Design for all:
How AI can help enable innovation for inclusion
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Chris Bush

Head of design group

Lee Valentine

Business analyst

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Thinking about inclusion

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1.4 billion people

worldwide have a
long-term disability

Source: World Health Organisation

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16 million people

in the UK
have some form of disability

Source: Office of National Statistics

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Types of impairment

Visual

ability to
perceive or process
visual information

Auditory

ability to
perceive or process
auditory information

Sensorimotor

ability to
feel and manipulate
a physical device
quickly, smoothly,
and accurately

Speech

ability to
produce sounds
clearly, smoothly,
and understandably

Cognitive

ability in
mentally demanding
areas: reading,
memory, attention,
language, complex
concepts, problem
solving

Mental health

a mental health
condition is
considered a
disability if it has a
long-term effect on
your normal day-to-
day activity.

Source: Gov UK "When a mental health condition becomes a disability", Equality Act 2010

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AI + Accessibility
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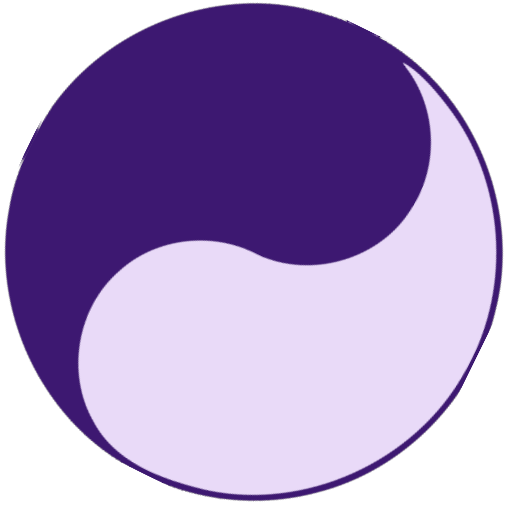
Improving the user experience



Supporting inclusive ways of working

Inclusive design principles for generative AI

https://www.nexerdigital.com/news-and-thoughts/ai-for-all-public-sector

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Involve real users

Focus on user needs and context

Remove barriers (Empower and Inspire)

Provide control

Design with transparency

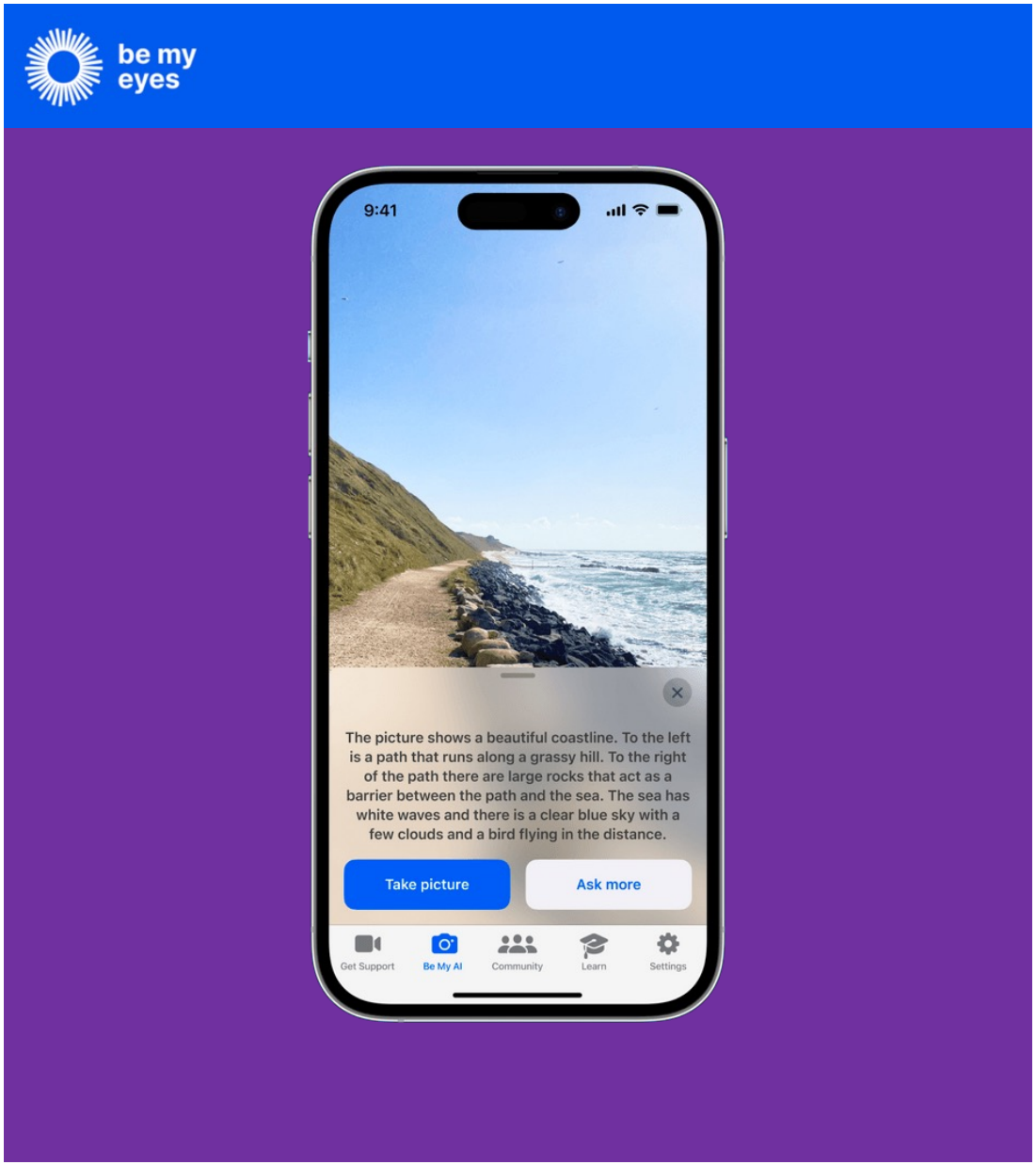
Maintain quality and accuracy

Ethical and responsible use

Support different interaction preferences

Compliance with accessibility standards

Focus on user needs and their context



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17:51
NHS England
Accessibility Lab
Design for everyone
Take picture
Get support
Be My AI
Community
Learn
Settings

NEXER

NHS

Search

My account

Health A-Z | Live Well | Mental health | Care and support | Pregnancy | NHS services

Home > Health assessment tools

Calculate your body mass index (BMI)

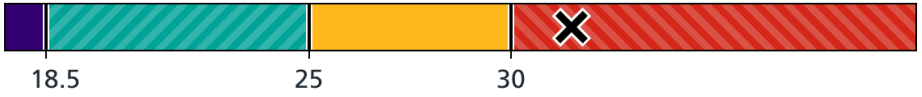
Check your BMI to find out if you're a healthy weight for your height.

Calculate your BMI for adults

Calculate your BMI for children and teenagers

Your BMI is 31.5

Your BMI is in the obese category.



- Underweight
- Healthy
- Overweight
- Obese
- Your BMI

▶ Chart description

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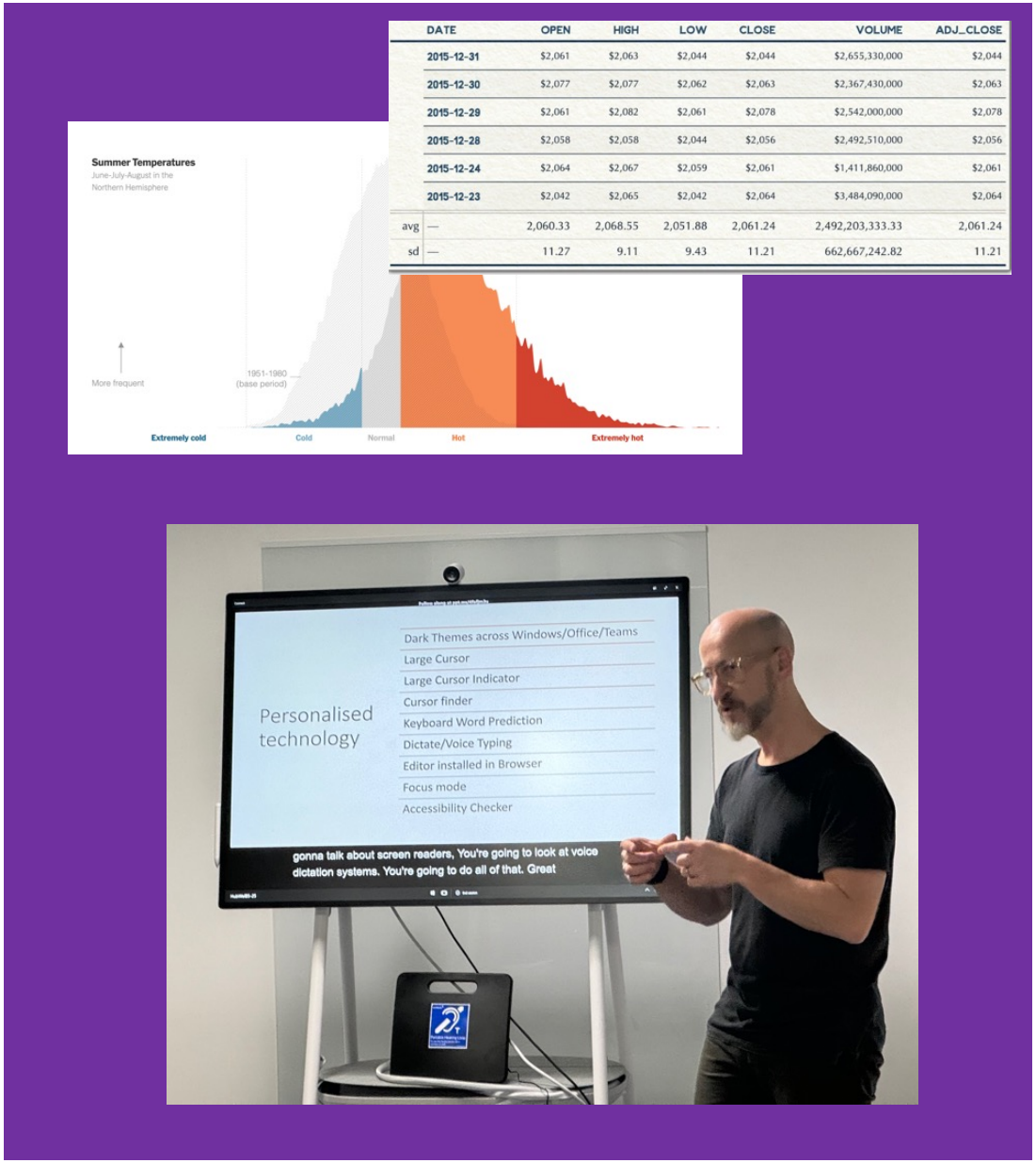
Empower and inspire



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Swindon Council
(+ Experts by experience)

Paying for your service

We tell you what your daily charge is.

We will charge you £ each month, and send you an invoice for this amount every month

You can pay us directly from your bank account on Day 28 of each month.

Every year we will look at what you pay.

If the cost changes you will get a new Easy Read Agreement showing the new cost.

What your service includes

- All the support in your agreement
- Support to match your individual needs
- How we can support you to stay healthy and safe
- Use of the centre when you need to.

What your service does not include

- Travelling to and from the centre
- The cost of activities Freedom Support does not provide such as
  - going to the gym
  - going out for a meal
  - going out to see a film.

Do you need help with travel?

We can help you to travel to and from the centre, and add this to your daily costs.

https://www.youtube.com/watch?v=leQegdK-1M8

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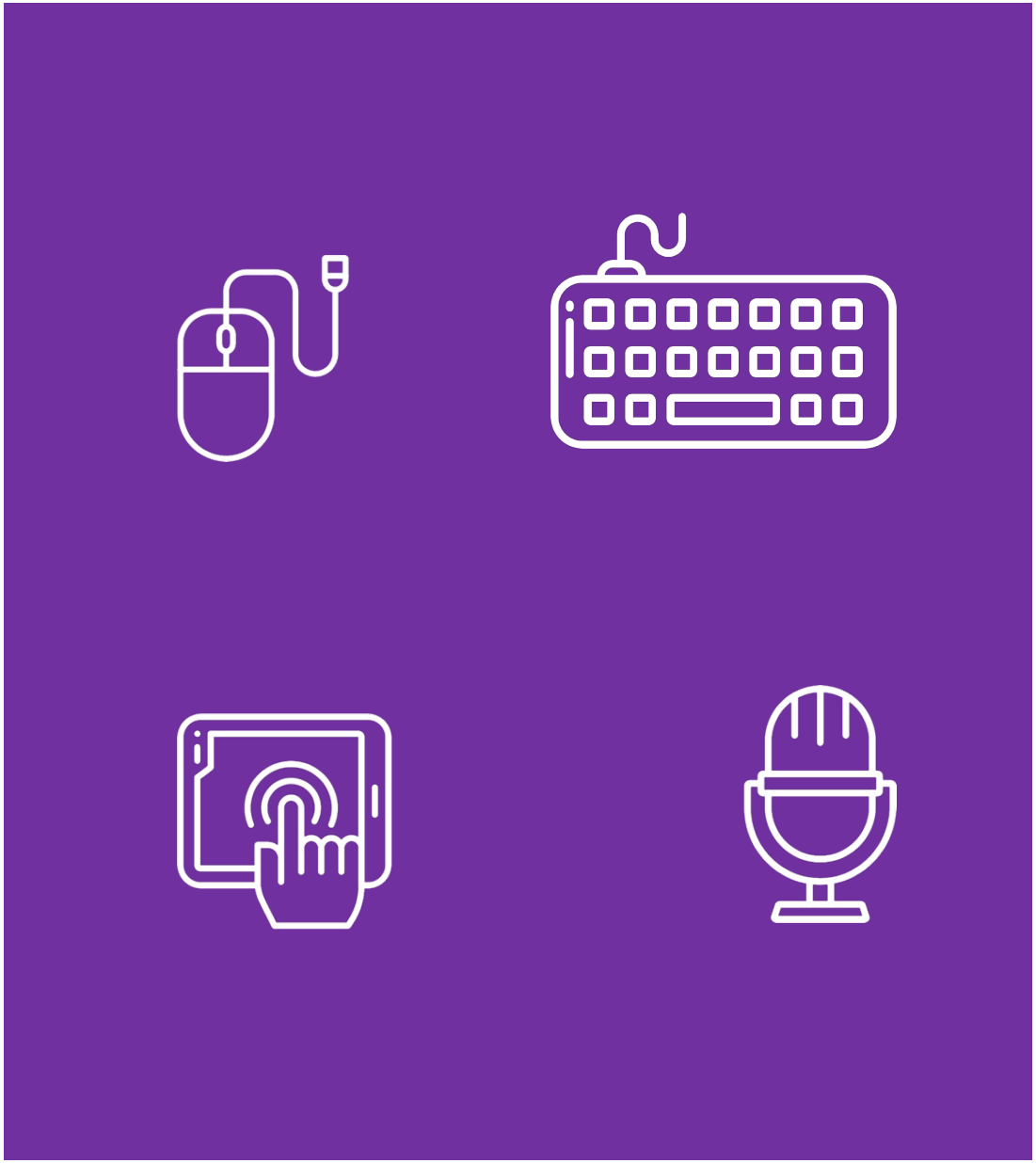
Support different interaction preferences



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Google Research

Project Euphonia

Communication powered by research

Watch video

https://sites.research.google/euphonia/about/

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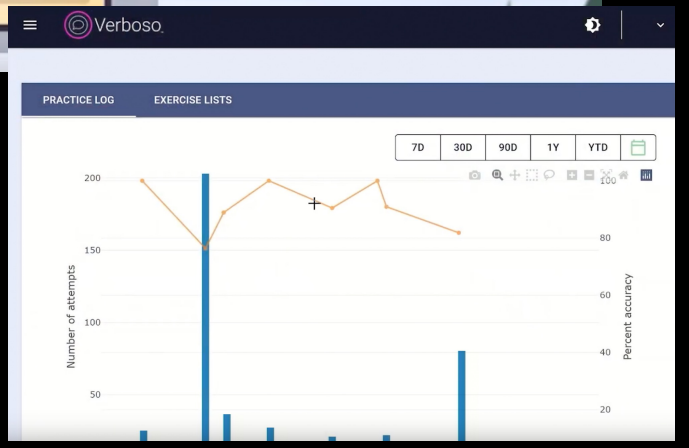
Verboso

Level 2
bean bag


Verboso
PRACTICE LOG
EXERCISE LISTS
7D
30D
90D
1Y
YTD
Number of attempts
Percent accuracy

Maintain quality and accuracy.

Get real user feedback

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Inclusive ways of working

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How we make working inclusive at Nexer

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Employee Resource Groups

Access @ Nexer

Disability

- Published guidance on inclusive meetings
- Early research on M365 Copilot for disabled and neurodiverse experiences
- Delivered accessibility awareness sessions to colleagues in Sweden

C.A.R.I.N.G

Cultural and religious

- Creating awareness and increasing cultural intelligence
- Improving diversity in leadership roles
- Helping colleagues to participate in cultural events

Still Proud

LGBTQIA+

- Developed resources to educate about LGBTQIA+ inclusion
- Organised charity event for #StillProud
- Show and Learn for International Pronoun Day

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Manual of Me

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MANUAL OF ME...

LEE VALENTINE – BUSINESS ANALYST

The basics you should know about me are ...

- I know I look grumpy 24/7, but I'm honestly very friendly and like being approached
- Live in Manchester, enjoy training in wrestling and Brazilian jiujitsu
- Problem solver, good with words and letters, genuinely shocking with maths and numbers

I work brilliantly when...

- I am trusted and respected
- There is clear communication – I am hearing impaired, and so may often ask for repetition and/or confirmation
- I can apply visual context to help understand problems and solutions

When I'm dealing with stress, I ...

- Take a mini break, breathe and refocus
- Eat my weight in cookies or choc hobnobs
- Strangle my friends after work (at training of course..)

My best working patterns look like ...

- Flexible but lose focus and effectiveness with too many back-to-back meetings

Three things I've done recently which I'm proud of are ...

- Stopped working for a Russian state-owned company
- Joined Nexer
- Won a few jiujitsu matches and competitions

There are some things which I'd love to resolve as a team ...

- Wherever I can contribute and hopefully add value
- How I can help you feel included and heard

The sort of projects which really excite me have ...

- Opportunities for personal and collective growth
- Anything we can do to change or improve lives

What motivates me to come into work each day is ...

- The chance to learn from a wide range of talented humans and contribute towards their successes

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Access needs and preferred communication methods

Supportive environment with respect for diversity

Sharing personal experiences and challenges

Lived and learned experiences

- Neurodiverse Ways of Working Field Guide
- Good Practice for Hearing Loss in meetings
- Neurodiversity awareness and communication training
- Accessible Design for Older Adults

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Sharing knowledge across our teams

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Recognising and overcoming barriers

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Liam

Business Analyst

Liam is a skilled business analyst with expertise in analysing data and creating accessible digital solutions.

Liam has a **hearing impairment** and uses lip reading and captioning for communication.

Barriers / Difficulties

- Cannot watch video without subtitles / closed captioning.
- Cannot participate in remote or hybrid meetings without captioning or transcriptions.
- Cognitive load from note taking can lead to missed information.
- Challenges in following different perspectives discussed in meetings.
- Difficulty in recognising who said what during meetings.

How Copilot can help Liam

- **Real-time captioning and transcriptions enabled**
- **Recaps of meetings using transcriptions**
  Provides text versions of his meetings and use Copilot for analysis
- **Catch up and gain insights from videos**
  Helps isolate key information from long recordings
- **Meeting summaries and note generation assistance**
  Helps them catch up without needing to read/write extensive meeting minutes
- **Attribute contributions to specific speakers**
  Helps them recognise each individual contributor and follow discussions more effectively

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Emma

UX designer

Emma has been working as a UX designer for over ten years. She is passionate about creating inclusive designs that cater to all users.

Emma has a **visual impairment** and relies on screen readers and magnification tools to interact with digital content.

Barriers / Difficulties

- Cannot see small text
- Difficult to consume long or complex content
- Team collaboration – digital whiteboards on occasions are not accessible
- File sharing and version control – challenging to navigate to easily find relevant information
- Difficulty using mouse to target small areas

How Copilot can help Emma

- **Summarise emails**
  Helps them quickly grasp the content of her emails without extensive reading and navigating
- **Create draft emails**
  Helps dictate and draft emails more efficiently
- **Search for and locate files**
  Provides easier access to enterprise search
- **Recap of meetings**
  Helps catch up without needing to read through extensive meeting minutes and transcriptions
- **Generate meeting notes**
  Helps with her meeting facilitation and note generation and distribution

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Kevin

Software developer

Kevin is a skilled front-end developer who is detail-oriented and focuses on coding accessible and efficient web applications.

Kevin has a **cognitive impairment** that affects his ability to process complex information quickly.

Barriers / Difficulties

- Time consuming to filter large amounts of information
- Difficult to assess credibility of multiple sources of data
- Struggles with ideation and creating ideas from scratch
- Finds detailed technical documents hard to absorb
- Needs explanations to improve clarity and flow of content

How Copilot can help Kevin

- **Copilot enterprise search**
  Helps find internal resources he needs without being overwhelmed by unnecessary information
- **Integrated web content search**
  Helps gather information and resources from multiple external sources
- **Generate ideas from a blank canvas**
  Helps ideate and brainstorm solutions when starting new projects or features
- **Summarising complex documents**
  Helps understand and process detailed technical documents
- **Ask Copilot questions about content**
  Quickly get clarification on complex code or project requirements

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Sofia

Project Manager

Sofia has extensive experience managing digital transformation projects ensuring they are delivered on time and within budget.

Sofia has a **motor impairment** and uses voice recognition software and adaptive keyboards for her work.

Barriers / Difficulties

- Struggles with traditional input methods, often requiring hands-free workarounds
- Extensive note taking places a strain on motor skills
- Maintaining and reviewing historical records of activities requires sustained physical effort
- Managing daily tasks, to-do lists, and next steps can be physically draining
- Producing detailed project planning and reporting documents can be exhausting

How Copilot can help Sofia

- **Voice enabled prompting**
- **Copilot assistance during meetings**
  Provides a single platform for multi-channel information retrieval
- **Recap of historical meetings**
  Helps track project progress by providing summaries of past meetings
- **End of day summary and advisory actions**
  Helps with organisation by summarising daily activities and next steps
- **Quick and easy drafting of documents and presentations**
  Helps generate quick first drafts for her to build upon

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Maya

Content designer

Maya is a talented content designer who brings creativity and innovation to the team.

Maya is **neurodiverse** and experiences **sensory sensitivities** and needs structured environments.

Barriers / Difficulties

- Struggles with managing sensory overload
- Difficulty starting from a blank slate
- Lack of structure and consistency can cause confusion and frustration
- Challenges with focus and prioritisation
- Overwhelm from unstructured information

How Copilot can help Maya

- **Simplify workshop content management**
  Helps group content based on themes to focus on key information without feeling overwhelmed by clutter
- **Summarise MS Whiteboard sessions**
  Helps turn detailed discussions into concise points to help focus on essential takeaways
- **Generate initial ideas in MS Loop**
  Helps ideate and brainstorm solutions when starting new projects or features from scratch
- **Create MS Forms with a single prompt**
  Helps draft structured forms to avoid the overwhelming task of starting from a blank slate
- **Prioritising emails**
  Helps focus on important tasks amongst an unorganised inbox

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What are we doing
next?
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Activity roadmap

Service Development

- MS365 and Copilot implementation projects
- MS365 and Copilot consultancy
- Accessibility audits
- Accessibility training and support

Knowledge Sharing

- Nexer Group Copilot webinar (November)
- Nexer Digital blog posts
- Conference appearances
- Annual Nexer Digital UK conference (Camp Digital)
- Joining advisory groups and forums to share and learn best practice

Ongoing Research

- Copilot Studio
- Copilot Wave 2 release
- Copilot extension
- Further iteration of personas and resources

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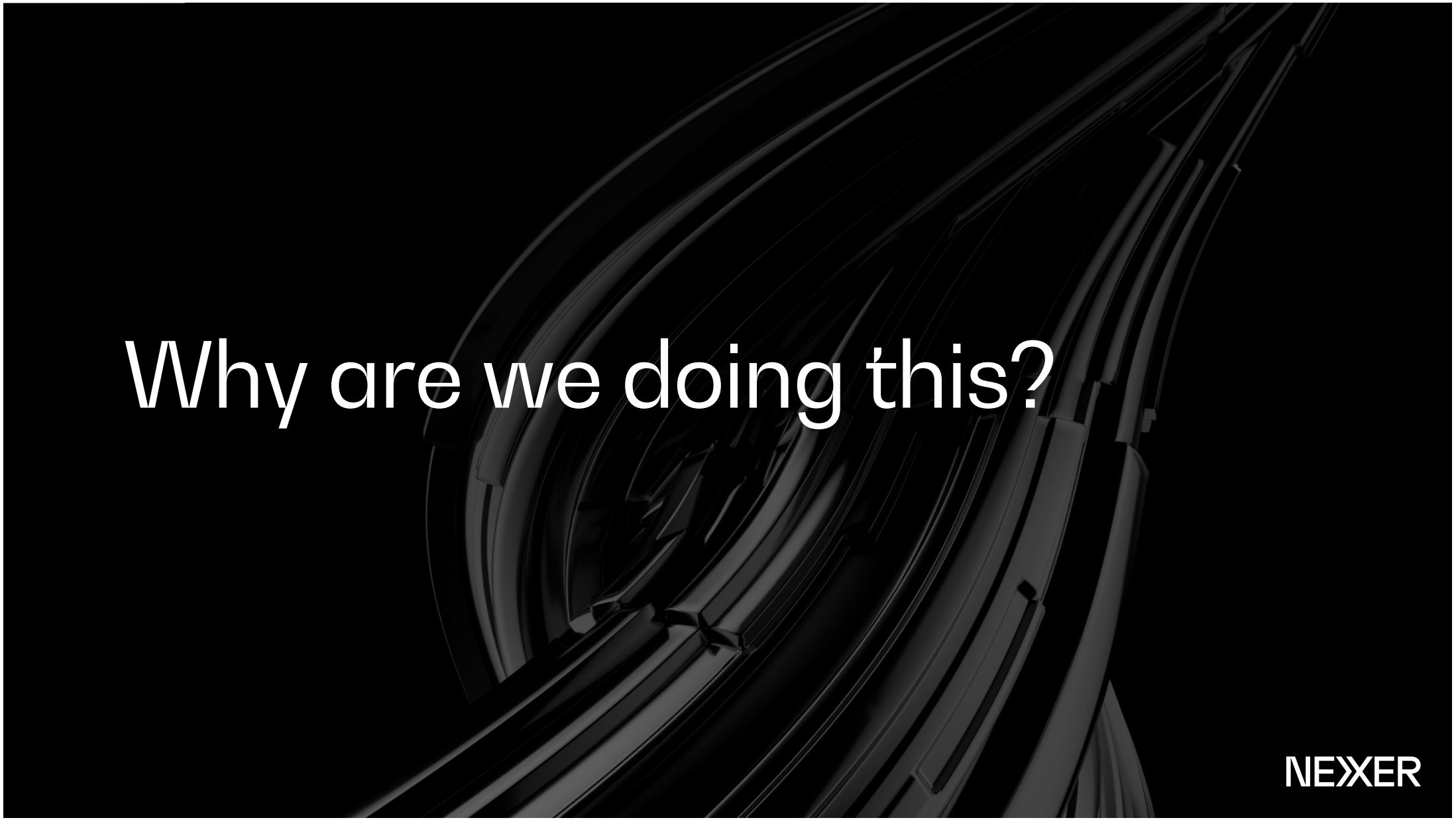
Why are we doing this?
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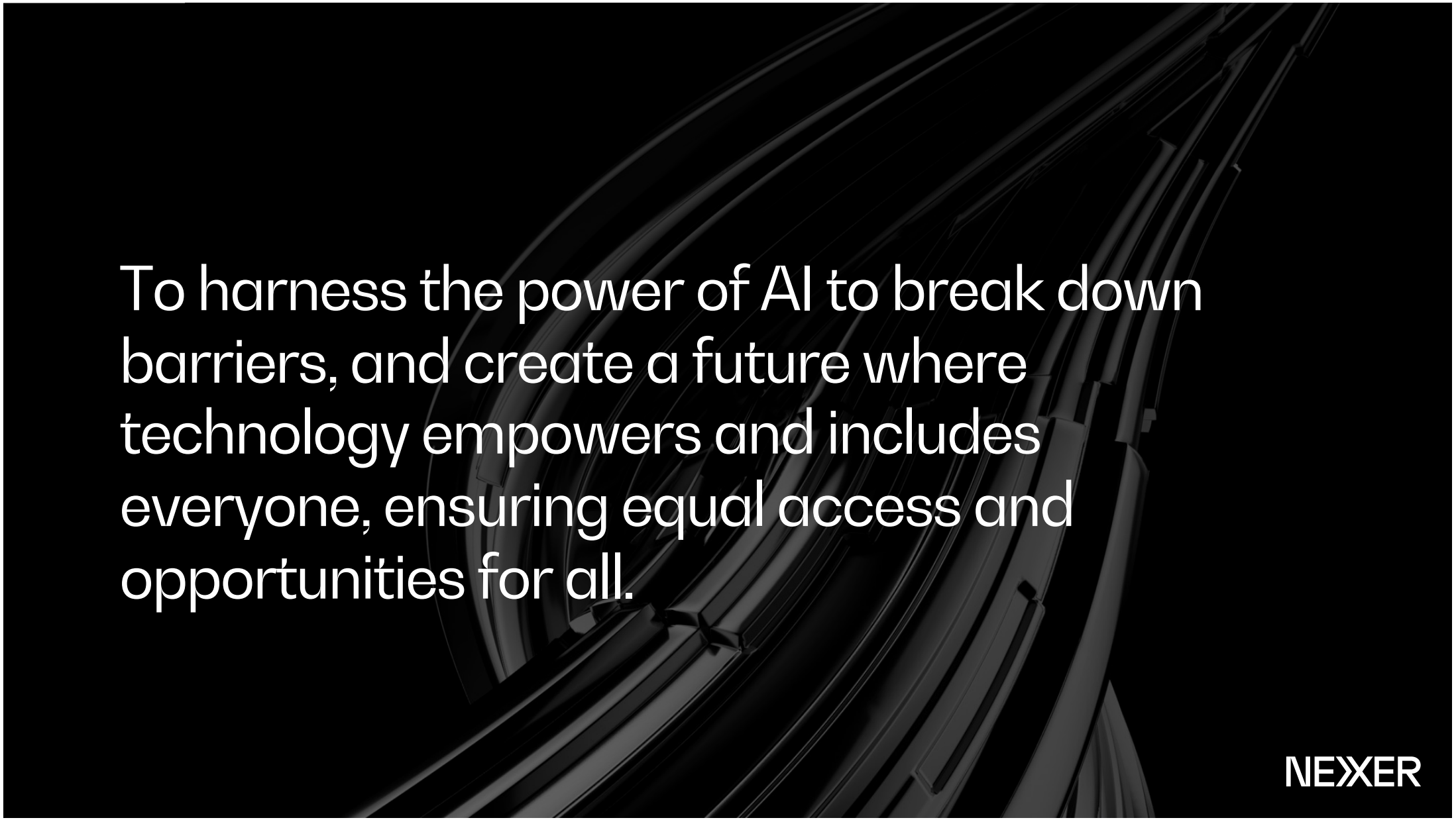
To harness the power of AI to break down barriers, and create a future where technology empowers and includes everyone, ensuring equal access and opportunities for all.
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THANK YOU
Any questions?
chris.bush@nexergroup.com
lee.valentine@nexergroup.com
https://www.nexerdigital.com/news-and-thoughts/
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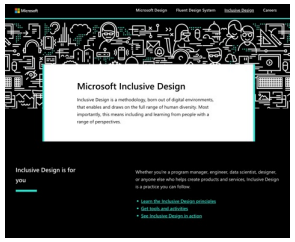
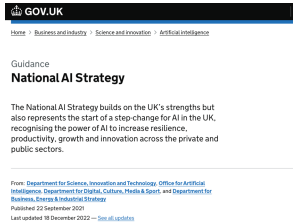
Useful resources



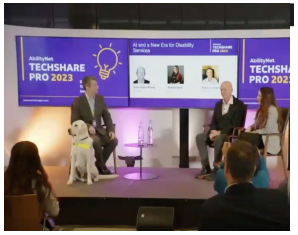
[Microsoft inclusive design]



[UK National AI strategy]

[Opportunities for AI in Accessibility]

[Designing generative AI to work for people with disabilities]



[AI and a new era for disability services]

[Council using AI to help people with learning disabilities]

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