

### Rehabilitation in the virtual age: Using VR to support patient recovery

Ivan Phelan







## IMPACT VR

R E S E A R C H L A B



Patients suffer pain during arm and hand rehab, low engagement and more time in clinic



# Develop an effective, engaging and user friendly VR rehab system for paediatric patients







It's much easier... because it felt like I didn't have an injury, so it felt like I could just do it.



She got a huge amount more range of movement and has significantly improved just with that one session (Ph2)

















When he's back from school, every day he's...

"Come on mum, I'm ready for the video".



You didn't feel like you were doing physio. It just felt like you were playing a game.



The range of movements seemed to be a lot more fluent. It was just like, it was a natural reaction to just do that, and the movement was just better than it would be if you hadn't had it [VR headset] on.





GAMES FOR CHANGE AWARDS

## 





APNI SUNO BINDASS CHUNO



























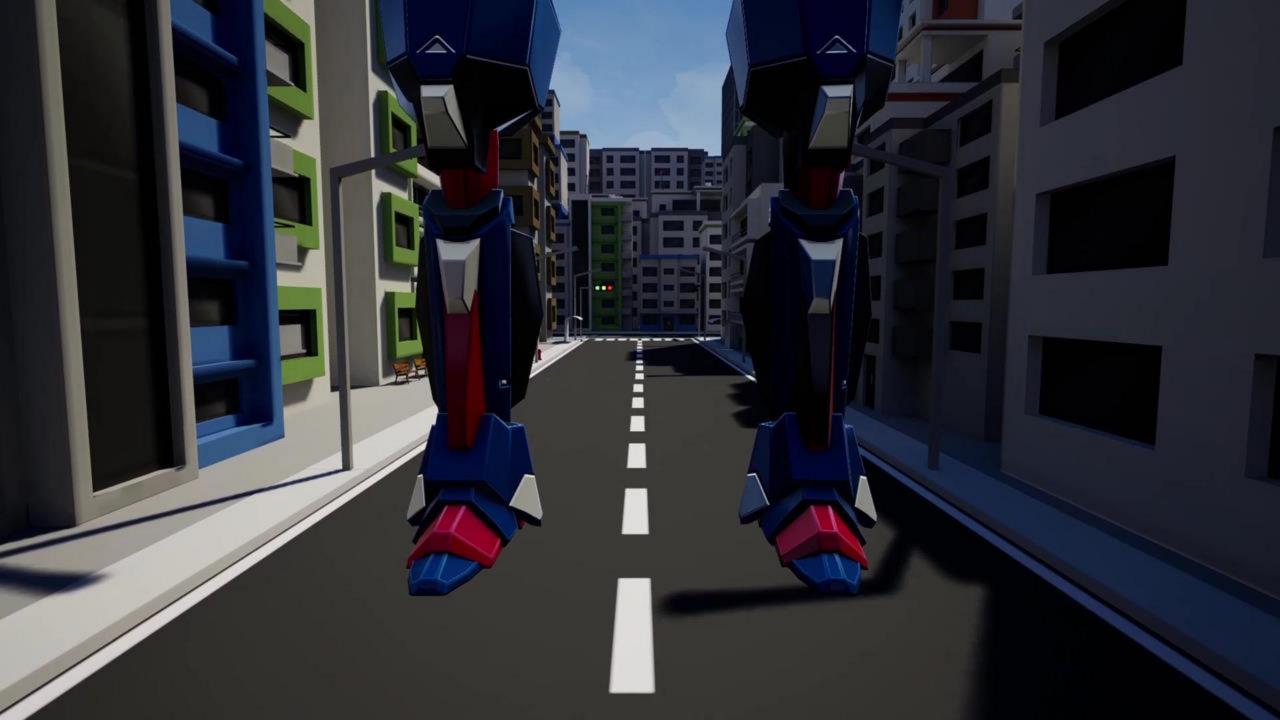


Rehab can be painful, uncomfortable, and tedious, reducing compliance.



# Use VR as a tool in physiotherapy for children after lower limb or knee surgery.













It made it more accessible, a lot easier. Because it's when I was trying to walk with it, I was like on my tiptoes. But when I was doing it with VR, I could put my whole foot down and not be scared



### I didn't realise how I walked in that far until I took it off



- Co Design
- Engagement
- Usability
- Difficulty



#### Questions!



i.phelan@shu.ac.uk@phello / @impactvrlab







