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Chris Bush

Head of design group

Lee Valentine

Business analyst

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Removing barriers:

Leveraging AI to build more inclusive products and services

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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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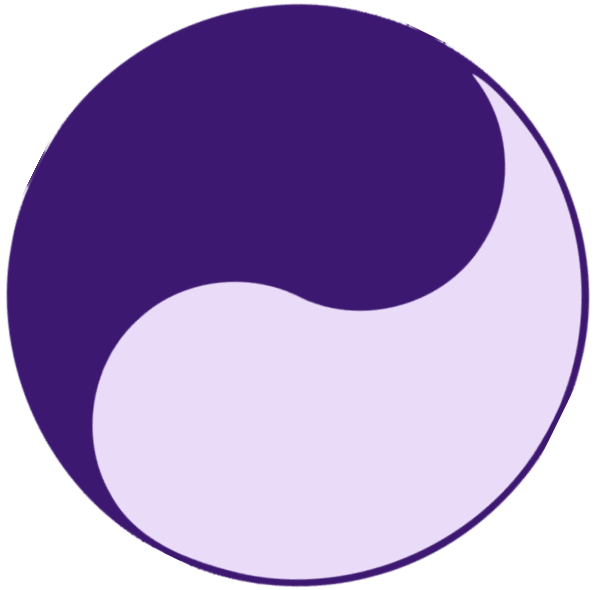
Improving the user experience



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

Inclusive design principles for generative AI

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

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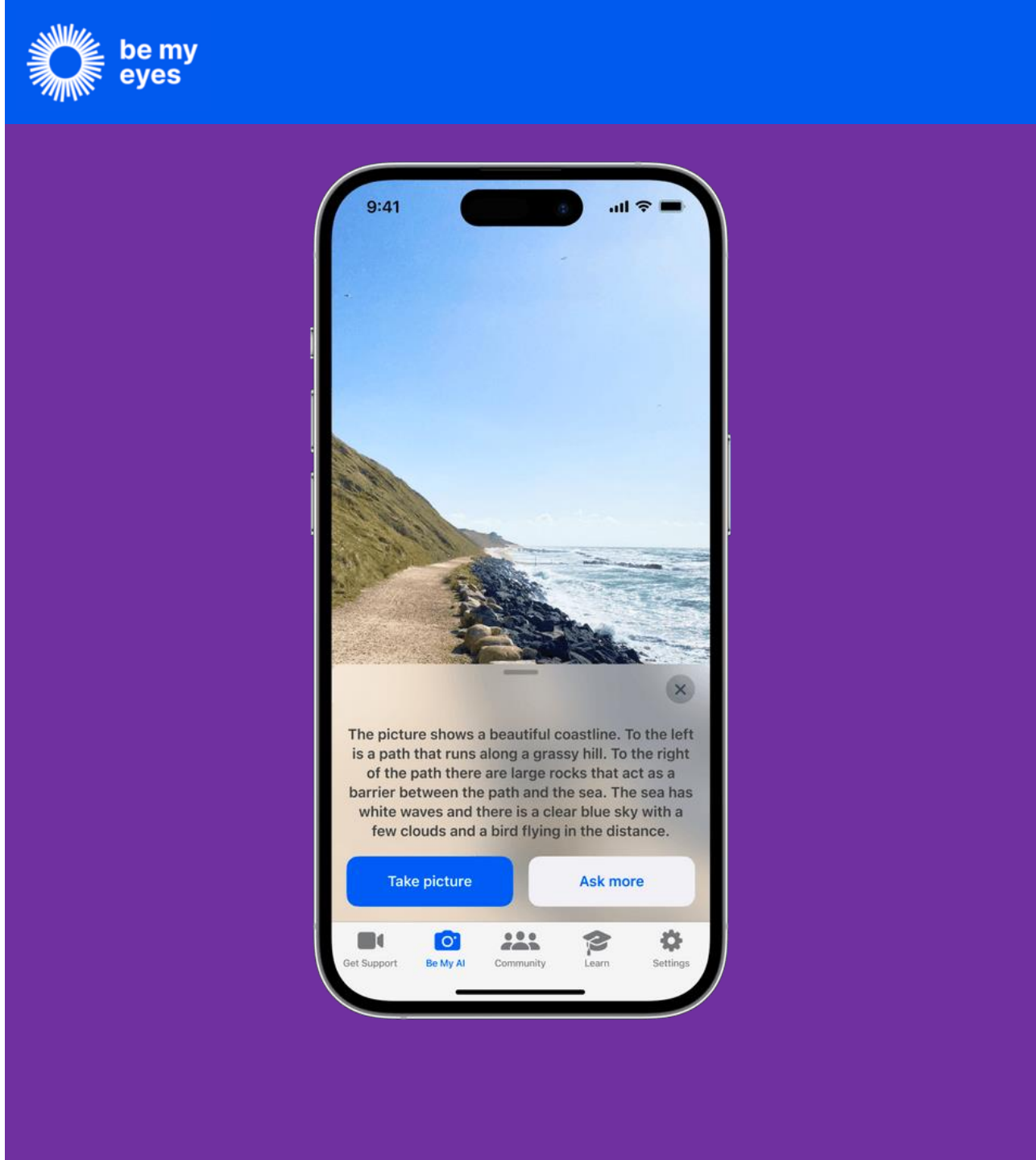
Support different interaction preferences

Compliance with accessibility standards

Focus on user needs and their context



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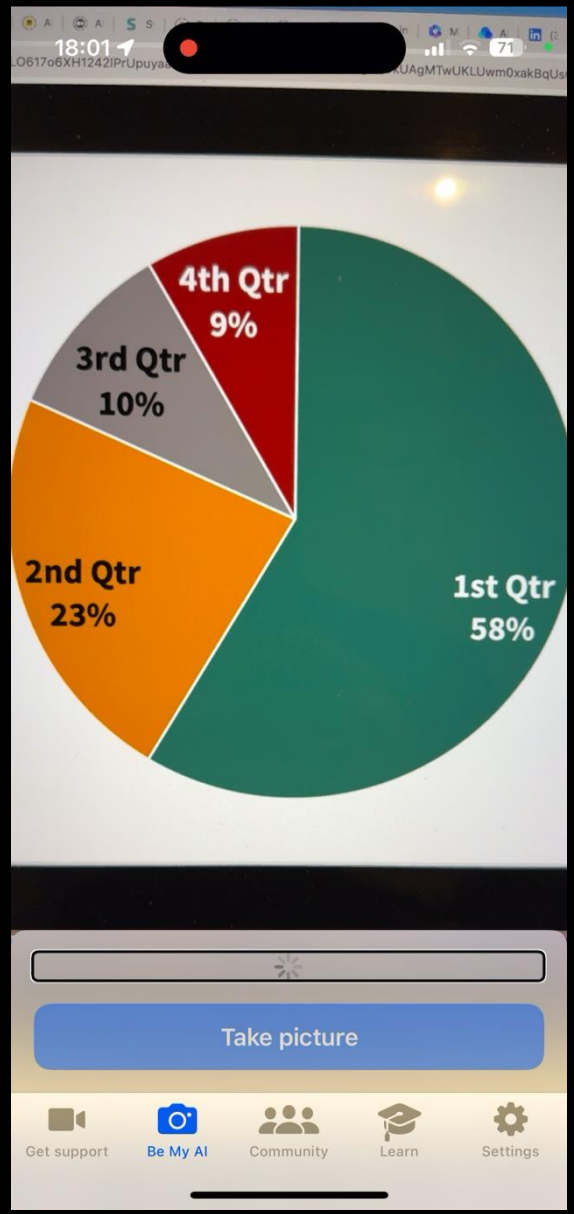
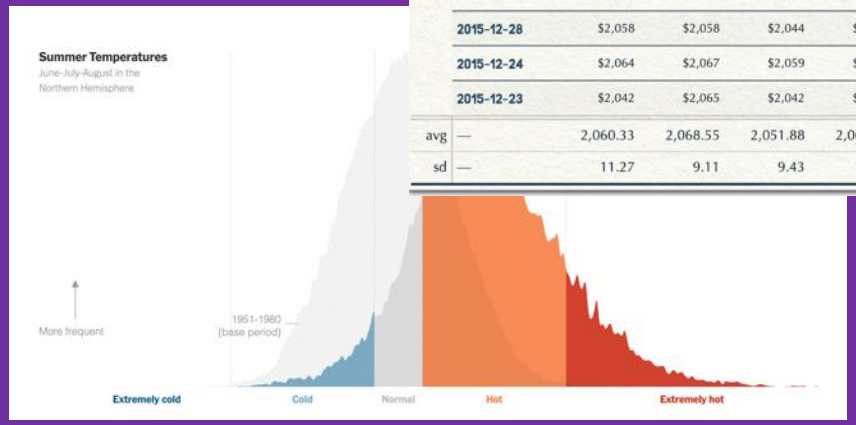
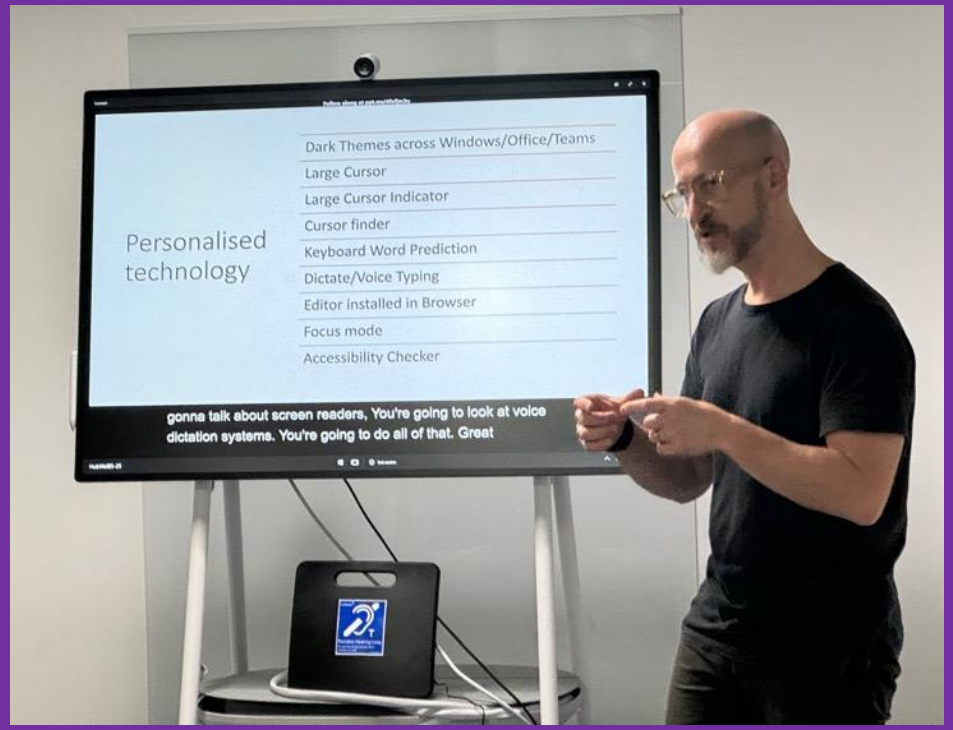
17:51
NHS England
Accessibility Lab
Design for everyone
Take picture
Get support
Be My AI
Community
Learn
Settings


18:01
4th Qtr
9%
3rd Qtr
10%
2nd Qtr
23%
1st Qtr
58%
Take picture
Get support
Be My AI
Community
Learn
Settings

Empower and inspire

DATE	OPEN	HIGH	LOW	CLOSE	VOLUME	ADJ_CLOSE
2015-12-31	$2,061	$2,063	$2,044	$2,044	$2,655,330,000	$2,044
2015-12-30	$2,077	$2,077	$2,062	$2,063	$2,367,430,000	$2,063
2015-12-29	$2,061	$2,082	$2,061	$2,078	$2,542,000,000	$2,078
2015-12-28	$2,058	$2,058	$2,044	$2,056	$2,492,510,000	$2,056
2015-12-24	$2,064	$2,067	$2,059	$2,061	$1,411,860,000	$2,061
2015-12-23	$2,042	$2,065	$2,042	$2,064	$3,484,090,000	$2,064
avg	—	2,060.33	2,068.55	2,051.88	2,061.24	2,492,203,333.33	2,061.24
sd	—	11.27	9.11	9.43	11.21	662,667,242.82	11.21





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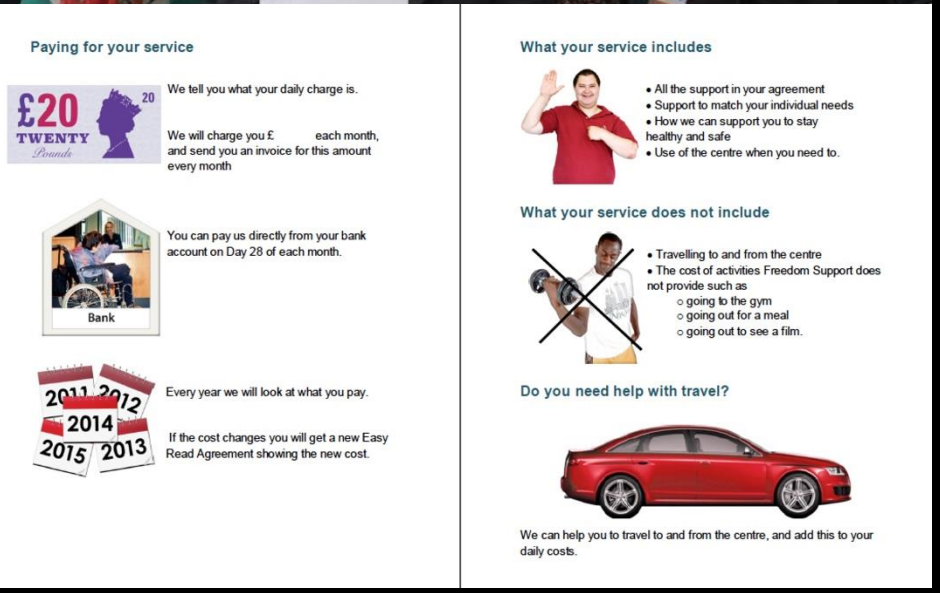
Swindon Council
(+ Experts by experience)



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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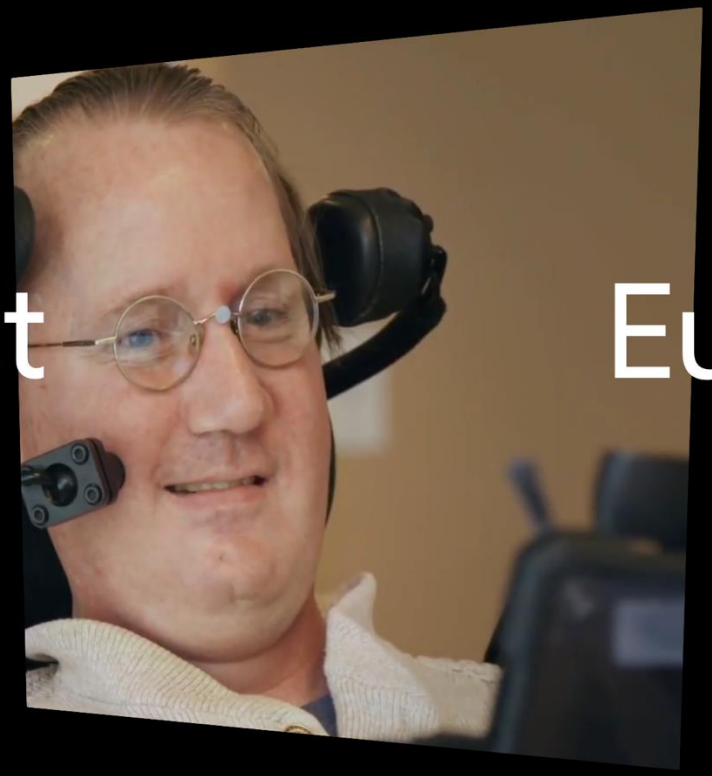
Google Research

Project Euphonia

Communication powered by research



Watch video

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

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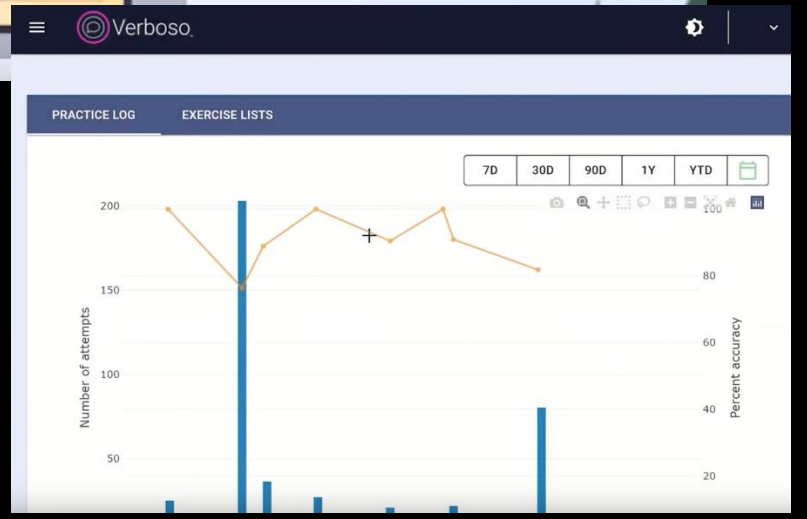
Verboso

Level 2
bean bag


Verboso
PRACTICE LOG
EXERCISE LISTS
7D
30D
90D
1Y
YTD
Number of attempts
Percent accuracy
200
150
100
50
80
60
40
20

Maintain quality and accuracy.

Get real user feedback

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Inclusive ways of working

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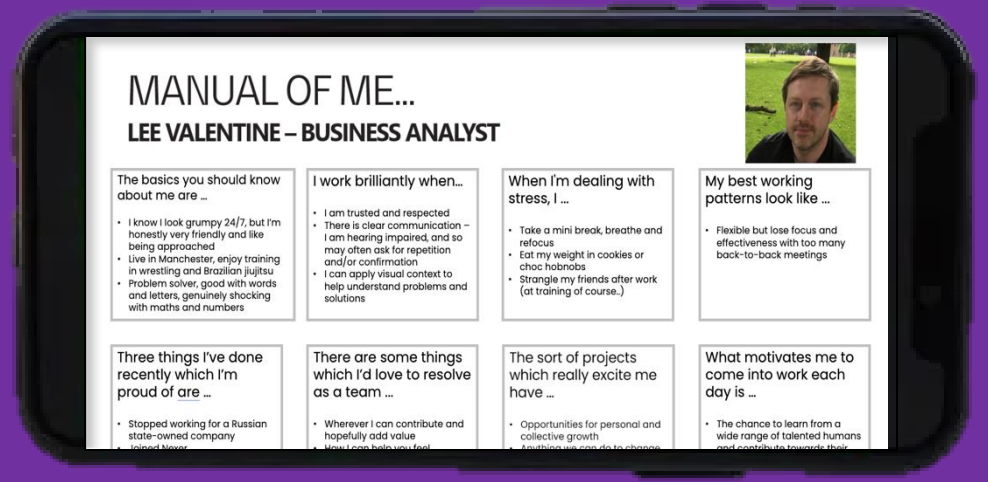
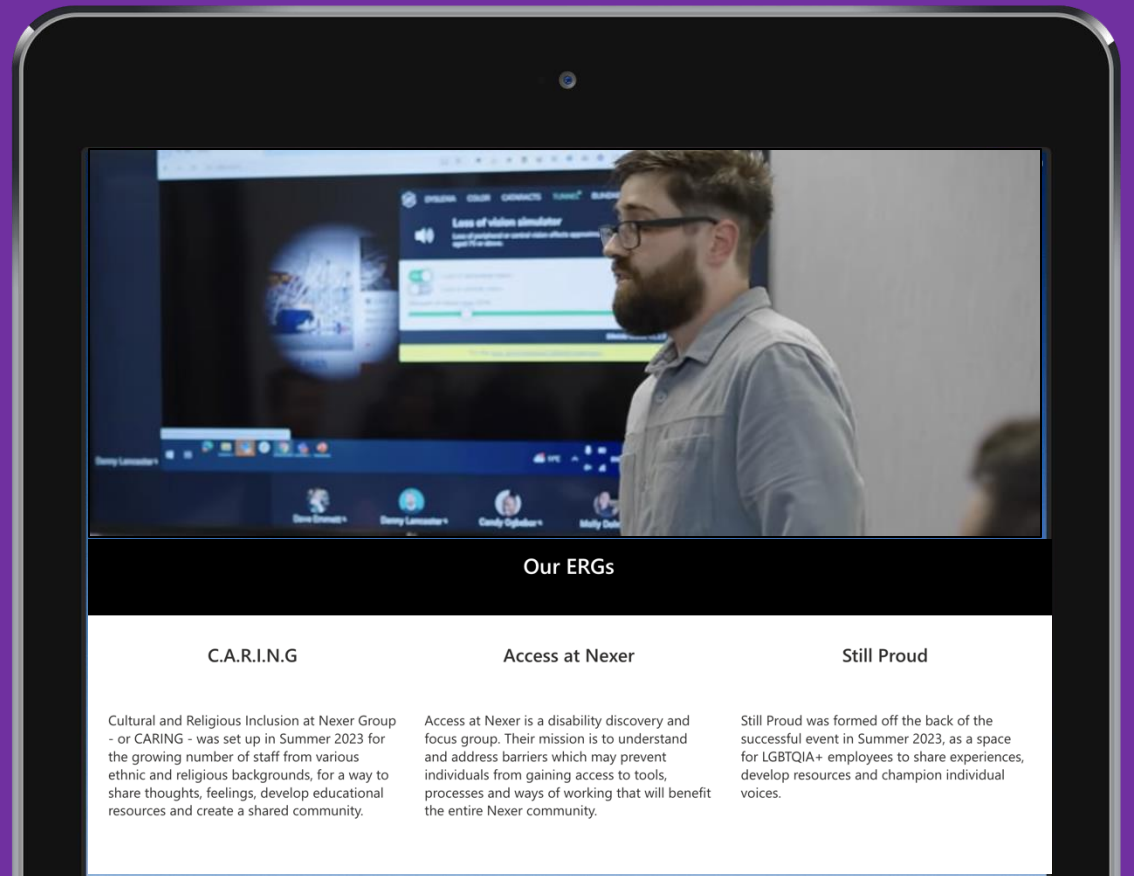
How we make working inclusive at Nexer





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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
- Collaboration on Neurodiversity Ways of Working Guide

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

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

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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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Inclusive Language Guide

- Inclusive language and why it matters
- Includes age, body image, disability, family, neurodiversity, parenthood, race, religion, gender, socio-economic status
- Tips to adjust your language for inclusivity
- Everyday use: practical guidelines for inclusion

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Sharing knowledge across our teams

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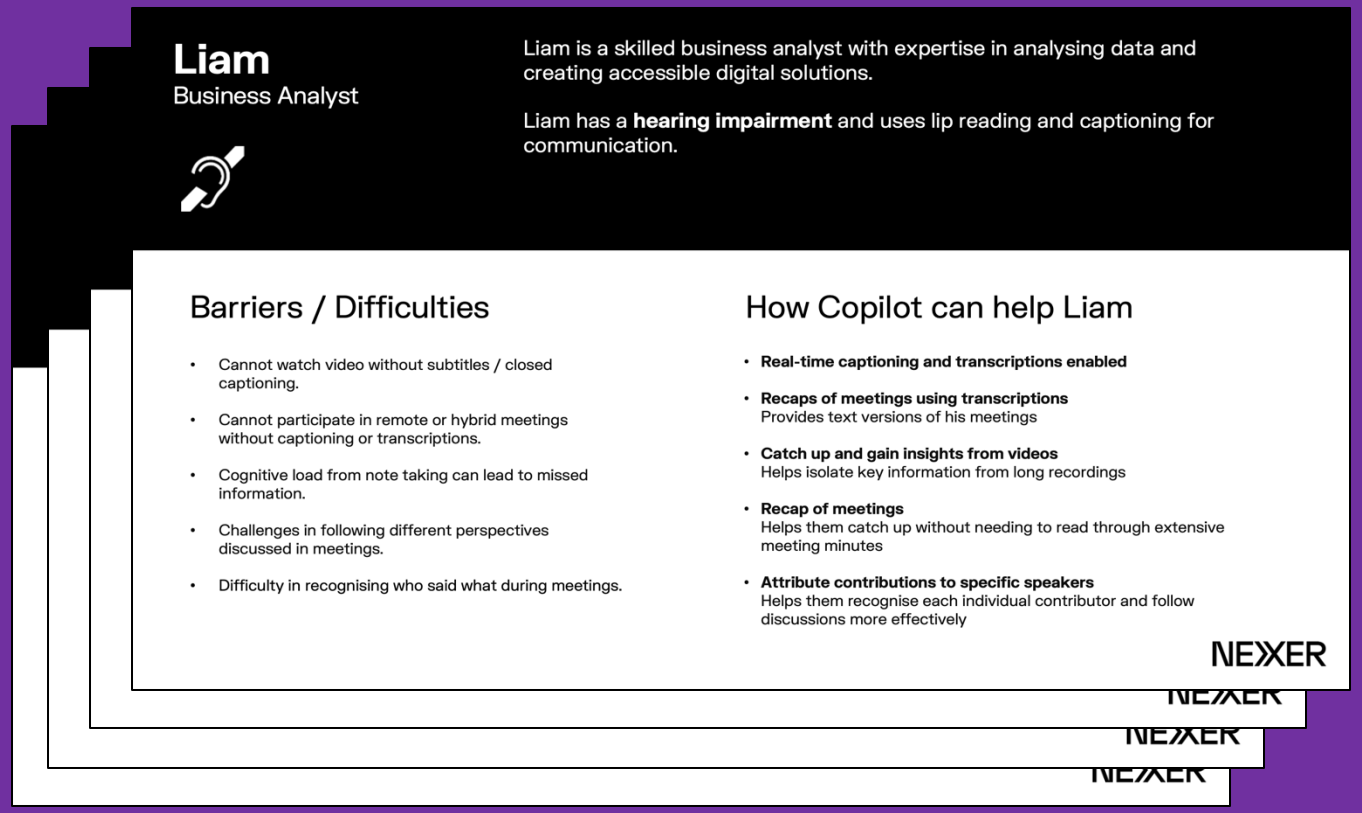
Recognising and overcoming barriers



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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 an **auditory 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 and burnout.
- 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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Emily

UX designer

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

Emily 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 Emily

- **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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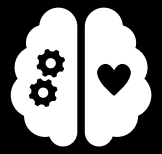
Kevin

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 **sensorimotor 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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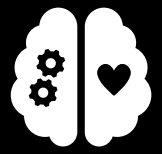
Thomas

Service Designer



Thomas is a service designer who excels at crafting user-centred service experiences by aligning customer needs with business objectives across all touchpoints.

Thomas has **Generalised Anxiety Disorder** that can affect his concentration and stress levels when managing deadlines, multiple tasks or preparing for presentations.

Barriers / Difficulties

- Cognitive fatigue through information overload
- Struggles to begin tasks for fear of making mistakes
- Fear of miscommunication
- Anxiety induced memory loss
- Strain from switching between multiple apps and tools to find information or complete tasks
- Difficulty prioritising tasks due to anxiety over making wrong decisions

How Copilot can help Thomas

- **Highlight critical points in emails, documents and meeting notes**
  Reduces anxiety by simplifying complex information ensuring no key details are missed
- **Generate draft content, presentations and emails**
  Helps start tasks with confidence, saving time and reducing risk of errors
- **Support with communication responses and tone**
  Reduces anxiety about crafting perfect messages or causing misunderstandings
- **Centralised information retrieval**
  Quickly locate files, emails or specific documents without needing to remember where they were saved
- **Contextual assistance**
  Helps pick up where they left off easing the fear of forgetting important points

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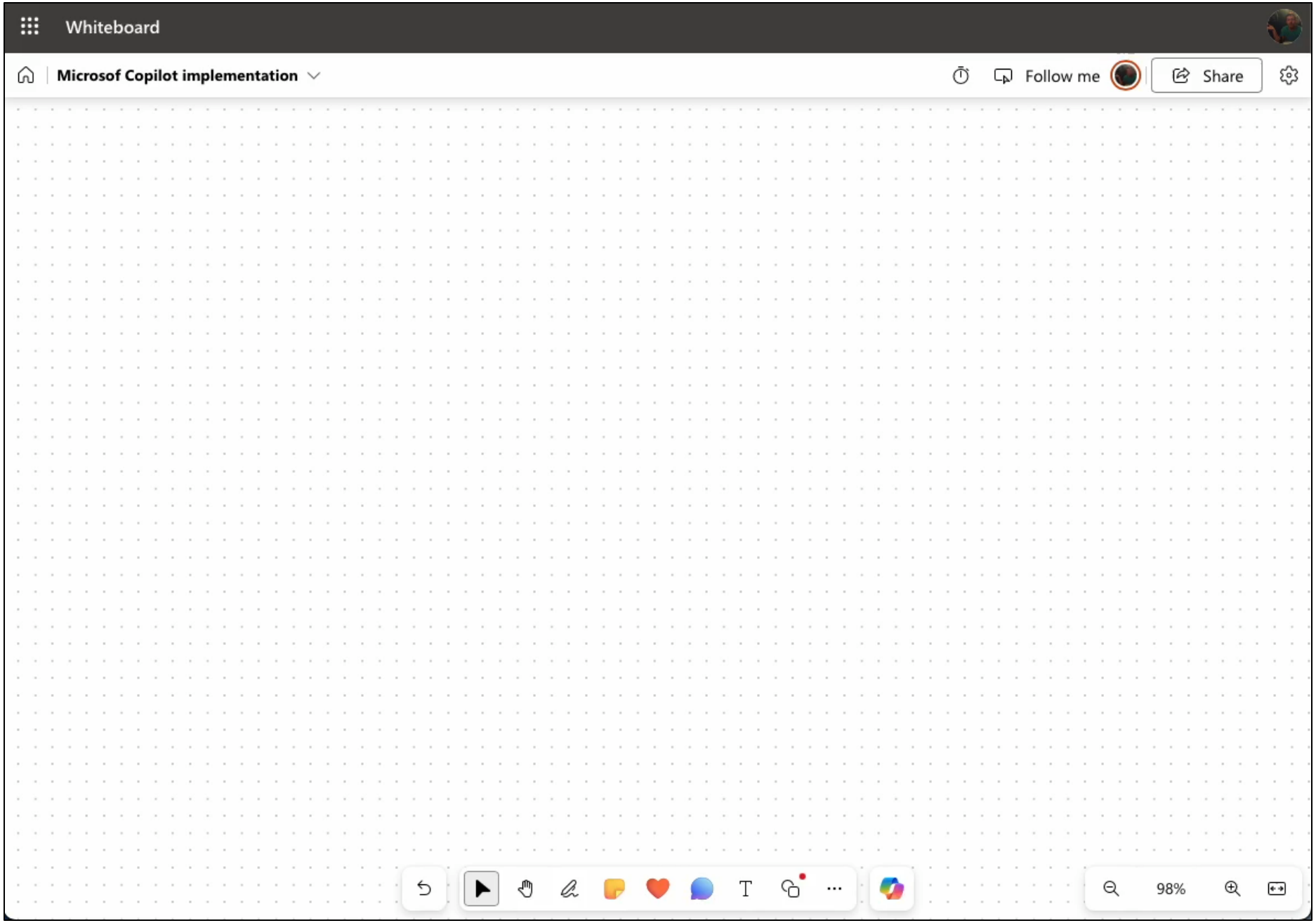
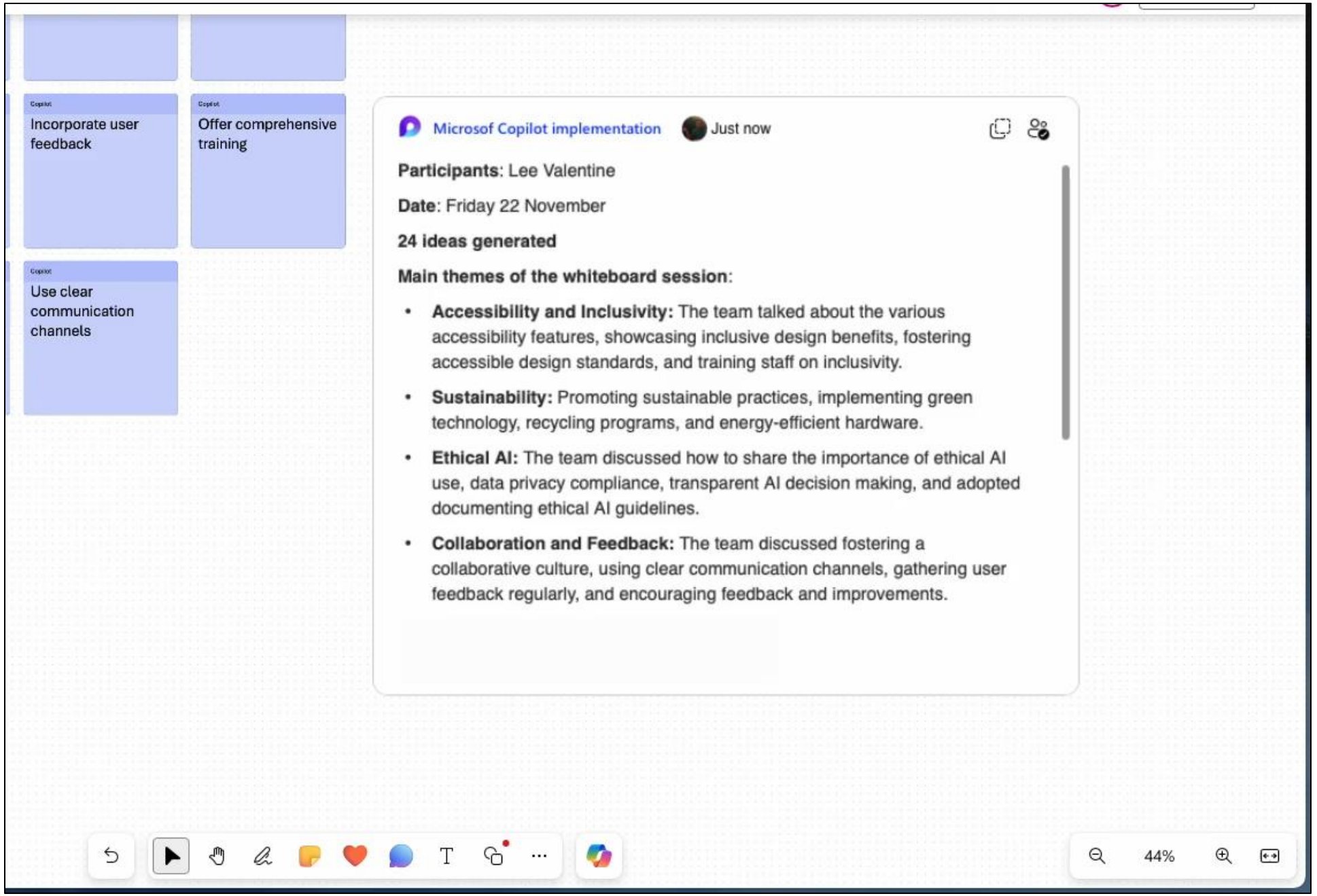

Whiteboard
Microsof Copilot implementation
Follow me
Share
98%

NEXXER


Copilot
Incorporate user feedback
Copilot
Offer comprehensive training
Copilot
Use clear communication channels
Microsof Copilot implementation
Just now
Participants: Lee Valentine
Date: Friday 22 November
24 ideas generated
Main themes of the whiteboard session:
Accessibility and Inclusivity: The team talked about the various accessibility features, showcasing inclusive design benefits, fostering accessible design standards, and training staff on inclusivity.
Sustainability: Promoting sustainable practices, implementing green technology, recycling programs, and energy-efficient hardware.
Ethical AI: The team discussed how to share the importance of ethical AI use, data privacy compliance, transparent AI decision making, and adopted documenting ethical AI guidelines.
Collaboration and Feedback: The team discussed fostering a collaborative culture, using clear communication channels, gathering user feedback regularly, and encouraging feedback and improvements.
44%

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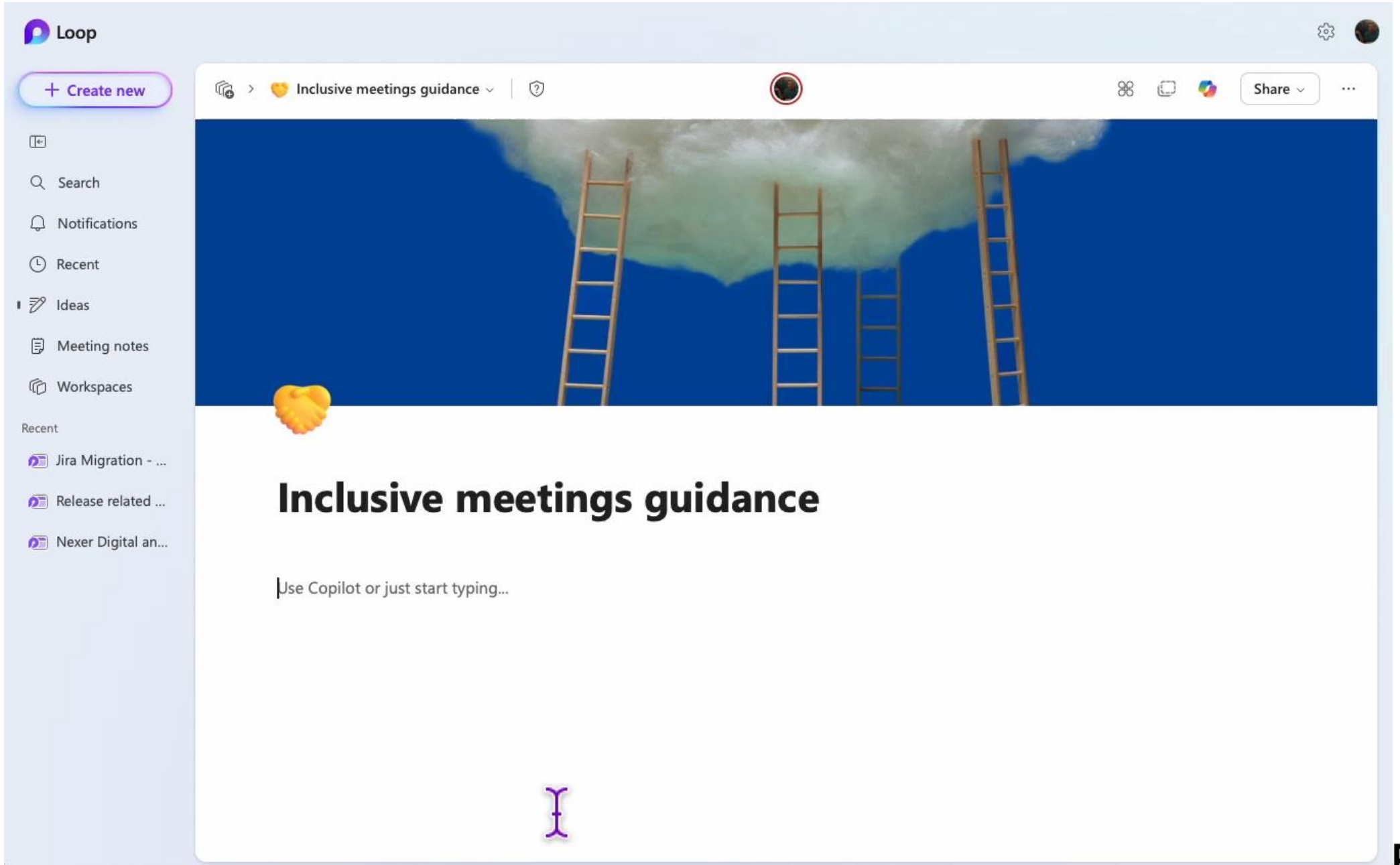
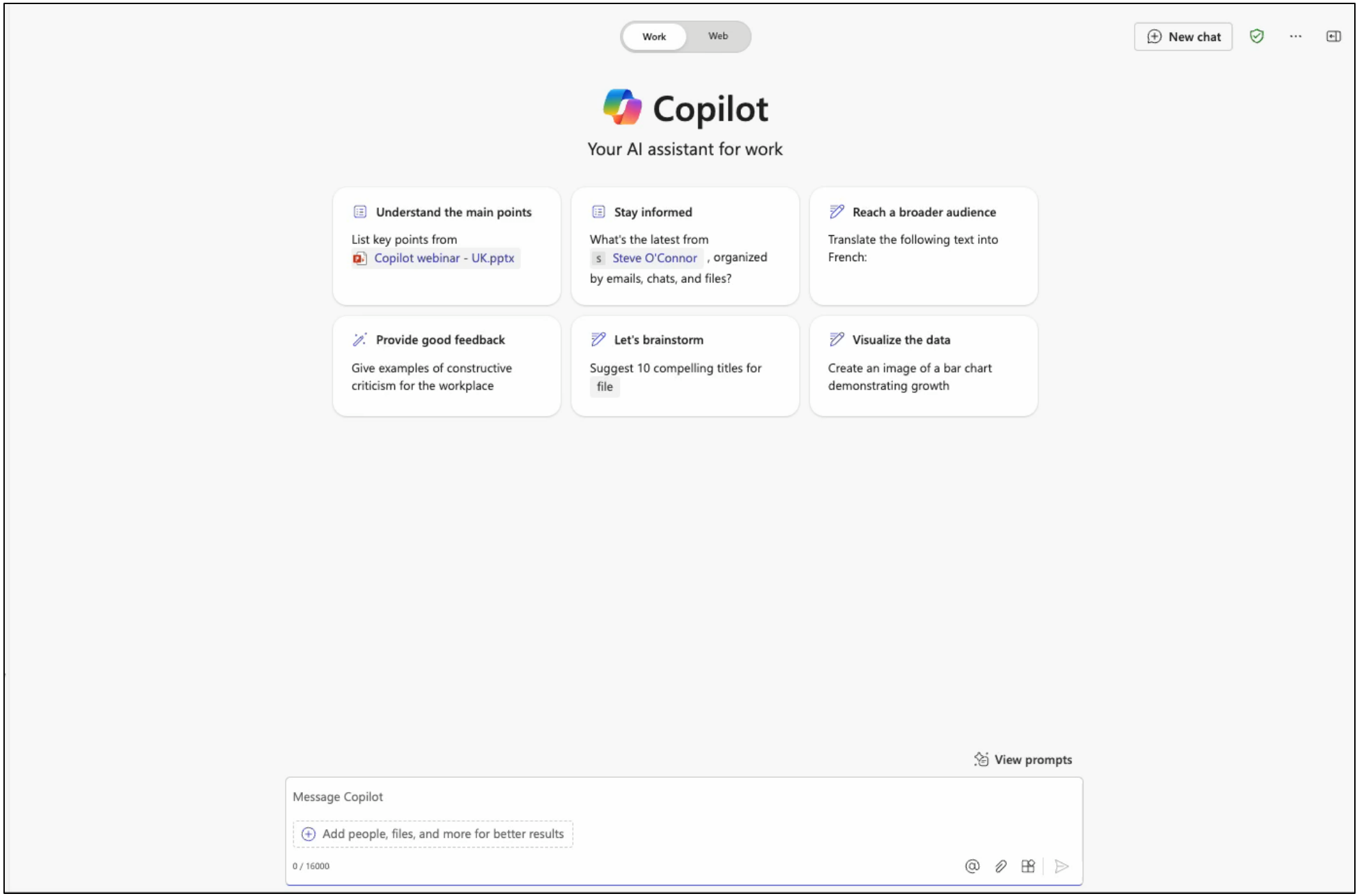
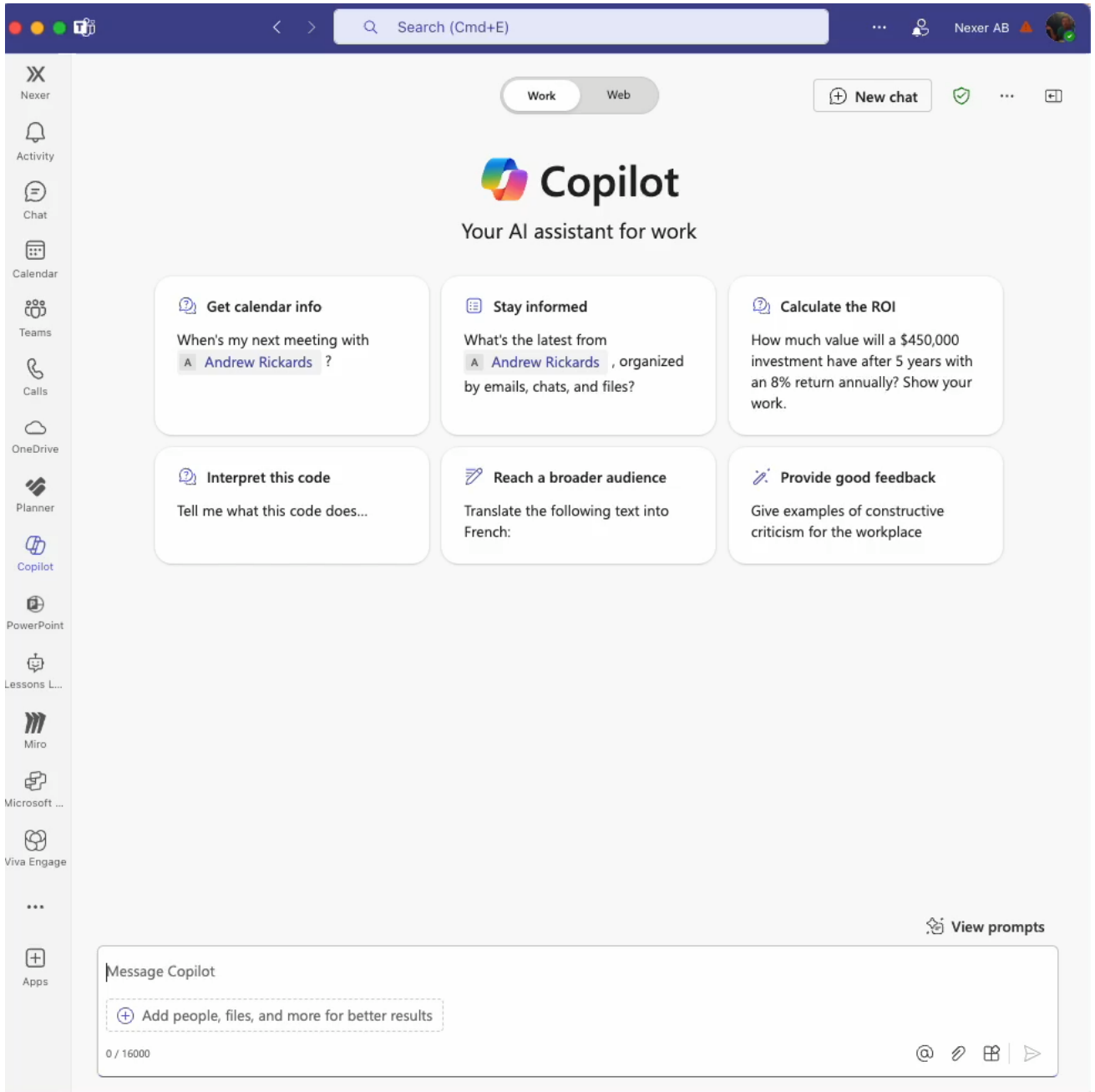

Loop
Create new
Search
Notifications
Recent
Ideas
Meeting notes
Workspaces
Recent
Jira Migration - ...
Release related ...
Nexer Digital an...
Inclusive meetings guidance
Share
Inclusive meetings guidance
Use Copilot or just start typing...


Work
Web
New chat
Copilot
Your AI assistant for work
Understand the main points
List key points from
Copilot webinar - UK.pptx
Stay informed
What's the latest from
Steve O'Connor
, organized by emails, chats, and files?
Reach a broader audience
Translate the following text into French:
Provide good feedback
Give examples of constructive criticism for the workplace
Let's brainstorm
Suggest 10 compelling titles for
file
Visualize the data
Create an image of a bar chart demonstrating growth
View prompts
Message Copilot
Add people, files, and more for better results
0 / 16000

NEXER


Search (Cmd+E)
Nexer AB
Nexer
Activity
Chat
Calendar
Teams
Calls
OneDrive
Planner
Copilot
PowerPoint
Lessons L...
Miro
Microsoft ...
Viva Engage
Apps
Work
Web
New chat
Copilot
Your AI assistant for work
Get calendar info
When's my next meeting with Andrew Rickards ?
Stay informed
What's the latest from Andrew Rickards , organized by emails, chats, and files?
Calculate the ROI
How much value will a $450,000 investment have after 5 years with an 8% return annually? Show your work.
Interpret this code
Tell me what this code does...
Reach a broader audience
Translate the following text into French:
Provide good feedback
Give examples of constructive criticism for the workplace
View prompts
Message Copilot
Add people, files, and more for better results
0 / 16000

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Why are we doing this?

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/ai-for-all-public-sector/

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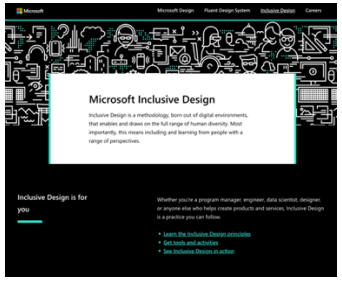
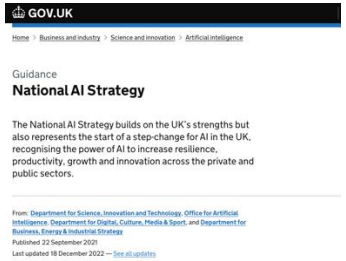
Useful resources



[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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