Suffolk 2020 VR Project

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Introductions

- Digital Care Team @ Suffolk County Council
- Team of 5 professionals who jointly provide advice and support across all the Adult Social Work Teams in Suffolk as well as the external care market.
- The team has been heavily involved in the procurement of a new Digital Care Provider for the county who we will be working with as a partnership to help deliver a bold program of innovation and transformation.
- We each lead on different strategic projects at local and county level.
- Stuart Savage is the Project Manager for our 2020 VR Project.

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Benefits of VR for PLWD
High-level Literature Summary

- Despite the preconceptions of carers and families, **PLWD enjoy VR** and give highly positive feedback. There is significant evidence of **improvement in mood & wellbeing** (Moyle et. al. (2018); Brimelow et. al. (2020); Appel et. al. (2020); Rose et. al (2021)).
- Also evidence of **cumulative beneficial impact** of VR therapy over time (Brugi & Grey (2020).
- Use of VR with PLWD sees significant **increase in attention & focus** – with marked reduction in "apathy" (Manera et. a; (2016); Moyle et. al. (2018); Brimelow et. al. (2020)).
- This in turn means that treatment delivered via VR can enable **striking improvement in memory and cognition** (Optale et. al. (2010); Thapa et. al. (2020)) as well as **mobility & gait** (Thapa (2020)).
- Very limited evidence of **any** increase in anxiety / fear (noted in one study alongside positive effects (Moyle et. al. 2018) but not replicated in any other clinical study cf. Appel et. al. 2020).
- **Preference for VR activity** over equivalent paperbased activity (Manera et. al. (2016)).
- VR can enable **escape from the reality of physical & cognitive limitations** & institutional confinement and in so doing "**augment selfhood**" by reconnecting with memories of past experiences(Siriaraya & Ang 2014) and thereby providing a powerful medium for reminiscence therapy (Coelho et. al. (2020)).

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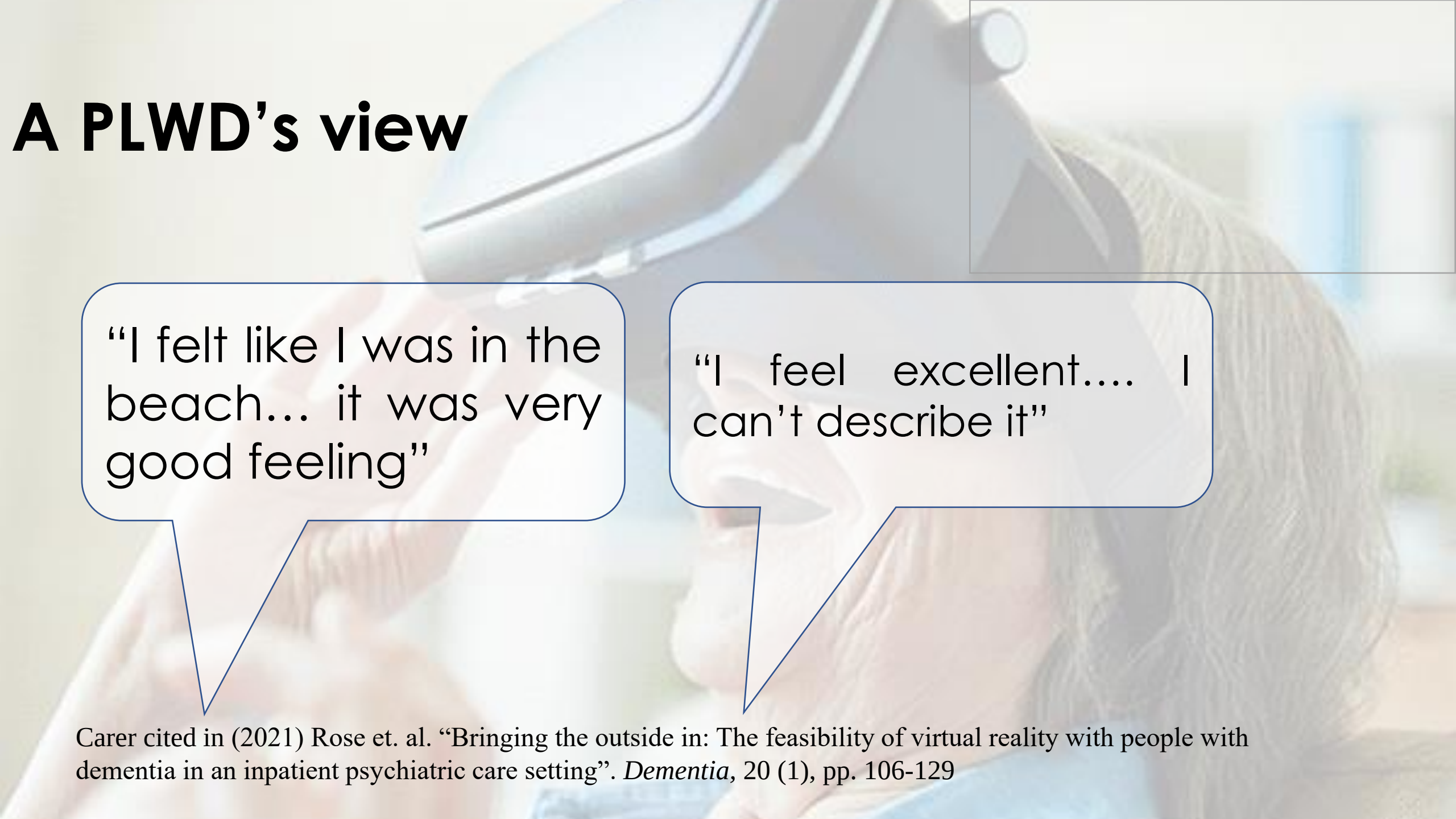
VR & Personhood

"The declines in cognition and memory among people with dementia have been argued to result in a "loss of self". The experiences and memories invoked by the Virtual World (VW) could help augment the sense of self for older people with dementia. **VWs allow the residents to temporarily step outside of their closed physical environment of long-term care facilities and transport them to a (albeit virtual) world of reminiscence. When the residents are institutionalised, their life is disrupted, the continuity broken. VWs could provide a "memory sanctuary" to maintain this continuity of self**."

Siriaraya, Panote, Ang, Chee Siang (2014) *Recreating living experiences from past memories through virtual worlds for people with dementia.* In: CHI '14 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. CHI Conference on Human Factors in Computer Systems . pp. 3977-3986.

A PLWD's view



Carer cited in (2021) Rose et. al. "Bringing the outside in: The feasibility of virtual reality with people with dementia in an inpatient psychiatric care setting". *Dementia*, 20 (1), pp. 106-129

A carer's view of VR

"You can't get them to a forest walk every day, you can't get them to a beach every day, you can't get them to a cathedral every day and it's as close to those environments that they can then get to regularly … so it's… definitely beneficial for them because I mean [the PWD] wouldn't have seen the lovely countryside today if it hadn't of been virtual reality unfortunately … so it's great. It stimulated him."

Carer cited in (2021) Rose et. al. "Bringing the outside in: The feasibility of virtual reality with people with dementia in an inpatient psychiatric care setting". *Dementia*, 20 (1), pp. 106-129

Anecdotal Evidence

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VR Dementia Market

- New niche market with a handful of UK based providers.
- Business Model offers subscription which typically includes hardware rental, support and access to a small number of generic VR experiences.
- Most solutions are confined to the service user though some allow a passive carer view.
- They presuppose physical and cognitive tolerance of headset.
- The cost of hardware and subscription is still relatively high for the amount of accessible content and probably beyond the budgets of most care homes / day centres at this moment in time.
- **The formal and anecdotal research base around VR & Dementia demand a bolder vision to democratise this life-enhancing technology. We would suggest this is an area where the Local Authority could intervene to stimulate the tech sector and mediate between the sector and the social care market.**
- **How can we ensure that all Suffolk care home residents / day centre attendees with dementia can access VR?**

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VR & Social Care Market

- Retro rooms.
- Keeping the dynamic of care within the domain of the familiar and the comfortable (Tea, Cake, BINGO & Board / Bored games?)
- On the other hand it provides a convenient logic against innovation and investment & perpetuates technological exclusion.
- To be Dementia Friendly = Digitally free?
- Lack of digital equipment & connectivity.
- Digital readiness & literacy of the social care workforce.
- Where does VR facilitation sit within time & task care provision?

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Our Proposed VR Solution for PLWD

- **Paired App** – (in)formal carer driven VR experiences
- **Enhanced Safety features** – content moderation and rating alongside simple biometric tracking to help the carer to identify signs of distress as well as engagement / stimulus.
- **Maximal accessibility -** to enable semi to fully immersive VR for PLWD who cannot tolerate headsets.
- **Off-line functionality** – no assumptions made about the presence or bandwidth of wi-fi in social care settings.
- **Localised Content –** Suffolk-based VR content determined via service-user focus group.
- **Digital Talk-Prompts in carer's app/view** – to offer enrichment & intergenerational experience.
- **Use of Archival material** – interested in exploring making archival materials accessible via VR – colourisation and adding immersion.
- **Back-end data insights -**to support further VR & non-VR based therapeutic activities.

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Wider Stakeholders: Who have we spoken to?

- Eastern Academic Health Science Network
- Broadland District Council
- Norfolk & Suffolk Foundation Trust
- Suffolk Artlink
- Southend-on-Sea Borough Council & Professor Reinhold Scherer
- Suffolk Dementia Alliances & Suffolk Dementia Forum
- East Anglian Film Archive
- Suffolk Hub

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Statutory & Charitable Bodies

Pro-bono Tech-sector involvement

SERVICE-USER FOCUS GROUP

Open Access VR Platform to receive a wide variety of VR content

SERVICE-USER FOCUS GROUP

IT Students / Digital Arts & Media Students

Formal & Informal Carers of PLWD

CONTENT MODERATION, DESCRIPTION, RATING & PRIVACY SETTING

RESIDENTIAL
DAY CENTRE
COMMUNITY

& Carer

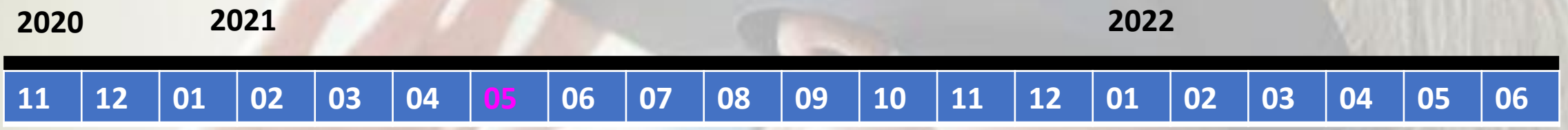
VR delivered via headset

& Carer

VR / Immersive experiences delivered via alternative hardware without a headset

Actionable Data Insights: Reviewing what the PLWD has said and looked at, what they have engaged with and what has stimulated them will provide intelligence for further VR & Non-VR follow up activities.

Project Timeline visualisation– where are we?



Project Start

PIN – Market Engag ement

Publish Spec

Award Contract Negotiate IP

Short Term Trial & Test with Service-User Group

<--- Long Term Platform Development --->

Active Engagement with Service-User Group over design of content & platform across 3 care sites.

End of Phase 1 & Phased Roll-out of VR Platform across Suffolk

Source & Secure Phase 2 Funding

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What we hope to achieve

- Make VR accessible to the widest possible cohort of PLWD in Suffolk going right across the disease spectrum.
- Challenge the culture of care around PLWD with one of the latest areas of consumer tech innovation.
- Make an important contribution to enhancing the mood, wellbeing, cognitive ability and "rementing" (Kitwood, 2011)of PLWD with potential knock-on benefits to stabilising care placements and reducing breakdown and enabling better participation with professionals around social work and health assessments.
- Enable intergenerational contact and improved visits with family carers around a shared digital experience.
- Provide a digital tool for the discovery of meaningful "interest" points to be followed up via both VR and non-VR based activities.
- Provide a long term digital platform for VR content creation for Suffolk care providers, families of PLWD as well as inspiring *pro bono* support from the tech sector and IT / Digital Media Students.

Thank you for listening …

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