Exploring Physical Activity Engagement Surrounding the Union Cycliste Internationale Road World Championships in Doncaster Communities of Thorne and Moorends.

EXECUTIVE SUMMARY, KEY FINDINGS AND RECCOMENDATIONS

UCI

SPORT ENGLAND

Doncaster Council

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Executive Summary

Doncaster Council's commitment to understanding and improving physical activity (PA) surrounding iconic sporting events, continued with the Union Cycliste Internationale Championship event (UCI), 2019. The communities selected for the research were unresearched areas of Thorne and Moorends; areas in the top 10% most deprived UK areas. UCI-2019 provided a platform to explore, gain insight and understand PA engagement in these communities. By agreement, it was decided the research would benefit from engaging a single individual researcher across the life course of the project, using an ethnographic approach. Initially, research was UCI-specific. However, after initial scoping in the field, locally grounded issues emerged that affect PA readiness. This meant adopting a two-stage approach for the work.

Stage 1 used surveys, scorecards, observations and feedback forms to collect data. Stage 1 identified that UCI-2019 was a successful event, engaging a wide array of community members. Such events represent a valued 'opportunity' for locals; further events may optimise this effect. As with Tour De Yorkshire (TDY), the grant scheme supported community groups to engage with the event, some providing PA-specific activities. 'Sticky' places must be created for locals to engage, stay and enjoy events. While 'on the day' survey scores, including Influencer scoring, confirmed that the UCI event 'opportunity' was effective in improving PA perspectives on multiple levels across all age groups, teenagers reported the most limited engagement. The most influential effect around UCI-2019 was 'social buzz'. This is not surprising and may reflect the processes characteristic of any 'tight-knit' community. At the same time, locals commented on a need for a greater 'festival feel' in the build-up to UCI-2019. Similar points might be made about how to prolong effects beyond the event itself.

Stage 2 used interviews, observations, case studies, park audits, street audits, sludge audits and the Gamification framework to collect data. Stage 2 showed that powerful on-going PA provision was available; representing behavioural 'fuel'. Yet, impeding the effectiveness of this existing provision is local 'friction'. Friction was identified using sludge audits (sludge defined as "excessive or unjustified friction"). The most powerful of these have combined to create a 'scarcity mindset' (a limited "cognitive bandwidth" due to feelings of having limited availability of a resource) in many local, inactive people; this mindset reflects powerful changes in brain function resulting from prolonged exposure to deprivation and inequalities. Further, the scarcities of their day-to-day lives have created a 'tunnel vision' meaning that even well-delivered PA is overlooked. Due to the scarcity mindset, 'everyday level' PA was perceived as difficult for five main - and often interconnected - reasons: (i) safety, (ii) cost, (iii) local provision, (iv) infrastructure and (v) event demand.

Stage 2 also explored how PA provision is developed and delivered, using a Gamification (defined as "the craft of deriving all the fun and addicting elements found in games and applying them to the real-world or productive activities") framework. Gamification 'stages' – Discovery, Onboarding, Scaffolding and End gaming – characterise the differentiation within programme provision. The 'sludge' linked to the 2019 summer program was also mapped using Gamification. The data showed that the summer PA provision had a variable impact. They often relied on short Discovery periods (often just days), inconsistent Onboarding and little Scaffolding or End-gaming. The Gamification framework was also used to 'map' how existing and successful PA interventions were developed and delivered; they especially activated strong social influences. However, Discovery mechanisms varied; older adults preferred a more in-person approach compared with a more digitally reliant approach for families.

To summarise, the UCI event **(Stage 1)** provided an opportunity for locals to engage in community PA. **Stage 2** of the research identified friction is paramount to the success of PA provision, as excessive amounts are causing inefficiencies in local provision and low and/or inconsistent engagement in PA. Powerful local friction identified as the scarcity mindset is crucial for understanding the context of these communities to better guide interventions. Additional PA provision (Fuel) is unlikely to be effective without considering the local friction. Findings from the UCI needs to combine with both 2018 and 2019 TDY findings to guide local stakeholders. PA provision needs to be planned with the aim to create a before, on the day/s and after effect of the Rugby League World Cup 2021 (RLWC} stadium events, hosted in Doncaster. In Thorne and Moorends, the community spirit is strong, therefore harnessing the local social pressure is critical to leverage PA provision.

Key Findings

The UCI event research was carried out in two phases. As well as generating phase-specific findings, several findings were corroborated by the other phase of investigation. In relation to "The Hook" model (below), the research engaged with the community to generate insights into the existing mechanisms and context. The following findings are distinguished between 'Stage 1' (UCI event-related PA) and 'Stage 2' ('everyday level' PA).
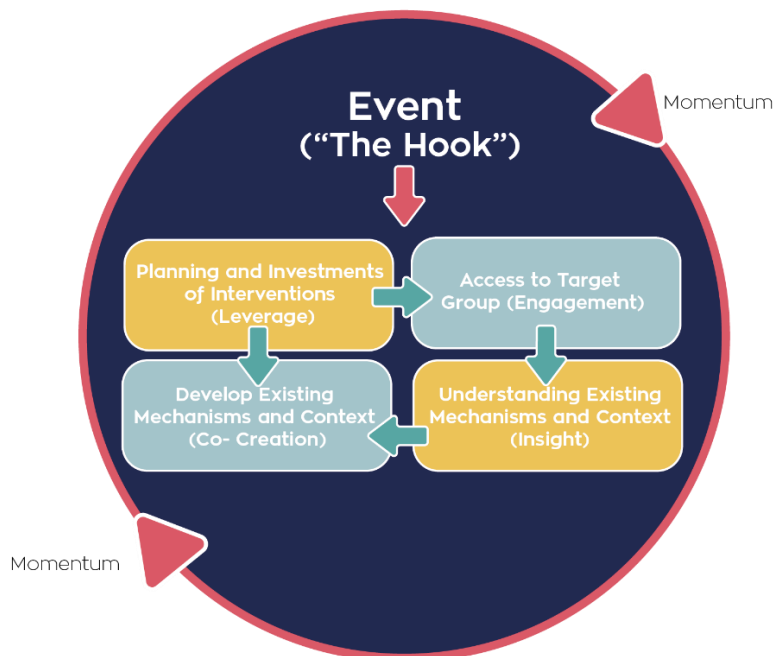
The "Hook" Model for PA Engagement and Events

Stage 1 (UCI-Event Related PA)

### 1) Community PA perspective was influenced by the UCI event.

On the day of the UCI, surveys were completed by locals attending the race in Thorne. Based upon the Six-Influencer framework, questions revolved around PA within the six domains. For all six domains, perspectives of PA were positively influenced (see below 'Six-Influencer Framework'). A score of '0' represents 'not at all' and a score of '4' represents 'a lot'. The mean is the average score and standard deviation (SD) is the variation of data around the mean.

Domain Score (Mean, SD)	Explanation
Individual Motivation (1.9 ± 1.5)	How much activities around the UCI event made you want to do more PA.
Individual Ability (1.6 ± 1.4)	How well the UCI event helped people build their skills or fitness to do more PA.
Social Motivation (2.9 ± 1.4)	How well the UCI event encouraged groups of people to be more active ('social buzz').
Social Ability (2.8 ± 1.3)	Whether, through UCI, other people provide help, information or resources.
Structural Motivation (2.1 ± 1.5)	Whether, through UCI, people felt 'rewarded' for doing more PA.
Structural Ability (2.4 ± 1.4)	Whether the physical environment supported doing more PA.

Six-Influencer Framework

Total Influencer scores from the survey were 14/24 (7/12 motivation domains, 7/12 ability domains). The '*Event Day Six-Influencer Survey Scores*' figure below illustrates the spread of scores. Social domains were most influenced through the UCI event. The lowest scores were achieved for Individual and Structural domains. Yet, the survey still identified that the UCI event had increased PA within the communities. To encourage locals through multiple levels to engage more with PA it is likely that higher scores are needed for the Individual and Structural domains. Additionally, teenage engagement was low. Future events should plan to facilitate greater engagement with this population.

UCI EVENT SURVEY RESULTS
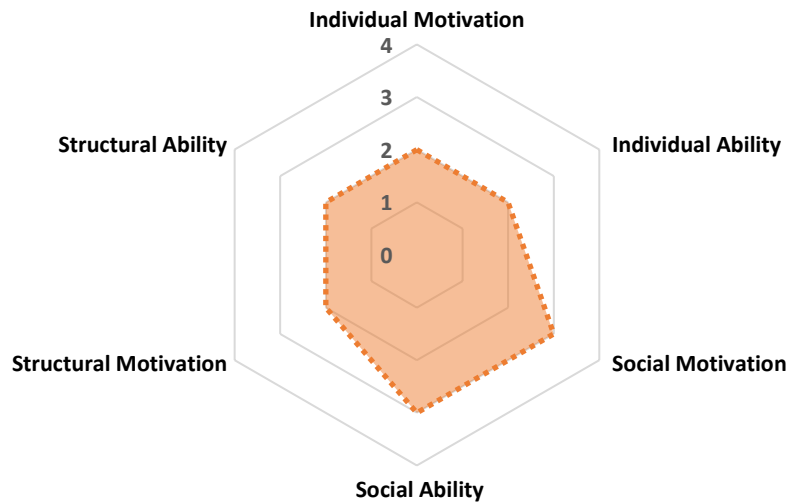
Event Day Six-Influencer Survey Scores

2) 'Social Buzz' is critical for PA involvement.

Locals were asked which Influencer domain was most important for them to be active. They reported 'social buzz' (social motivation) as the most influential motivator to being physically active. All age groups reported 'social buzz' as being of prime importance, suggesting a universal influence. That said, 'social buzz' will need to be refined for age groups as they each use distinctive communication pathways. For example, older adults favoured word-of-mouth where as younger generations favoured social media. Harnessing the social pressure inherent to these 'tight-knit' communities will encourage PA involvement.

Locals commented for a greater 'festival atmosphere' to improve social buzz. A festival atmosphere can be achieved through designing sticky streets and sticky places. 'Sticky' refers to the creation of enjoyable, engaging environments that encourage people to stay. This was attempted in Thorne and Moorends, however the weather impacted some local's behaviour to not engaging with the event.
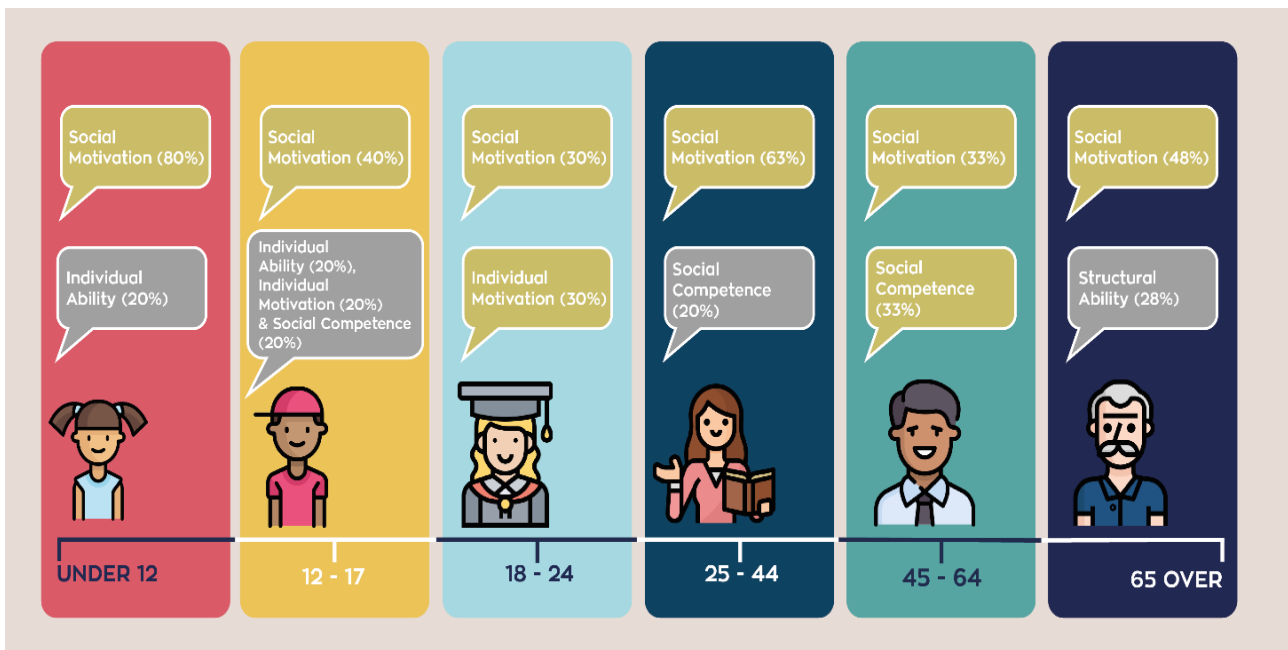
Percentage (%) of Respondents Reporting Domain Importance for PA.

3) The grant scheme is a powerful tool to leverage community engagement.

Similar to the TDY grant scheme (see link: https://getdoncastermoving.org/uploads/the-social-and-economic-impact-of-events-report-5-8-5.pdf), this tool was effective in promoting community engagement. Within these areas' community groups are highly influential messengers, facilitators and activators. A total of 9 community groups applied for the grants within Thorne and Moorends. Grant recipients included: The Countryside Team of Doncaster Council, Thorne and Moorends Events Working Group, Thorne Netball Club, Thorne's Royal British Legion, Bridging Generations, Thorne and Moorends Healthy Living Group, Friends of Thorne Memorial Park, Thorne and Moorends Youth Group and Thorne and Moorends Business Forum. The groups were asked to estimate the number of people who engaged with their activity. Combined, the groups achieved an estimated total reach of 2,310 people.

Some grant recipients used their grant to provide PA activities. There was a mixture of intervention durations, some focused on 'dot' interventions (one-time points) where as others used the UCI event to recruit and promote their community group over a longer time period (for example, the netball club). Without these grants reach into the community is likely to have been reduced.

Community groups/members that did not apply to the grant scheme, commented they did not apply as they felt the application "was not relevant to them" and were unsure "what they could do". To encourage further applications from qualifying groups it may be necessary to simplify the application process. Redesigning the application forms using the EAST (Easy, Simple, Attractive, Timely) criteria, may be justified as this has been successful in driving increased adoption in a range of other scenarios. This could focus on improving the user experience of applying (for example using more colours, reducing cognitive overload of information, reducing the readability requirements and providing testimonies from previous grant recipients).

4) Events command initial attention and create opportunity.

Events like the UCI event expose local communities to important engagement opportunities. These opportunities may entail greater involvement in community planning, joining new groups, being encouraged to be more active and being supported to develop a local idea. In communities where opportunities are perceived as scarce, regular events can promote opportunities in abundance. Highlighted in the research, the potential for one-off events, like the UCI, for initiating initial engagement needs to be developed to secure more prolonged local-level engagement. Planning is needed that addresses (i) pre-event, (ii) on the day of the event and (iii) post-event activities to encourage sustained PA behaviour.

Stage 2 (Everyday Level Related PA)

1) Tunnel vision poses friction to PA.

Friction is impeding individual and community PA. Many community members experience multiple inequalities. These inequalities create a lifestyle of instability, inactivity/low activity and vulnerability to the negative impacts of "shocks" (unexpected or unplanned-for factors). These inequalities cause friction through processes operating on a subconscious level. These processes have powerful 'knock-on-effects' for other aspects of life. As a result, 'tunnel vision' arises as individuals become focused on their more pressing problems. In scarcity, PA is rarely a priority. In Thorne and Moorends community PA engagement is low despite having many opportunities. To alleviate this friction PA needs to (i) be offered at minimal cost, (ii) support all patterns of engagement and (iii) be reframed to empower local people. These are challenging notions and are likely to require a mindset 'shift' among providers to release the PA capacity lying in these neighbourhoods.

### 2) Summer activity "Discovery phase" is impeded by sludge.

Sludge (defined as "system inefficiencies") reflects the types of friction experienced in systems. Sludge causes an increase in perceived effort required to engage in activities. Given that engagement in summer activities were low, it was not surprising to collate 15 existing sludges relating to them. To identify the timings of sludge within the activities, the Gamification framework was used to map them (Discovery, Onboarding, Scaffolding and End-Game). The Discovery stage was affected by a total of 10 sludges; this is the phase creating the first and most lasting impressions. This phase is imperative for converting initial interest into attendance. As summer activities provide an important opportunity to promote positive trajectories for PA, the Discovery phase needs to be designed carefully. The summer period was also an ideal opportunity for promotion of the upcoming UCI event (in the End-Game phase). However, this opportunity was not realised. For the RLWC, it would be beneficial for the summer provision to promote the event/s through more careful and diligence deployment of a strong End-Game approach.

Sludge Mapped on the Gamification Framework for Participants and Deliverers
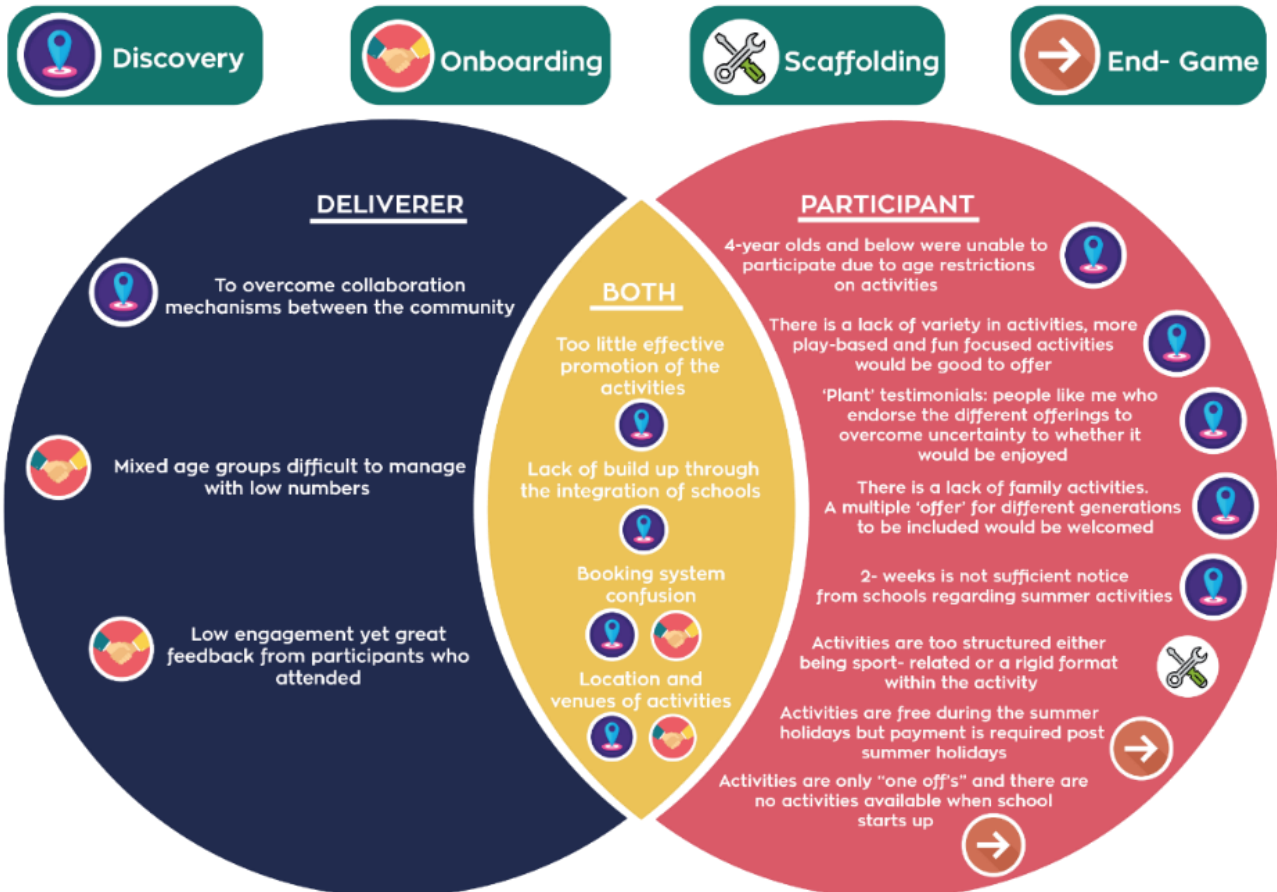
3) Local PA issues revolve around five reasons.

An online community survey in Thorne and Moorends was carried out, based upon the Six-Influencer framework. **Total Influencer scores from the survey were 12/24 (7/12 motivation domains, 5/12 ability domains).** The figure below illustrates the overall 'picture' of PA perspectives within the community. Most noticeably, structural ability (how well the environment supports the right behaviour) was low (scoring 1 out of 4). Reports on experiences and opinions of PA within Thorne and Moorends focused on five elements of 'structure' (environmental drivers of behaviour); (i) safety, (ii) cost, (iii) local provision, (iv) infrastructure and (v) event demand. Local scores for individual motivation averaged 3 – higher than anticipated. In combination, these scores suggest locals want to be active but feel the environment is restricting their engagement.

ONLINE LOCAL SURVEY RESULTS

Local Influencer Survey Scores
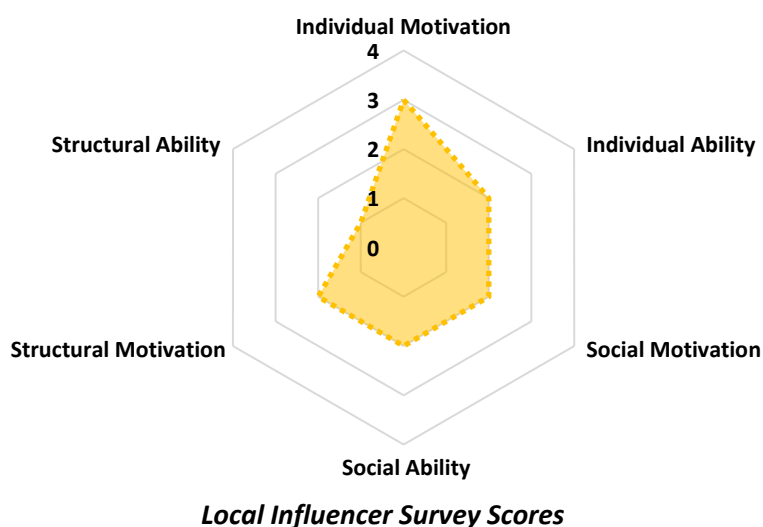
4) Use 'Gamification' to overcome PA challenges.

The Gamification framework can be used to design, implement, adopt and evaluate PA interventions. The framework was used to map existing effective community interventions against four phases; Discovery, Onboarding, Scaffolding and End-Game. Implementation and adoption of mechanisms could be overviewed, and evaluation opportunities made available (for example sludge auditing for each phase). The framework was readily understood by community groups and findings from evaluations based on it can be presented visually. Utilising this framework in an intervention would provide a standardised approach that can be used to compare interventions in varying contexts and identify key mechanisms driving the intervention.

5) Make environments more 'sticky'

Green spaces offer an asset for encouraging PA. Therefore, improving the 'stickiness' of these locations is likely to improve PA. 'Sticky' places must be created for locals to engage, stay and enjoy spaces (and events). Locally, public green spaces such as the local parks had variable 'stickiness'. Audits of local parks provided an insight into what these public spaces had to 'offer'. The attractions of each park were unique and catered for different population groups, for example, Thorne Memorial Park appeared to be more favoured by older adults. Yet, as identified in the park user audit, people did not stay for long periods of time. *"Great places are both initially*

attractive, and 'sticky' once you get there. A place is sticky if you love it and don't want to leave" (Brent Toderian). Within the local parks, it was identified as an opportunity to improve the 'stickiness' of the spaces to encourage greater PA. Thorne Memorial Park boasted the greatest number of park users during the time period. The park was the 'stickiest' with the highest time spent being at Thorne Memorial Park opposed to Wikegate Park and Moorends Miners Welfare Ground.

Similarly, 'sticky' streets improve PA behaviour. Streets can be viewed as people-places. *"A street is sticky if as you move along it, you're constantly enticed to slow down, stop and linger to enjoy the public life around you" (Brent Toderian).* While most street design promotes the 'walkability' of a street, great streets are both 'walkable' and 'sticky'. Sticky streets can be developed to signal the importance of those streets. In Thorne and Moorends the connecting street to these two communities has the potential to be made 'stickier'. Older adults of these communities were particularly sensitive to this issue. For them, having no benches - which they need because they can't walk far in single stretches – result in inactivity and social isolation. They were also unlikely to spend time on the streets with no access to public toilets. Having more stickier streets ultimately creates a greater opportunity to live an improved community, social and active life.

Summary

Address both 'Friction' and 'Fuel' for local success in PA.

To summarise, the UCI event **(Stage 1)** provided an opportunity for locals to engage in community PA. **Stage 2** of the research identified friction is paramount to the success of PA provision, as excessive amounts are causing inefficiencies in local provision and low and/or inconsistent engagement in PA. Powerful local friction identified as the scarcity mindset is crucial for understanding the context of these communities to better guide interventions. Additional PA provision (Fuel) is unlikely to be effective without considering the local friction.
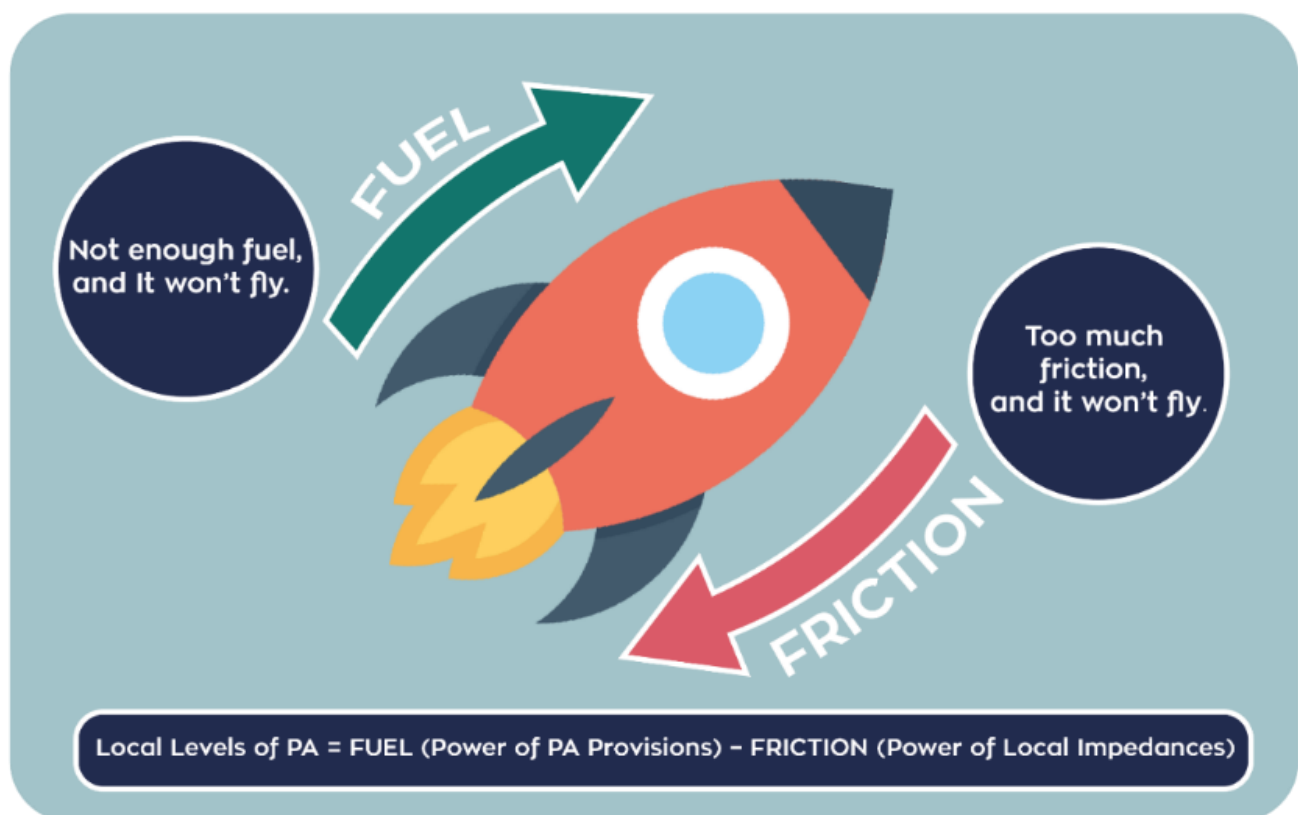
Fuel and Friction Metaphor

Recommendations

In this section we summarise the key recommendations based upon our interpretation of findings from this research. It is apparent the event does improve community PA perspective on the day of the event by creating an environment of opportunities for PA, however there is a lack of pre-UCI and post-UCI PA opportunities. Running parallel to the event is 'everyday level' PA. Whilst there are positive examples of effective PA provision, 'everyday level' PA is often stalled by community and individual friction being present. The in-depth research understanding of the context of Thorne and Moorends has enabled a 'bigger picture' to emerge. For the RLWC and 'everyday level' PA, the following recommendations aim to highlight and provide ideas or improvements that could be adopted.

Please note recommendations are not stated in chronological order of 'importance'. Recommendations with text in green are highlighted to indicate where we think importance is of high value.

14.1.1 Fuel and Friction

From our research we identified a fuel and friction issue both for the UCI event and on an 'everyday level'. In a PA setting, the fuel relates to the PA provision that boosts engagement such as it being social, accessible or rewarding. Friction relates to things that impede PA such as system inefficiencies, mindset and inequalities. In Thorne and Moorends motivation and engagement was very low across the community despite having fantastic PA opportunities, likely because the local's friction was too much. **Friction was the issue not fuel.** *It's like trying to drive with your foot on the break, nothing happens because there is too much friction despite all the fuel.*

#1 Do not pour more fuel into the community without dealing with the existing friction. Identify potential system efficiencies, inequalities and if scarcity mindset is impeding engagement. Once these have been identified, PA interventions can be designed to be inclusive and supportive of these factors.

#2 Let the user's 'voice' their experiences. A user's experience is often different to how designers initially planned it be. This is not necessarily a negative outcome as allowing users to feedback on their experience (including the smaller details) can help understand and improve the PA intervention. The most effective interventions, games or marketing campaigns are continually innovated to improve the user's perspective. For PA interventions in Thorne and Moorends, having regular feedback opportunities (e.g. sludge audits, scorecard, online survey, conversation, group discussion) should try to be executed.

#3 Engage more with 'most in need' locals within the community. Often, PA interventions engage with people who are already active and typically are not the 'most in need' as they are already responsive. For future PA interventions, community engagement strategies should be innovated in order to put PA on all local's radars and gain insight into their 'fuel and friction'. A mixed approach (online and in-person) should be adopted. Relying heavily on one communication channel such as social media is restricting engagement to that proportion of the community. Including in-person communication allows a **personal touch** and greater reach to those 'most in need'. *Example opportunities include e.g. walking through the street, the food bank, online community survey, the library, the GP practice, through spectators at events, in supermarkets, networking and word of mouth.*

#4 Keep locals 'in the loop'. Locals of Thorne and Moorends have a strong community spirit. Once this is harnessed, a 'social buzz' is created. For the UCI event, the 'social buzz' was only noticeable the week commencing of the event. From speaking to locals, it appeared plans for the UCI event (what is it, when is it and benefits to them) were informed in the latter stages of the build up to the event. This meant the build-up of the event was stagnated through a lack of perceived informative activities with locals. For the RLWC, plans (for the build-up activities, on the day activities and post-event activities) should be in greater advance to allow enough time for local's community engagement to be harnessed.

14.1.2 Framing PA

As professionals with a health and PA interest, our perceptions of PA often diverge from the general population. How we see PA is different to how they see PA. *For example, we often see PA as a health benefit but for children they see it as fun.* It is important to promote and frame PA specific population/target groups.

#5 To assist in framing PA, the EAST framework (developed through this research) can be used as a tool to tailor PA promotion and intervention design to populations/target groups – *see Figure 30*. PA interventions should be:

Make it EASY	Make it ATTRACTIVE	Make it SOCIAL	Make it TIMELY
Simplify PA messages to direct calls to action.	Create a personalised touch.	Choose the right messengers.	Identify key decision moments.
Use defaults and anchoring.	Be bold. Attract attention.	Highlight PA as the normative behaviour.	Build prompts into the environment.
Ensure the PA 'offering' is low 'cost' (time, effort, money, cognition).	Cater to emotions and feelings.	Allow sufficient time for 'word of mouth' to circulate the community.	Help people plan.
Utilise place importance to promote PA location/venue.	Maximise perceived value of attending.	Optimise social buzz to harness social pressure.	Receive feedback on the convenience of PA interventions.
Ensure the systems process is streamlined	Increase salience of PA offer.	Localise messages and empower the community.	Piggyback existing events to introduce PA experiences.
Ensure sludge is minimised within the PA provision system.	Tailor the PA 'offering' to the population/target groups.	Identify social support to encourage shared commitment.	Link PA with existing campaigns (e.g. mental health week).
Participants motivation is optimised through low-demand requirements of the PA provision.	Be visual in promoting the activity.	Use promotional items to create herding.	Capitalise on positive emotions and feelings.
Ensure all details needed to participate are provided. - Is this activity for me? - Where is it? - What time is it? - Do I need to bring anything? - Who do I contact for queries?	The PA 'offering' should maintain being 'sticky' throughout the duration.	Leverage existing community groups or local influencers to promote PA.	Structure PA benefits to make them immediate ('small wins').

Figure 1: EAST Framework for Physical Activity

14.1.3 The Scarcity Mindset

Individuals with a scarcity mindset live with the fear they are going to lose their time, money or have their other pressing problem impacted negatively. Engaging with PA is unlikely as this does not 'add' to improving their concerns, rather 'add' to the concern. The overall challenge, given the prominence of the scarcity mindset' (and its underlying circumstances), is to reframe PA as a simple behaviour that, at most, creates only a low demand on individual and collective cognitive resources. The EAST framework can be used however in order to engage with this population PA provision should prioritise the following:

#6 Cut the Cost

Cost is not simply referring to monetary costs but also burdens of people's time, effort, attention and cognition. Simplify promotional messages, make the process smooth and reduce the burden of attending (no matter how small you think it is). **Make being active the easy option.**

#7 Create Slack

Innovation is key. Ensure to build in adequate time, money, attention and other critical resources that are necessary to escape 'deprivation'. The **activity 'offering' must have a greater capacity to support their pressing**

problems as well as facilitate PA. *For example: If parents can also gain other benefits from their child participating such as advice with paperwork or receiving free fruit, the 'offering' of the activity has created slack.*

#8 Reframe and Empower

People lacking an abundant mindset often lack the feeling of empowerment. To build the feeling of empowerment into the scarcity mindset, focus on the **'small wins'.** Turning up can be viewed as successful step in progressing. Long-term success for scarcity engagers should not be a focus. Instead, focus shorter-term with the view of building this up. To help reframe and empower, a nurturing environment should be designed to help engagers explore their autonomy in a 'safe environment'.

14.1.4 Summer Activities

For children, summer activities have the potential to boost their development. Overall, the summer activities provided with a Six-Influencer score identifies the interventions are positively motivating and engaging locals on multiple levels when they attend sessions. There are positive mechanisms demonstrated within all interventions. Despite the positive activities, attendance and engagement remained poor. To improve this for future activities the following could be considered:

#9 Improvement mechanisms should be considered when planning. In all activities, improvement mechanisms were identified, ultimately impacting the Six-Influencer score and perspectives. Future activities of this kind should acknowledge the improvement mechanisms and aim to build these into the planning and design of the PA intervention.

#10 Use the Gamification framework to plan and design PA interventions. During the summer, it appeared activities were not structured considering wider influencers and impacts of the activity's mechanisms for the context. When mapped against the Gamification framework, there were short Discovery periods, inconsistent Onboarding and Scaffolding phases and a lack of End-Game provision. In order to boost engagement and motivation, the Gamification framework can be used to guide PA interventions.

#11 Reduce sludge in the 'Discovery Phase'. Several sludges were identified by both deliverers and participants of the summer activities. As the Discovery phase is critical to making a 'good first impression', there must be as little sludge present as possible. From the identified 'Discovery phase' sludge, recommendations have been developed in response to the sludge. The recommendations are either evidence-based or suggestions from participants and community groups delivering activities. The recommendations aim to improve the 'why would they want to start this activity?' and 'how can I get involved?'. From the sludge stated previously in the summer sludge audit the following suggestions should be considered to reduce the sludge stated:

#11.1 S-L-O-W Burn Approaches
'Light the blue torch paper' as soon as the summer activity plan has been established. The build-up of the activities should begin early on and continually have a small but positive impact in raising awareness. Through this approach, families can feel in control of what's upcoming and plan accordingly. The buzz around the activities should also be seen to increase as the activity dates get closer.

#11.2 Taster Sessions
Deliverers of activities could collaborate with schools to provide taster sessions for the children prior to the summer holidays. This mechanism would allow children to experience the activity, reassuring any uncertainties before attending the first summer holiday session. If the activity is enjoyed by the children, this will create a social buzz increasing the likelihood of programme success (based on the children attending).

#11.3 Channels of Promotion
Allocating an amount of money from the funding to drive promotion on all levels at least a month before summer could be completed to increase awareness and answer any questions from families. Using more social processes to advertise the event is likely to be most influential as 'word of mouth' is

successful in spreading local news in Thorne and Moorends. Capitalising on the social structures available should be undertaken to influence individuals and encourage other individuals. A campaign could be built with distinctive slogans that can be easily remembered. Messages around the campaign can be filtered through to locals via in-person, community groups, community social media pages and school communications. Physical prompts can also be used to raise awareness such as merchandise. As commented above, a summer holiday activity calendar would be useful for parents to have on their fridge.

#11.4 Inclusive of 4-year olds
Provide activities that are available for ages below 5-years old to attend.

#11.5 Family Orientated Activities
A multiple offer for different generations would be welcomed. Community groups should look to provide regular activities each week throughout the summer for families to engage and participate in.

#11.6 More Fun!
Offer activities that are more varied. Although EXPECT Youth identify they offer over 20 activities, parents and children would both like activities that are more fun and play based. The creation of these activities may require co-creation of activities with families and deliverers to fulfil this request.

#11.7 Testimonies
Creating testimonies in a fun and easily digestible format should be completed to use alongside promotional materials. Testimonies have the power for other individuals to identify with so collecting a variety of testimonies from different backgrounds, likes/dislikes, type of activity and age groups can resonate feelings and attitudes towards the proposed activities offered.

#11.8 Collaboration is Key
Many community groups and organisations are already working within Thorne and Moorends, facilitating PA for young children. There appears to be a lack of collaboration between the existing groups however there is potential to develop a more effective summer activity programme in Thorne and Moorends if all these groups worked with each other. It would be powerful for the groups involved to have a meeting to discuss each other's perspectives and identify where one another could assist in supporting PA in the area as not all groups offer the same. Additionally, by communicating between one another this could avoid clashing of activities, using locations/venues better and streamlining promotional content to improve engagement in the summer programme.

#11.9 Simple Booking System
On all promotional content, 'how to book' should be outlined in simple steps (e.g. STEP 1: Register at 'www…', STEP 2: Complete online questions, STEP 3: Find an activity and click BOOK). Ideally, booking systems should streamline to one main source to avoid problems such as missing information and unexpected arrivals of participants. Additionally, management of participants who repeatedly book onto activities and don't turn up should be considered. For participants on a waiting list, the booking system could incorporate text messages so families can receive a text alert if a place becomes available.

#11.10 Location, Location, Location
Effectively utilising the community assets of Thorne and Moorends should be achieved through deliverers and organisations approaching location selection strategically. Three key questions can be used to help in their decision:
1. Is the location walkable for participants?

2. Is the location psychologically safe (i.e. predominantly familiar) and physically safe (e.g. no broken glass, little public disturbance)?
3. How can the available locations be made more E.A.S.T (Easy, Attractive, Social, Timely)?

#12 Reduce sludge in the 'Onboarding Phase'. Compared to the Discovery phase, there was less sludge commented on regarding the Onboarding phase. However, from the identified sludge the following should be considered to further reduce it:

#12.1 Create a Crowd to Build a Crowd
To maximise participant numbers at activities, communicating with engaged participants through slogans such as 'if you liked it, tell your friends', 'bring a mate' or 'bring your siblings' could be used to generate the social buzz to motivate others to attend. The age differences should be nullified by engaging greater numbers of attendees however age-specific activities could be implemented if age differences continued to impact activities.

#12.2 Simple Booking System
(A*s described in the Discovery phase)*

#12.3 Location, Location, Location
(As described in the Discovery phase)

#13 Reduce sludge in the 'Scaffolding Phase'. There was minimal sludge commented on regarding the Scaffolding phase. As the activities did not appear to have regular attendees each week, it would be difficult to suggest improving this phase. Only one sludge was identified, and this was relating to the structured format of the activities. To address this the following should be considered:

#13.1 Less Structure, More Fun!
Deliverers should focus more on hedonic reward of enjoyment, offering more varied (as identified in the Discovery phase recommendations 'More Fun!') and less sport-related activities. Sport is not to be overlooked however focusing on fundamental movement skills of stability, object control and locomotion out of context of sport, may engage tribes that don't identify with sport.

#13.2 Reduce sludge in the 'End-Game Phase'. The summer activities provide an opportunity to propel participants into further PA once the summer holidays have ended. From comments, it is evident there is a need for further provision once schools start again. The following should be considered:

#13.1 Failing to Plan, is Planning to Fail

Regardless of the activity, all activities should have been planned purposefully from the start to the end. The groups delivering activities should know 'what's next?' for participants. Once the summer holidays are finished, participants should know in advance what is available to them. For example, if throughout the summer, families have been attending a new series of 'family challenges' inform them these will be continuing every 2-weeks or there are similar activities starting up in the area in September. The summer period should be used to leverage engagement further in order to encourage new behaviours.

14.1.5 Grant Scheme
For both the UCI event and the TDY events, the grant scheme has been an effective approach initiated by Andy and Darren. There is a sense of ownership and community involvement for those who engage with the grant

scheme. The following suggestions aim to widen the grant scheme involvement with the community and boost engagement:

#14 The simpler the application the better. The simpler the form is to understand, the more likely of further engagement. Making the grant scheme application form a lower reading age may engage a greater reach of community members to apply. Additionally, providing a FAQ's style format may answer unsure community groups/members queries. Reducing the sludge of the application will encourage uptake.

#15 Promote the grant scheme in-person. Throughout the research period, several active community groups and individuals were communicated with. For those who did not apply to the grant scheme, comments that they felt "it was not relatable to them" or "they were not sure what they could do" emerged. However, after explaining in-person the purpose and opportunity there was a greater interest. For future promotion of grant schemes, a personal touch may encourage greater uptake.

14.1.6 Everyday Level PA

The importance of 'everyday level' PA is crucial for maintaining physical, social and mental health. Locals have been receptive in communicating their views regarding how to improve community PA.

#16 Identify opportunities to improve the "stickiness" of streets. There is a lack of structural support to encourage PA via active travel. Enabling streets to become a social and attractive 'place' rather than a passive structure will support locals to become more active and social. For older adults, having 'rest stops' would benefit their confidence and ability to live more independent lives locally.

#17 Facilitate parks to show greater social presence. Local parks are valuable community assets to facilitate PA. Thorne and Moorends have numerous community sport clubs and groups that utilise these areas but visually there is no information or personal engagement surrounding this. When social elements are available in the environment, parks users feel a greater social responsibility (such as in Thorne Memorial Park with the social evidence of Greentop Primary School).

#18 Host more community events. From the research it is understood locals in Thorne and Moorends enjoy and engage with community events such as the UCI event and Gala. For the planning committee, facilitating greater community events may be difficult with their available time and resources however where opportunities are possible local PA could be facilitated. There is a desire for more local events, this could be from festivals, sporting events, local community club events, carnival or more one-off events like Gala.

#19 Improve the community infrastructure. As big a local talking point to the UCI event was the new resurfaced road. Locals repeatedly emphasised the need for better quality infrastructure to support being active. Improving the local roads, paths, cycle routes and public spaces will encourage default PA and support the potential for locals to increase their PA levels. Within Moorends, the quality is perceived as 'worse off' since Thorne had the main road resurfaced.

#20 Improve perceived community safety. A theme of *safety* was identified as a barrier to being active locally. If possible, having more deterrents such as speeding cameras, speed bumps and CCTV would help improve perceived safety. The Doncaster East Team already support neighbourhood watch and community speed watch initiatives, but this could be supported further.

#22 Support existing groups providing PA provision in engaging with a greater reach of the community. There are existing groups facilitating PA in both Thorne and Moorends, demonstrating effective engagement within the community. Some groups are at full capacity however other groups would benefit from support to improve their community reach. Most established groups are run sustainably (or appear to be) therefore engaging with new 'most to gain' individuals would mutually benefit the community.

14.1.7 Future PA Interventions

Supporting community PA interventions can be challenging. Understanding 'what works' and 'what does not work' is often unknown and there is insufficient time and resources to do the 'gold standard' method of intervention mapping. From our research undertaken, the insight gained has provided a better 'picture' of the context and mechanisms required for Thorne and Moorends.

#23 Utilise the Gamification framework. The Gamification framework builds in other recommendations and initiatives such as 'framing PA' (in the Discovery phase), sustainability (in the End-Game phase) and sludge audits (all 4-phases). The framework is adaptable, engaging and can simplify the complexity of intervention design. It can be presented visually and has the capability to use the Six-Influencer mapped against each phase. The concept has been successfully introduced to stakeholders. In a community setting this has not been utilised (to our knowledge) therefore provides an opportunity for Doncaster Council to lead the way for its use during the RLWC PA approach.

#24 Target 'most to gain' individuals. Much of the research has been engaging with locals already participating in a community group or attending the UCI event. There remain individuals that are not engaging with the research and not engaging with PA. A challenge is communicating with these individuals. Using community links such as the local food bank or the chicken factory are avenues that can lead to engagement but would require more directed and calculated efforts. Taking an innovative approach alike to this to engage individuals in PA would be novel in supporting the 'most to gain' community individuals in improving their physical, mental and social health.

#25 Conduct a pre-mortem. A PA intervention pre-mortem assesses and identifies all the things that could go wrong before the intervention has been implemented. In a public setting, this is beneficial as it helps minimise sludge, barriers and better directs funding. A pre-mortem is a proactive approach rather than a post-mortem (after PA interventions) - a reactive approach. PA interventions for the RLWC should look to undertake a pre-mortem.

14.1.8 Other Areas

#26 Leverage school influences. As schools transfer into academies, community contact can fade. There should be a conscious effort to keep in communication with schools in order to support children and their families in PA. Schools are highly influential, having the ability to communicate community messages and opportunities but also link their extra-curricular to local events. Supporting positive relationships with schools is critical to transferring knowledge and experiences both in-term and out of term. The challenge of engaging with teenagers within the area may be overcome by engaging teenagers through school.