

DIGITAL COLLABORATION AND AI: ADMINISTRATIVE ROLES FOR SUSTAINABILITY

*Digital Collaboration and AI: Administrative
Roles for Sustainability*

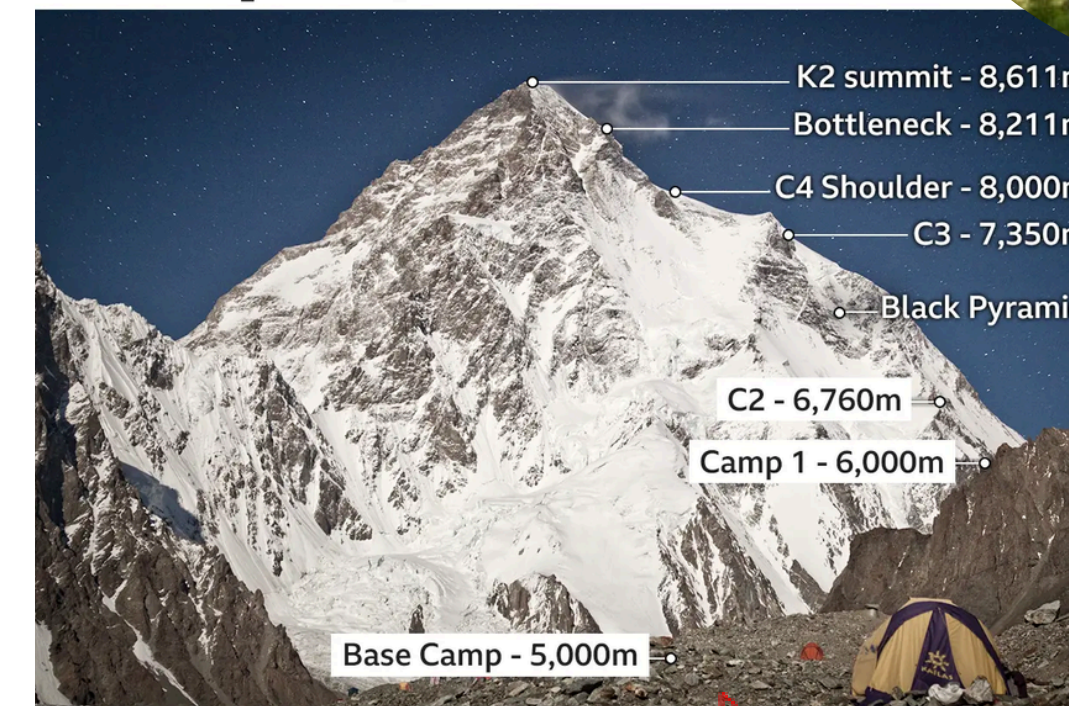


Hi! I'm Farzana and I'm Grenzenlos speaker!

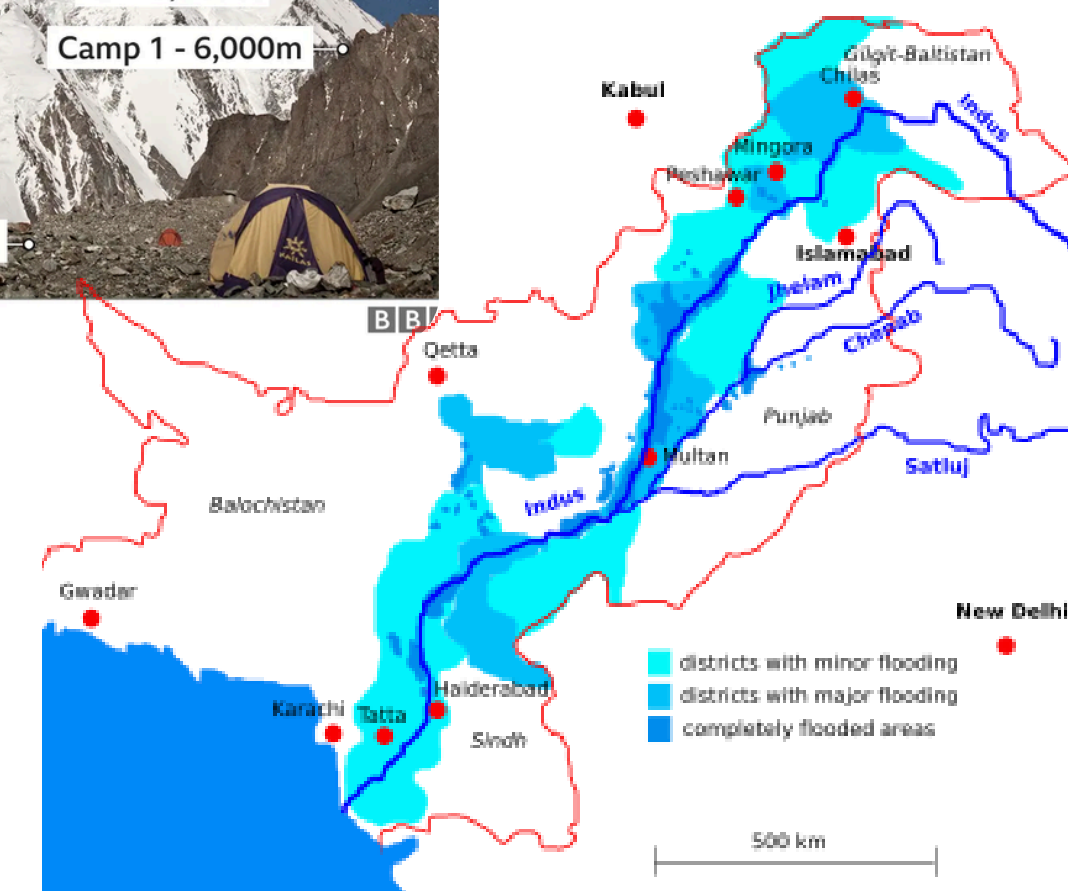
My journey begins in the breathtaking mountains of Hunza, Pakistan — a region renowned for its peace, high literacy rate, and the highest mountains nestled by the ancient Indus River and magnificent Karakoram Highway, often called the 8th Wonder of the World. This unique background gave me a strong passion for knowledge. That passion motivated my journey to Munich, to do my higher studies in Research on Teaching and Learning at the Technical University of Munich, Germany, where I now explore advanced methods in education, embrace new cultures and languages. I have always been deeply committed to giving back to society through teaching, activism, and mentorship, with a strong focus on educational development and equity. Therefore, I'm here.



route stops on K2



Source: Alex Gavan



OUR LEARNING JOURNEY FOR TODAY

A

Awareness Phase

B

Information Phase

C

Activity Phase

D

Reflection Phase

In 90 minutes, we will connect information with practice and jointly discover how digital tools can make our work world more sustainable.

Pick a side for each question and share why. There's no wrong answer – just honest opinions and good laughs.

ICEBREAKER: WOULD YOU RATHER?



AI assistant or 3-day weekend every week?

Hold all meetings digitally or all in person?

Write reports by hand or let AI summarize them instantly?

The Sustainable Development Goals



An Action for a Better World

The UN's 17 Sustainable Development Goals (SDGs) started in 2015 _ are a universal call to action to end poverty, protect the planet, and ensure peace and prosperity for all by 2030. These interconnected goals address global challenges like climate change, quality education, clean water, and gender equality, providing a shared roadmap for a more sustainable and equitable future.



Source: Modified from SDG Services

WHAT IS DIGITAL COLLABORATION & AI?

Core Concepts :

Digital Collaboration

Working together online using tools like Google Docs, Microsoft Teams, Slack, and Notion. No more endless email chains or lost files!

AI (Artificial Intelligence)

Smart technology that helps with writing, summarizing documents, scheduling meetings, organizing data, and answering routine questions

Sustainability Connection

Using digital tools reduces paper waste, saves time and energy, and makes resources accessible to everyone – supporting global goals.

refer to EU Artificial Intelligence Act 2024 for more definitions,

Best Collaborative Learning Platform

For Visual Collaboration



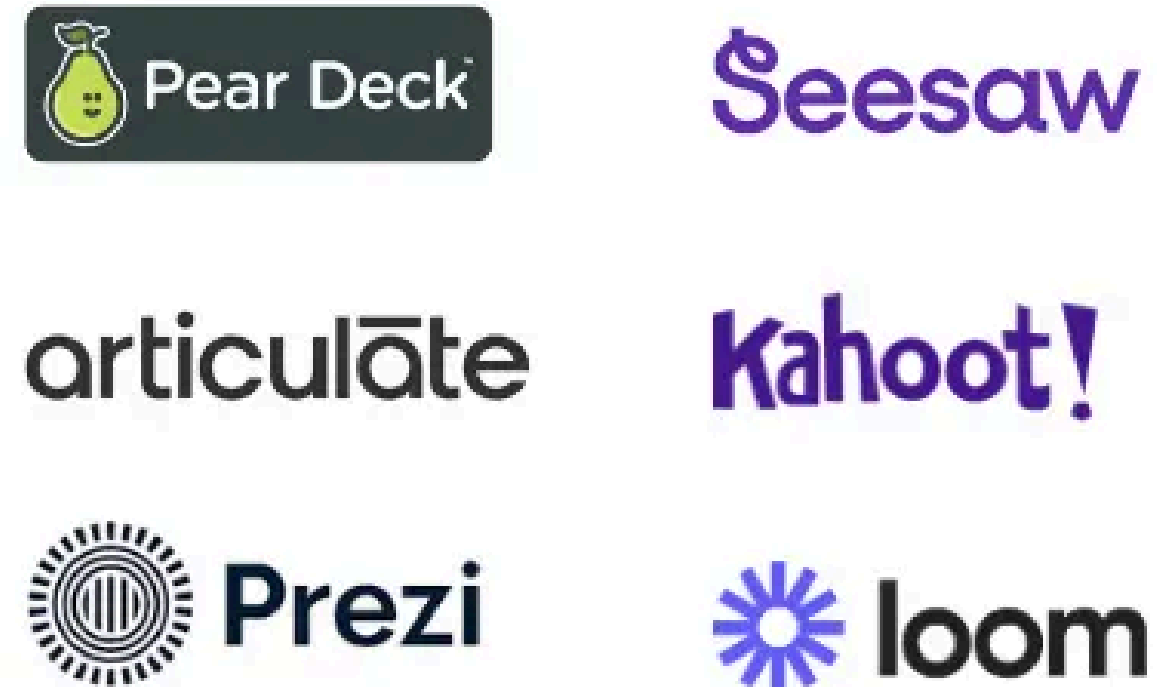
For Project Management



LMS for Collaborative Learning



Other Collaborative Platform



For Communication



KEY AREAS OF DIGITAL COLLABORATION

A

- Real-time document editing

B

- Video conferencing and chat

C

- Cloud-based data storage
- Project management tools

D

Automation of routine tasks

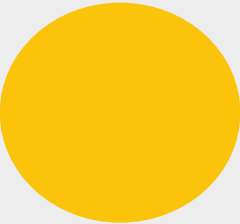
E

Data analysis and pattern recognition

F

-Intelligent assistance systems
-Personalized recommendations

EXAMPLES OF DIGITAL USE

- 
- AI writes meeting minutes while you focus on the discussion
 - Chatbots answer common legal and admin questions 24/7
 - Shared cloud drives eliminate paper and reduce email overload

- 
- AI helps draft professional emails and letters in seconds
 - Automated reminders keep projects on track
 - Digital signatures speed up approval processes

Your Turn Soon: After seeing these demos, you'll get hands-on time to explore these tools yourself. Think about which tasks in your studies or future job could benefit from AI assistance!

GAME TIME: AI OR HUMAN?

Can you tell if a text was written by AI or a human? Raise your hand for your guess!



Dear Mr. Meyer,
Please find attached the sustainability report for your review. Let me know if any adjustments are needed before we finalize it.
Best regards,
Anna

Dear valued colleague,
I am delighted to share the comprehensive sustainability report, which outlines our progress toward environmental responsibility and operational efficiency. Your feedback will be highly appreciated.
Kind regards,
The Sustainability Team



4 QUALITY
EDUCATION



Digital tools make learning and professional development accessible to everyone, anywhere.

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



AI and digital infrastructure drive innovation and create sustainable, resilient systems for the future of work.

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Digital collaboration reduces paper consumption, travel, and resource waste for more sustainable offices and administrations

HOW THIS SUPPORTS SUSTAINABILITY GOALS?

Digital tools and AI can help us achieve these goals.





Advantages

Saves time & boosts efficiency (→ SDG 9: Innovation & Infrastructure)

Improves access & personalised learning/support (→ SDG 4: Quality Education)

Reduces resource use and supports greener workflows (→ SDG 12: Responsible Consumption)

Enables better data-driven decisions (→ SDG 9 / SDG 4)

Fosters trustworthy, human-centred innovation when regulated (→ SDG 4 & 9)



Environmental footprint of AI (complex SDG 12 trade-off)

Some AI systems, especially large models or heavy data centres use significant energy, water and CO2 (sustainability requires efficient design and renewable energy use). EU Commission.

Challenges and Risks

Privacy, surveillance and human-rights concerns (threaten SDG 4 & inclusivity)

Increased data collection for collaboration and AI may risk privacy or be misused for surveillance unless governed by rights-based rules. United Nations

Bias & discrimination risk (hurts SDG 4 — equitable education)

- AI systems can reproduce bias in training data, leading to unfair outcomes in access, assessment or administrative decisions unless reduced risks. (Requires oversight and fairness measures.) UNESCO

Microsoft's carbon emissions rose 29% since 2020 — mainly from AI-driven data-centre expansion. Google's emissions increased 48% since 2019, linked to higher electricity demand and supply-chain use for AI.

According to the International Energy Agency (IEA), electricity demand from data centres will increase from 460 TWh in 2022 to 800 TWh by 2026.

Current and expected electricity usage of data centres as a percentage of total electricity usage of different countries

[Source: Transforma Insights, 2024]

Globally, there are **more than 10,000 data centres** in the world which are estimated to account for 1-2% of electricity demand which is likely to significantly increase in the coming years because of AI.

In **Ireland**, data centres accounted for **18%** of the country's total electricity usage in 2022, and this is expected to increase to **31% by 2028**.

In **Denmark**, data centre electricity consumption is expected to grow from less than 1% to **15% of total electricity by 2030**.

In the **EU** overall, data centres are estimated to account for close to **3% of EU electricity demand** and likely to significantly increase in the coming years.

The US is home to 50% of all data centres in the world. The rapidly growing demand for AI could drive data center energy consumption from **4.6% to 9.1%** of the country's total electricity usage by 2030.

China's data centres accounted for **2.5-3%** of national electricity consumption in 2020, expected to increase to **8% by 2030**.

Current and expected electricity usage of data centres as a % of total electricity usage of the country

While there is some research on the potential of AI to contribute towards safeguarding our natural resources and government regulations for sustainable Green AI solutions.

e.g., Germany

Germany's Energy Efficiency Act, passed in October 2023, mandates that data centres operational before 1 July 2026, should achieve a Power Usage Effectiveness (PUE) of 1.5 by July 2027 and 1.3 by July 2030. Data centres commencing operations after 1 July 2026, must meet a PUE of 1.2. The Act also requires these facilities to use 50% renewable electricity starting in 2024, rising to 100% by 2027.

AI & Sustainability

A Double-Edged Sword

AI's Environmental Footprint

High Energy Consumption

Training large AI models increase consumption.

Rising Carbon Emissions

Due to model training and operation.

E-Waste Accumulation

Hardware upgrades generate increasing e-waste.

Resource Depletion

AI hardware depends on scarce minerals and metals.

Data Center Overload

Growing AI use strains global data center capacity.



Greener AI, Better Planet

Lower Emissions

Cuts carbon output from AI operations.

Energy-Efficient Training

Uses fewer resources to train models.

Greener Infrastructure

Supports eco-friendly data centers.

Smart Monitoring

Tracks environmental changes in real time.

Sustainable Decisions

Guides eco-conscious business actions.

Ethics

The ethical considerations when using AI and data in education include ensuring that the AI systems used are reliable, fair, safe, and trustworthy and that the management of educational data is secure, protects the privacy of individuals, and is used for the common good.

Understanding the following is required to establishing a pathway for the ethical, safe and responsible implementation of these technologies.

Government commitment to ethical AI

AI tools used in the civil and public service must comply with seven key requirements:





what changes do you notice in how people work?

Which example surprised you most?"

“How might this apply to an administrative office?”

GROUP ACTIVITY: AI FOR A SUSTAINABLE OFFICE

Choose Your Sustainability Goal

Pick an SDG your office will champion – maybe zero paper waste (SDG 12), equal access to technology (SDG 4), or innovative infrastructure (SDG 9).

Select Your Digital Tools

Choose 2–3 technologies: Google Drive, ChatGPT, Microsoft Teams, Trello, Canva, automated scheduling tools, or digital signature platforms.

Design Your Office System

Map out how your tools create an eco-friendly, efficient workplace. What tasks will AI handle? How will teamwork improve? What makes it sustainable?

Prepare Your Pitch

Create a 3–5 minute presentation. Draw a poster, make digital slides, or just explain your brilliant idea – creativity counts!

Example Ideas to Inspire You:

AI-powered document organization system

Paperless meeting rooms with digital whiteboards

Chatbot for answering common HR questions

Automated expense tracking and reporting



GROUP PRESENTATION

Each group has 3–5 minutes to present their Smart Sustainable Office.
You can show your poster, your plan, or just explain your idea.

peer feedback (one positive point, one suggestion and maybe also
connection to SDGs)



Guess the Tool!

A cloud where you can store files, share folders, and say goodbye to USB sticks.



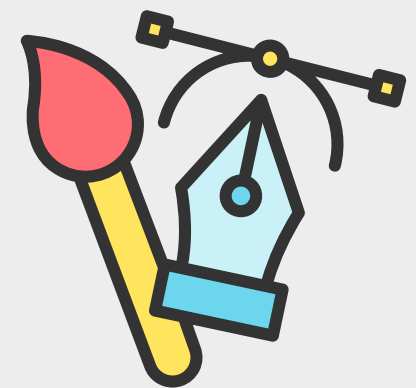
It writes emails, helps you summarize, and never gets tired.”



You can hold virtual meetings, share screens, and send emojis at work.



Digital design tool where your office posters come alive.”



AI that never forgets appointments 🕒?



Kahoot Quiz

Test your knowledge in a playful quiz on AI, digital collaboration, and sustainability. Follow the link -----



Call to Action

What small digital action can you implement to make your own work more sustainable?



CONCLUSION

Today we learned how digital tools and AI can make administrative professions more sustainable. These competencies are crucial for our professional future and contribute to a better world. Thank you for your active participation!





**THANK
YOU**

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