et al preliminary analysis

BACK-on-LINE™ technology ease of use   **81%**

Chart showing survey responses:

- I am comfortable using internet
- I am confident using all different aspects…
- I feel very confident navigating and…
- I enjoy using smartphone apps and…
- The administration has provided most of…
- I find that interacting with BackonLine…
- It is easy to integrate advice and…

X-axis: 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Legend: ■ Strongly Agree ■ Agree ■ Somewhat agree ■ Disagree ■ Strongly disagree

Sheeran et al preliminary analysis

BACK-on-LINE™ user experience

Sheeran et al preliminary analysis
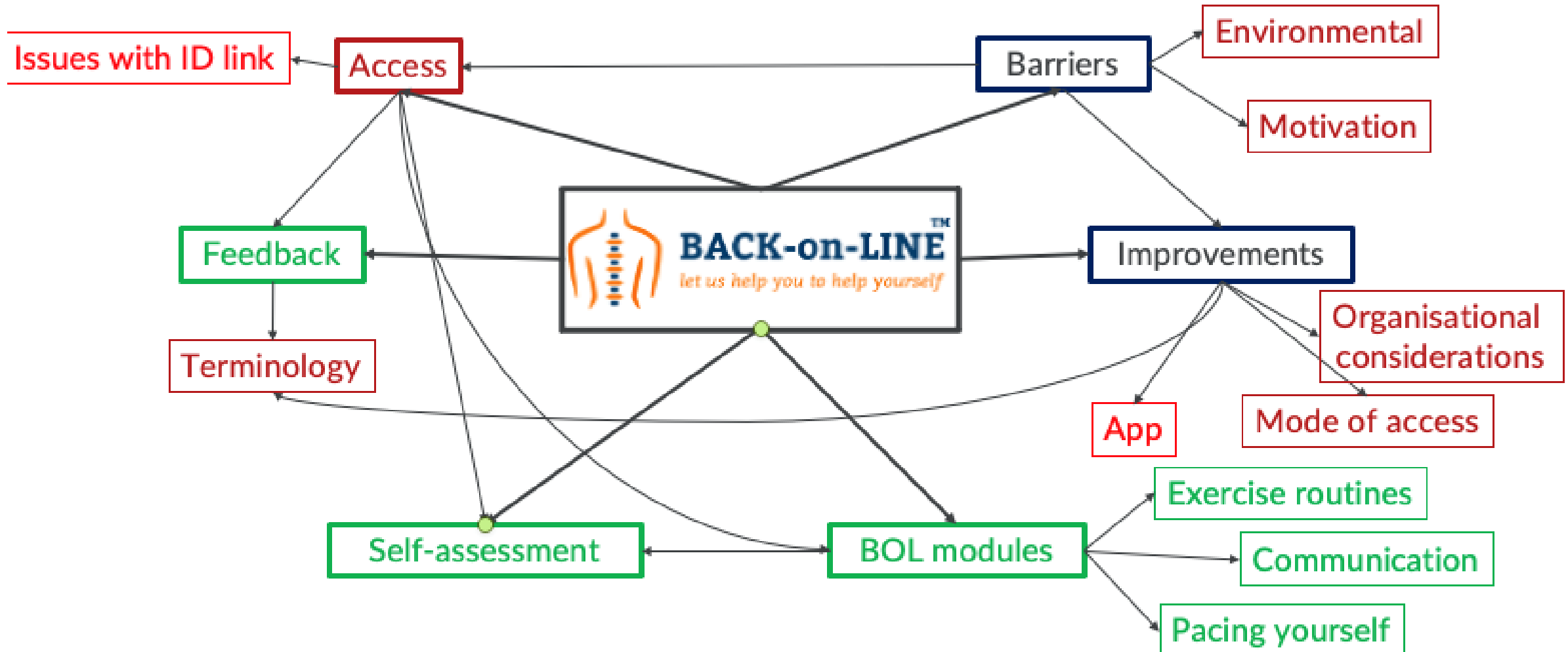
Implementation and scale-up in rail sector

Item	Employer representatives (n=7)	Employee representatives (n=8)
1. Is the intervention understandable / needed?	☑ Easily understood ☑ Seen beneficial to upskill workforce in self-care/help culture change?	☑ Yes, important to learn about LBP ☑ Useful to reduce back pain in work ✖ LBP causes not fully understood
2. Does it fit? Are people likely to commit to it?	☑ Fits with current H&WB policy ☑ Fills a gap in existing management ☑ Willing to incorporate into OH prov	☑ Tailoring good idea ✖ Need to report LBP to access BOL?
3. Are people prepared to put energy into making it work?	☑ Willing to train champions, managers ☑ Space to stretch safely and tech ✖ Complexity of work shift patterns	☑ Happy to support as champions ✖ May detract from work? ✖ Peer/team perceptions?
4. Are people willing to help adapt it/assess effectiveness?	☑ Yes as evaluation critical to adoption ✖ Sick. absence change will take time	☑ Happy to make it bespoke ✖ Anonymity, access to data?

Sheeran under review

BACK-on-LINE™ in rail sector – Key messages

High reach and use

6.5k users in 18 months

22 log in per user

Feasible to evaluate effectiveness

self-care confidence, practices & sickness absence

High technological acceptability

71% see BOL useful

81% see BOL ease to use

Strong user involvement

employer, employee and union reps

Challenges

back pain beliefs, adopting healthy behaviours in shift patterns, team dynamics, safe places, LBP reporting

Opportunities

High coherence and willingness to commit in making it work, strategic fit with H&WB strategy nationally

What's next?

Dissemination

Rail Industry Standard (MSK)
The rail knowledge hub SPARK

BACK-on-LINE™ App

user testing

(Transport for Wales, Network Rail, Siemens, Colas Rail)

Research

Evaluation BACK-on-LINE™ effect on workers' LBP self-care practices, reporting and sickness absence

How to get involved and use BACK-on-LINE™

- Access & try it yourself
- Pilot it in your workplace
- Help us to test impact of BACK-on-LINE™ in your organisation through our research

For information please contact:
Liba Sheeran
sheeranL@cardiff.ac.uk
@libasheeran @BACKonLINE1

Q&A – Data security and access

- Is the any data collected via the BACK-on-LINE™ platform shared with the employer? No. All data is owned, controlled and managed by Cardiff University in accordance with their Research Governance and Ethics Processes

- How could workers access BACK-on-LINE™ if we decide to pilot it? From stakeholder consultations workers like to access BACK-on-LINE™ via different channels such as OH service or independently. We will work with you to utilise your existing OH and health and wellbeing practices.

Q&A – How to make it work best & is there a cost?

- How to ensure that BACK-on-LINE^{TM} best helps workers in my organisation? We designed the intervention to require little to no technological support. However, the tool itself will only have positive effect if people are able to adopt the behaviours encouraged within the BACK-on-LINE^{TM} intervention. Therefore OH and well-being team willing to disseminate and support the use of BACK-on-LINETM through champions and provision of safe spaces will help its success.

- Is there a cost attached to using BACK-on-LINE^{TM}? No. Our aim as is help our research to make real world impact in areas of health and well-being. Once we complete the development there may be small cost to managing the resource and data properly. We work with social enterprises and not-for-profit partners to co-develop products to help minimise any costs in the future.

Q&A – Technology

- **What technology is needed to use BACK-on-LINETM?** Workers can use any smart device (e.g. smart phone, tablet, laptop) to get access.

- **Our staff works outside with no access to WIFI. Is that a problem?** We developed the **BACK-on-LINETM App** allowing workers to access all content **offline.**

- **Our staff may be unable to use mobile phones in workplace. Is that a problem?** No. BACK-on-LINE^{TM} content could be installed on static TV/advertising screens stationed in common areas (canteens, rest rooms etc) for people to engage with exercises, 'healthy spine' messages or search for specific guidance.

Thank you!

Liba Sheeran
sheeranL@cardiff.ac.uk
@libasheeran @BACKonLINE1