



THE STARWORKS PROJECT

INNOVATIONS IN PROSTHETICS FOR YOUNG PEOPLE

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Devices for Dignity

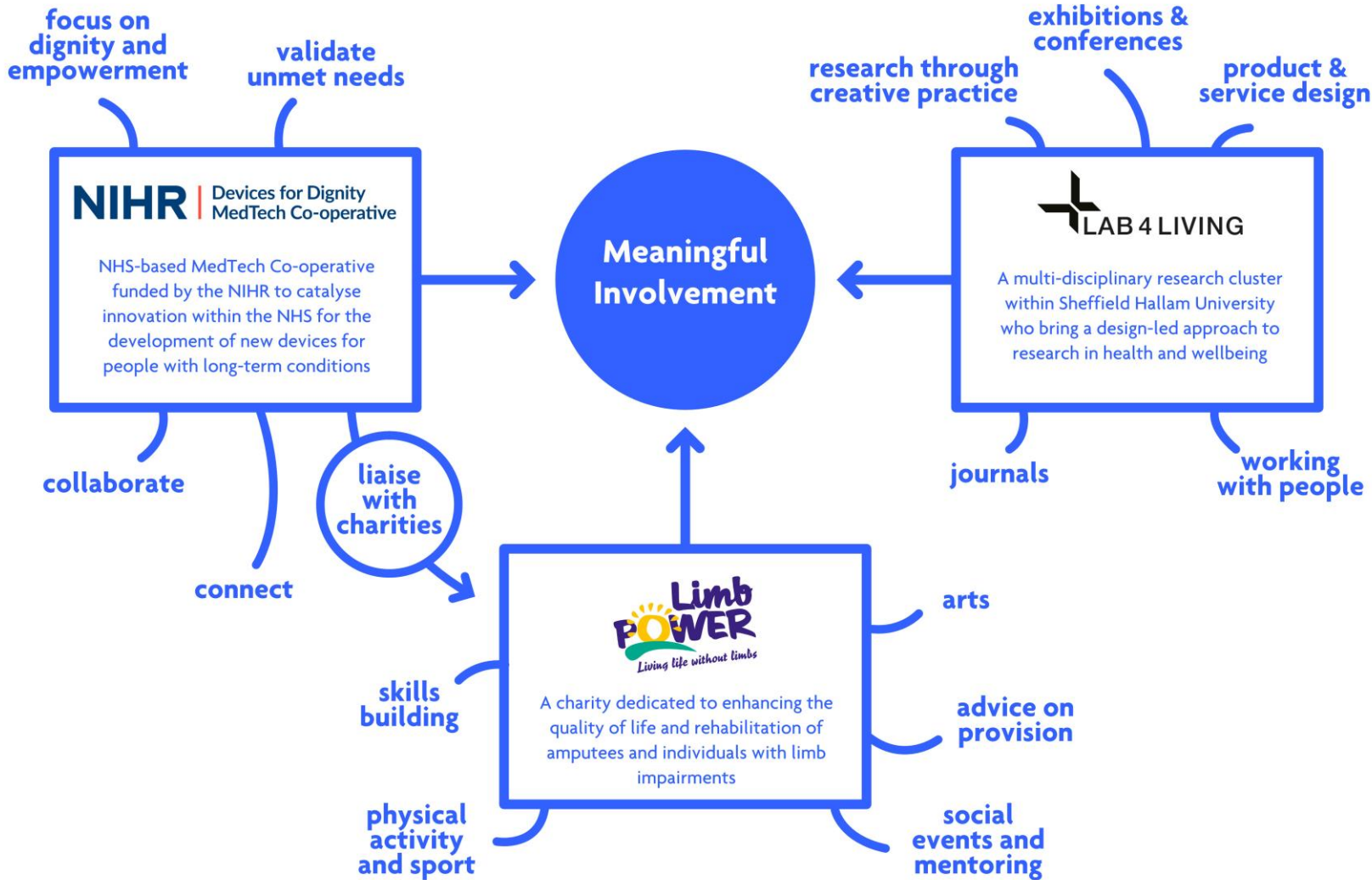
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Who is here today?



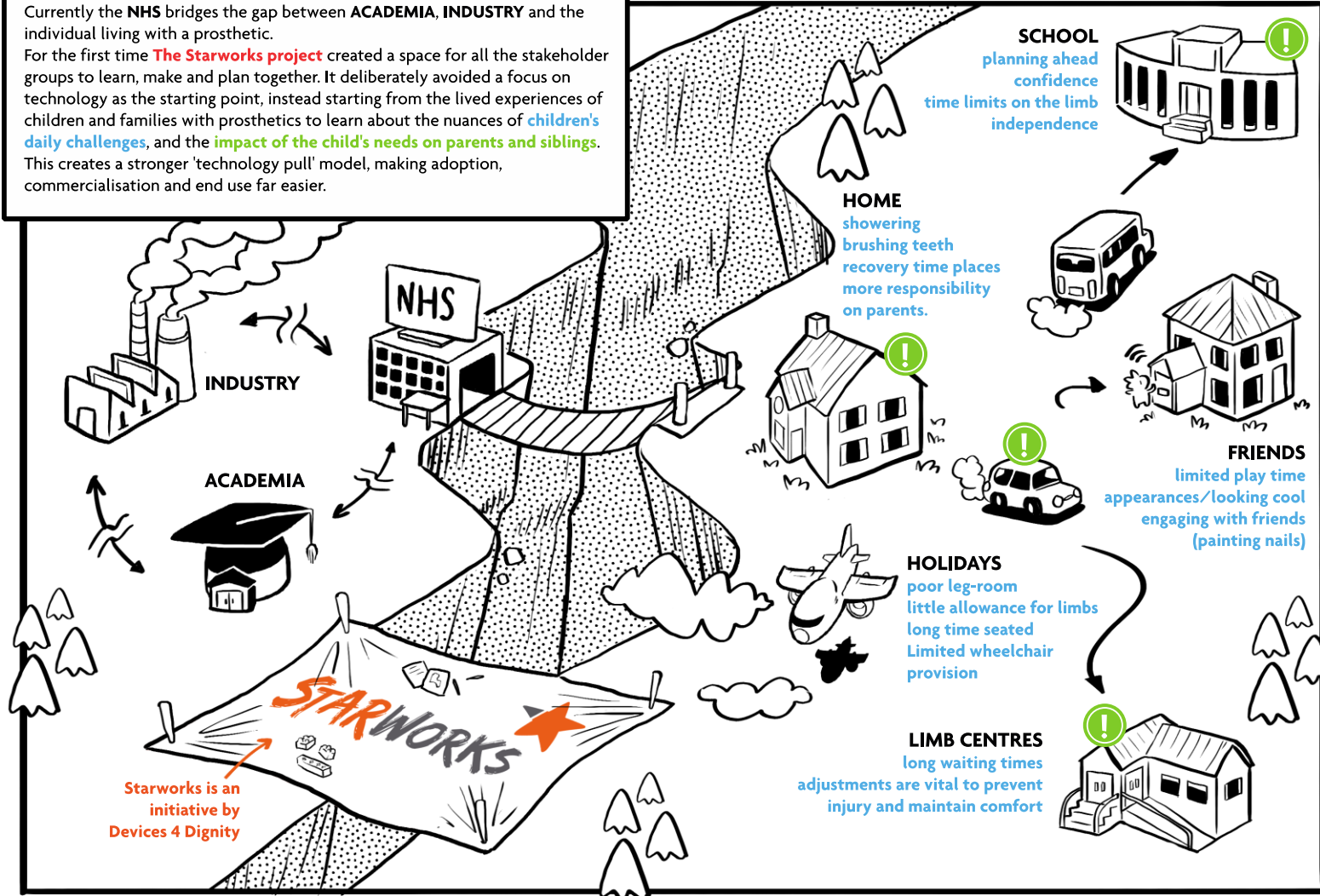
We'll highlight which of the key principles were enacted in each part of the project here



Setting up Starworks



Currently the **NHS** bridges the gap between **ACADEMIA**, **INDUSTRY** and the individual living with a prosthetic.
 For the first time **The Starworks project** created a space for all the stakeholder groups to learn, make and plan together. It deliberately avoided a focus on technology as the starting point, instead starting from the lived experiences of children and families with prosthetics to learn about the nuances of **children's daily challenges**, and the **impact of the child's needs on parents and siblings**.
 This creates a stronger 'technology pull' model, making adoption, commercialisation and end use far easier.



Market failure

Children have their own needs, but limited numbers means limited profit

Technology push vs pull

Many innovations aren't driven by these real-life needs

Chasm between stakeholders

Starworks aims to create a space to work together, meaningfully

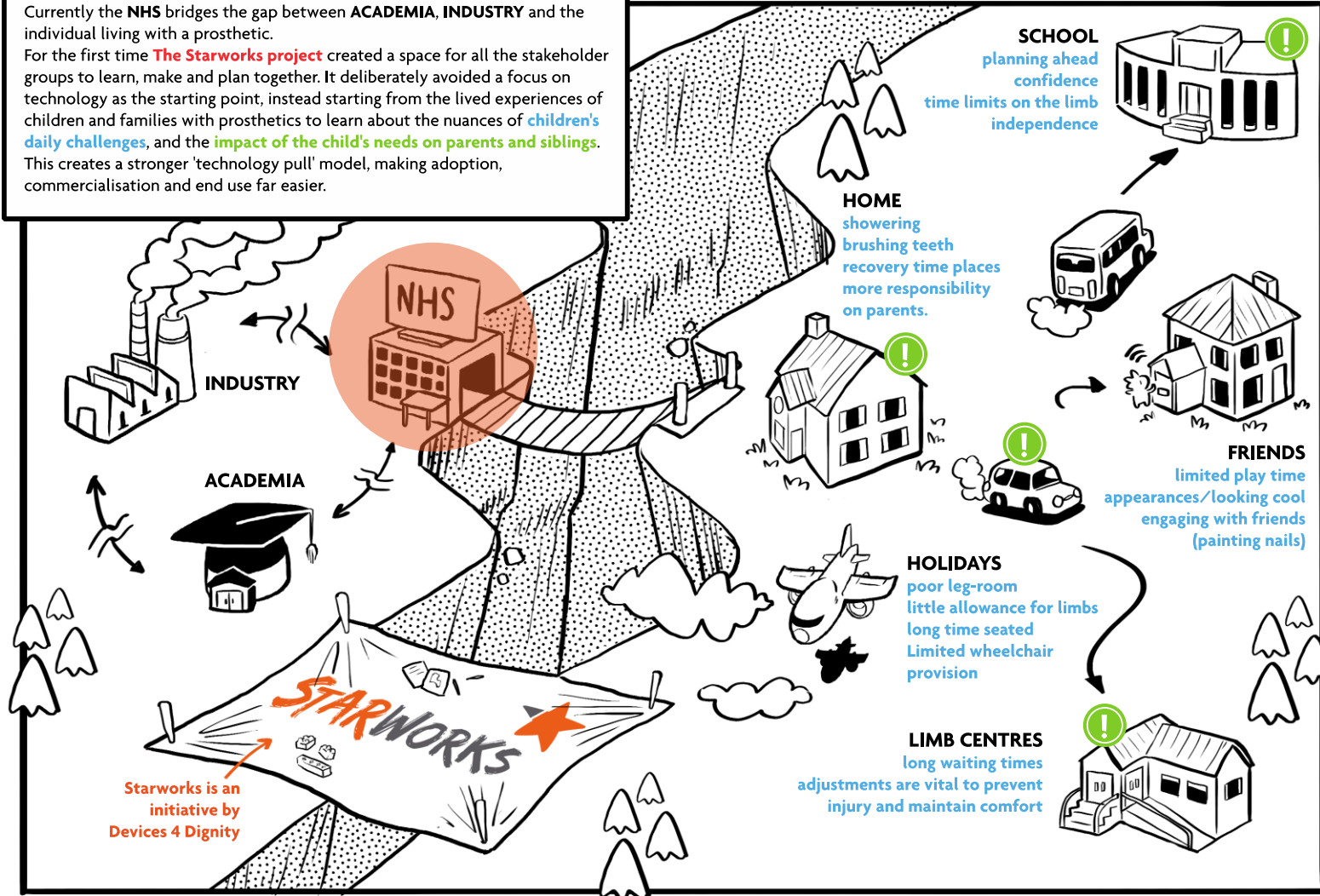


Unmet needs: NHS



Using stakeholder-specific methods

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Clinical Audit

To establish demand for prosthetics services & activity limbs

Surveys

To establish unmet needs within the service

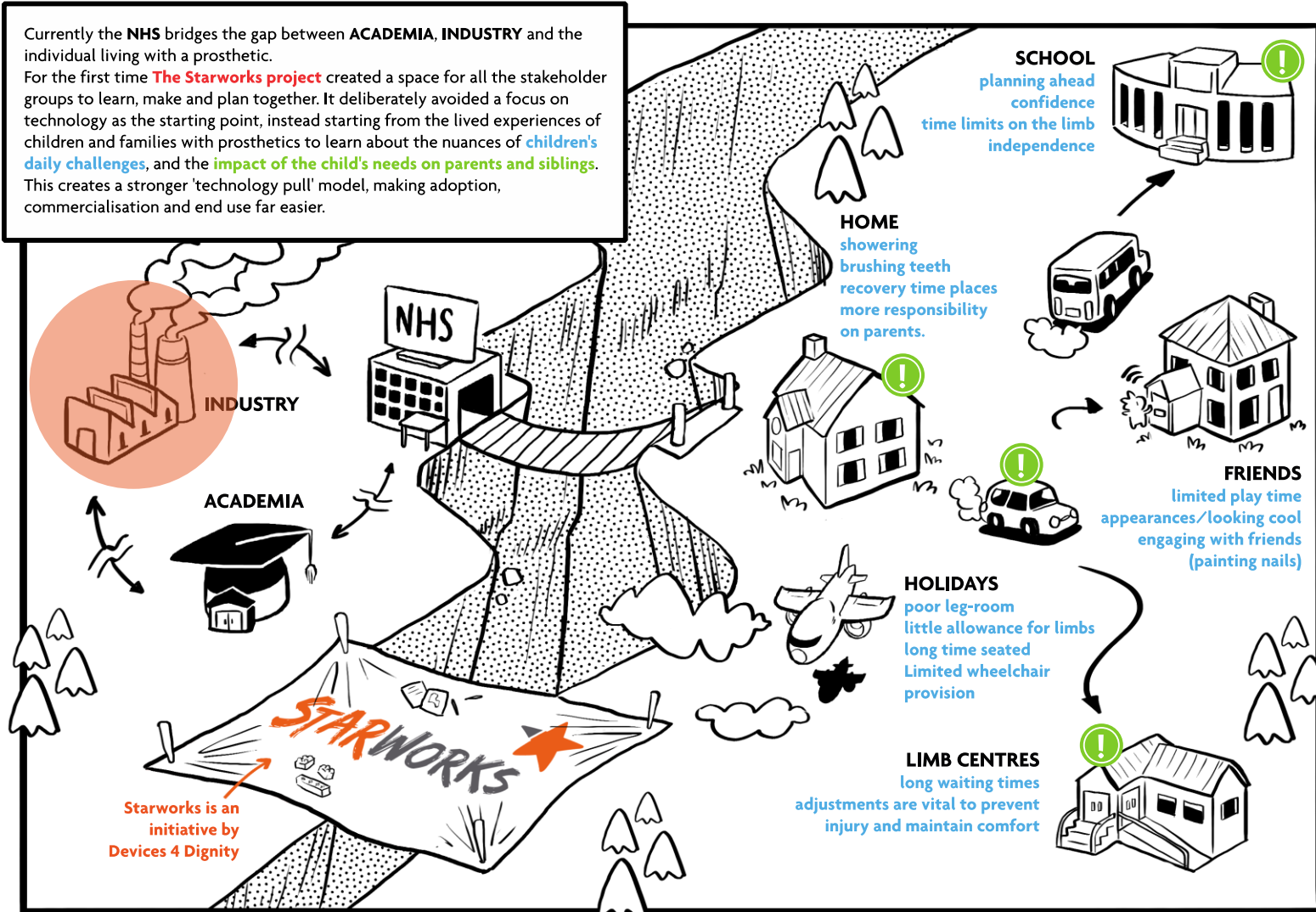


Unmet needs: Industry



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Desk-based research
& social media

Online survey

Telephone interviews

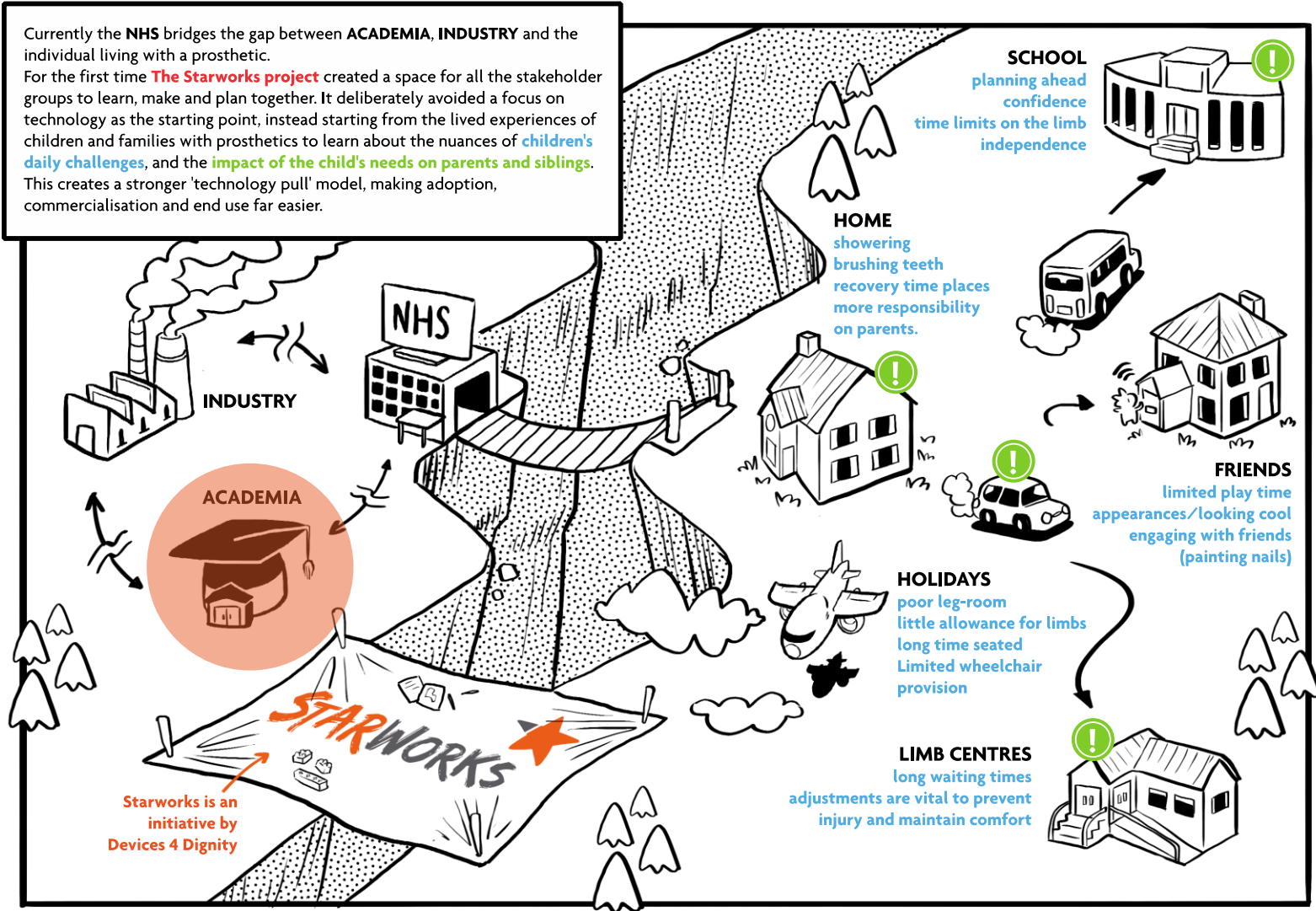


Unmet needs: Academia



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Review of publicly-funded research projects within the UK

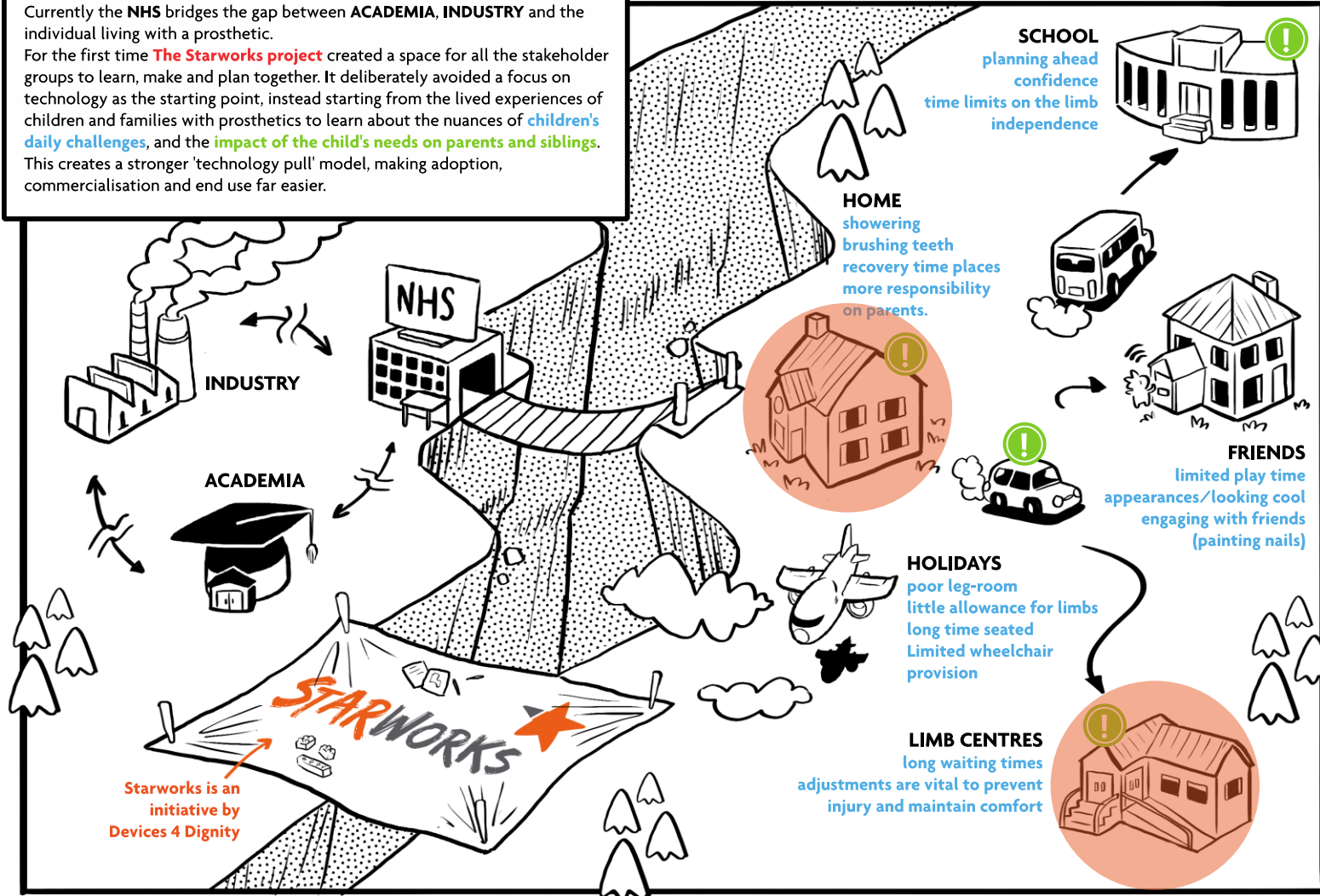


Unmet needs: Children & Families



Using stakeholder-specific methods

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- Surveys
- Phone calls
- Hospital visits
- Workshop activities

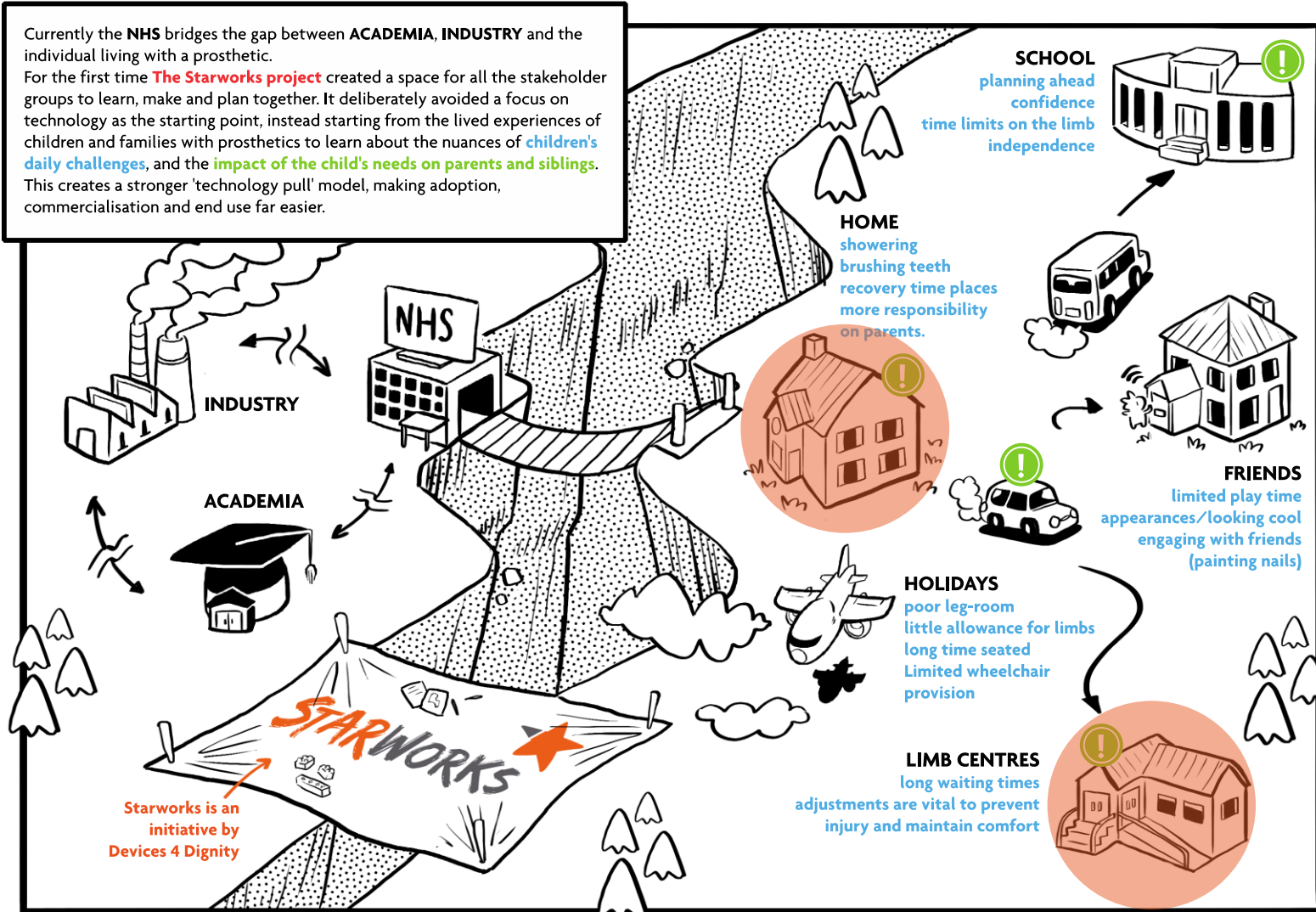


Unmet needs: Children & Families



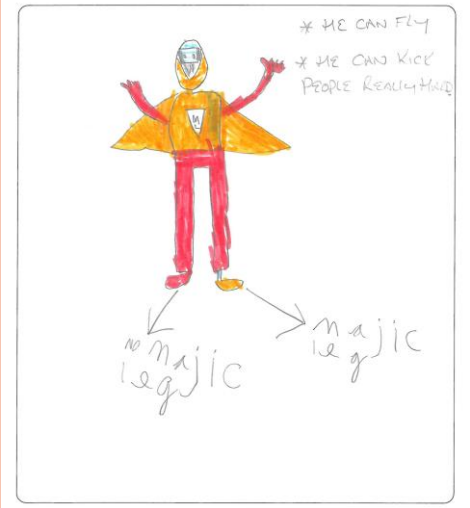
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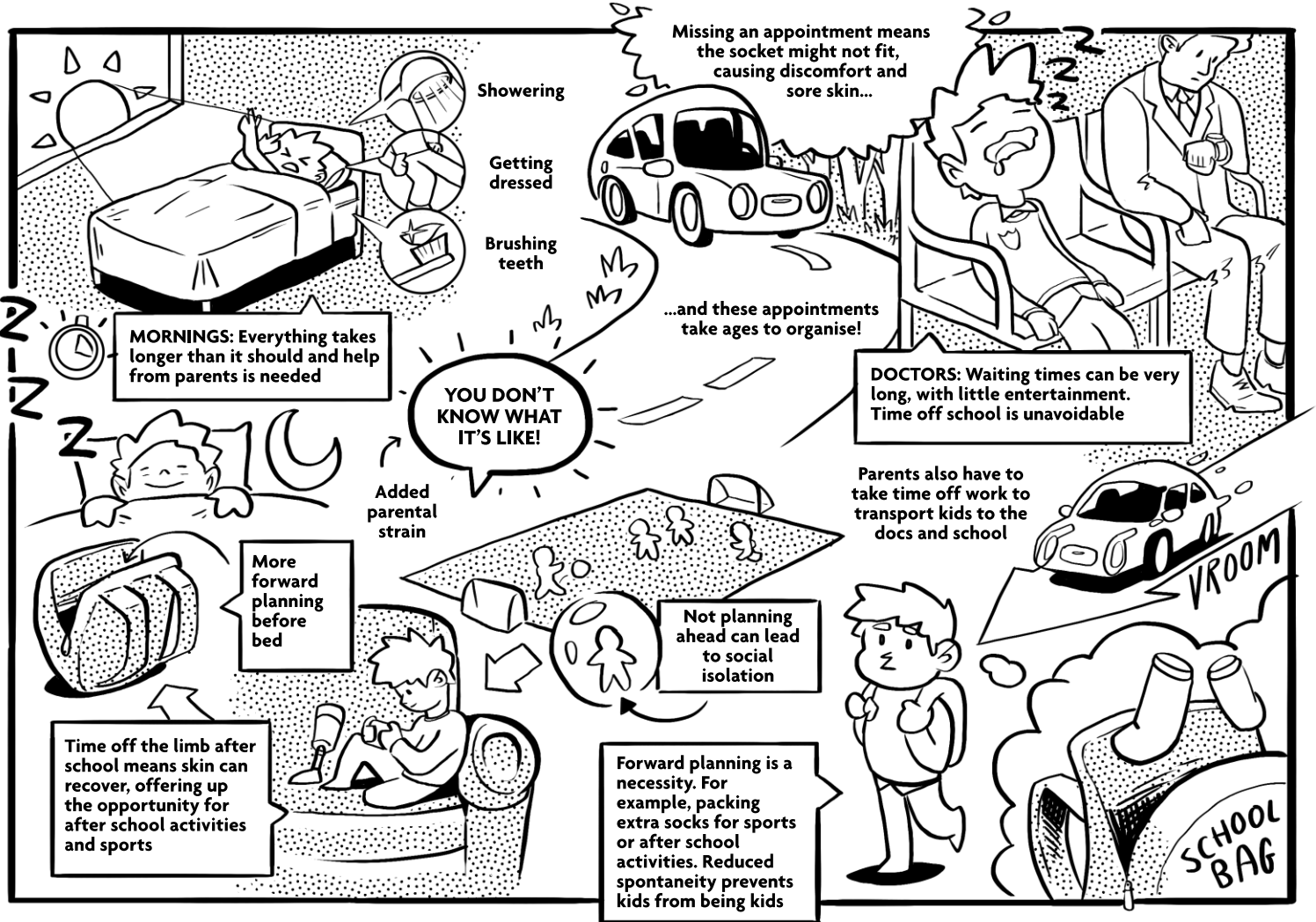


Having a limb is super because

Draw a superhero who has your limb here: What superpowers do they have? What can they do that no one else can?



Understanding the real issues



Creative methods yielded new insights

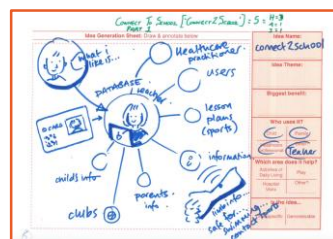
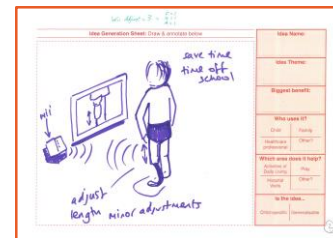
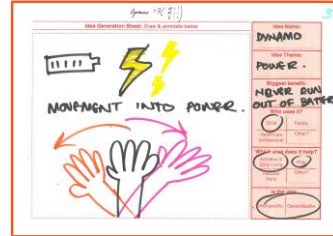
Children and families were able to express themselves and the 'everyday' challenges they face, not just biomedical, functional issues

Extending participation

Summarising the findings in formats like this help to share and develop them further with other children



Multi-stakeholder Sandpits



Problem definition

Inspiration

Ideation

Voting

Developing top ideas

Pitching & Sign up



A different, key perspective



Playing different roles at different times (and at the same time too!)

Mother of a child with limb difference

Co-director of LimbPower

Key partner in the Starworks Network
(Helping to recruit and advise)

Participant in Starworks Activities



Supporting Proof of Concept Projects



Silicone socket liners with active cooling



Customisable, 3D-printed covers for lower limb prosthetics



A lightweight knee joint that you can get wet, sandy, dirty, etc



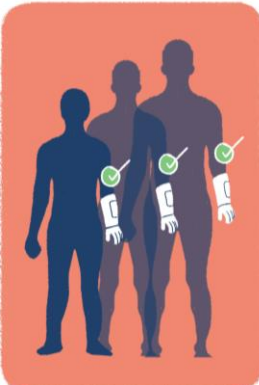
A liner with sensors to track and alert you to growth



A 'one stop shop' information website for family, friends, school, etc



A Lego® play attachment for split hook prosthetics



A socket to make sure robotic arm sensors are always placed correctly



A socket that is strong outside, but also flexible to growth inside



A video game to help kids learn how to use robotic hands easier and faster



Customisable, 3D printed upper limbs for children under 5 years old

Call for applications to PoC Funding
Must include voice of children and/or families in some form, ideally with cross-sector partners

Diverse range of projects
23 high quality proposals received across sectors, 10 funded

Multiple forms of support
From collaboration agreements to advice on co-production methods and opportunities to learn from each other



Next steps: a sustainable network...



Continued support for projects

Expanding & sustaining the network

Exploring outcome measures

Novel sources of innovation

Watch this space!



...including The Starworks Ambassadors! 



Charting progress
The time and effort put in by children and families should be recognised

Learning from 'Starworks 1'
With new, varied ways to engage

Building a community and tradition of engaging in research
And making their input more visible



Thank you, we look forward to hearing your questions!



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