Digital design tools: Introduction and practical use

A focused journey through AI in communication

maia
Maximising impact and accessibility of European Climate Research

#ClimateResearchNet

MAIA COMMUNICATION WORKING GROUP

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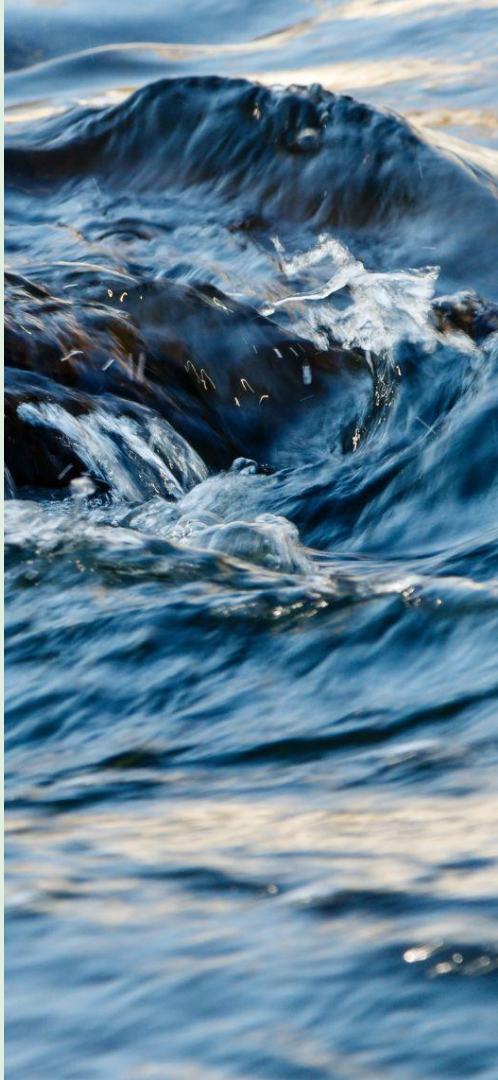
Introduction

AI has radically transformed digital communication. The **paradigm of information generation** has shifted, along with the **relationship with users** and **the way content is produced**, enabling automation, personalization, and creativity on unprecedented scales.

- **2020:** launch of GPT-3
- **2022:** Massive emergence of ChatGPT
- **2023-2024:** Multimodal models like GPT-4 & Gemini



Communication channels and media demand AI integration because audiences expect personalized experiences, instant responses, and relevant content.

Digital platforms already incorporate recommendation algorithms, virtual assistants, and AI-powered analytics tools, making their use essential to remain competitive and visible.

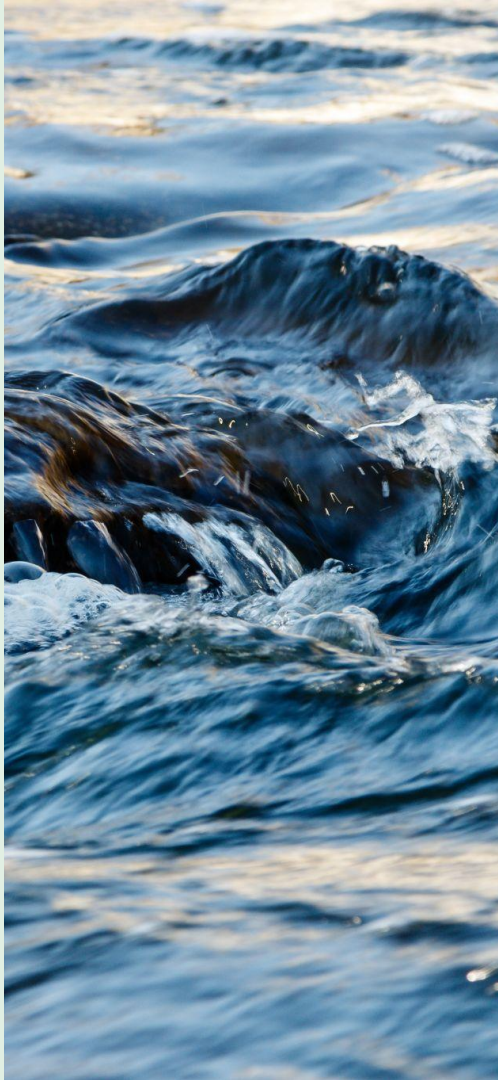
This means that **content must be optimised not only for human audiences, but also for AI systems that filter, recommend, and prioritise information across digital platforms**. Staying visible now requires being relevant to both people and algorithms.

AI makes it possible to **overcome the limitations of previous communication models** by enabling:

1. Faster content production
2. More precise and targeted messaging
3. Real-time adaptability

These pillars are essential for **continuously optimizing communication** and making it more relevant and efficient.

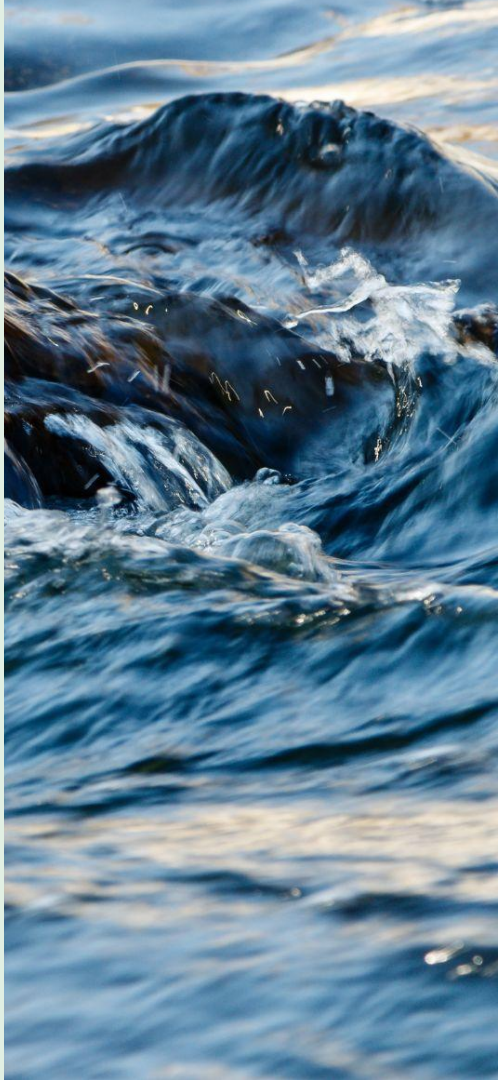
They will also enable more **inclusive, multichannel, proactive, and data-driven communication** that can anticipate needs and maximize impact.



How can AI enhance communication in European climate and adaptation projects?

By supporting key tasks such as **multilingual content** generation and adaptation, **audience and trend** analysis, **message personalisation**, **campaign automation**, **impact monitoring**, **community management**, and **early detection** of crises or misinformation.

AI enables multilingual communication not just through translation, but by scaling the adaptation of tone, terminology, and cultural context—making content more relevant, inclusive, and effective across diverse audiences.



Objectives

O1 **Demystify AI as a replacement tool,** positioning it as a strategic ally to enhance communication creativity.

O2 **Train communication professionals in the critical selection and use of AI tools,** considering their technical, ethical, and economic implications.

O3 **Explore the capabilities of generating and optimizing** visual and textual content through artificial intelligence tools.

O4 **Develop a collaboration model** where technology expands human capabilities without replacing strategic judgment and creativity.

Advantages of AI in communication

1. Efficiency in multimedia content production

- ➔ **Automated** graphics, editorial pieces, and video generation
- ➔ **Streamlined** editing, assembly, and format adaptation processes
- ➔ **Image, animation, and video clip** creation in minutes
- ➔ **Optimized time** and resource management

Result:

Teams producing more visual and audiovisual content in less time with greater consistency, enabling simultaneous multi-platform publication.

2. Personalization and adaptability in multimedia content

- ➔ **Audience and context** data analysis for content adaptation
- ➔ **Customized** graphics, videos, and texts for target audiences
- ➔ **Adjustable** colors, formats, languages, and messages by channel
- ➔ **Personalized** versions of multimedia pieces through segmentation

Result:

More relevant, accessible, and personalized communication that improves user experience and increases the impact of each action.

3. Innovation in Multimedia Strategies

- ➔ **Experimentation** with new formats and styles
- ➔ **Automated A/B** testing for videos and graphics
- ➔ **Real-time** performance monitoring
- ➔ **Visual trend** detection and creative idea suggestions
- ➔ **Continuous multimedia** campaign optimization with interactive elements

Result:

More agile, innovative, and data-driven communication strategies that maximize visual and audiovisual possibilities.

4. Enhancement of Creativity in Multimedia

- ➔ **AI as creative co-pilot** for content generation
- ➔ **Automated** sketches, storyboards, graphics, script creation
- ➔ **Complete video generation** from initial ideas
- ➔ **Creative** variation and style proposals
- ➔ **Support for overcoming** creative blocks and exploring new narratives

Result:

Expanded creativity, more collaborative processes and more diverse, relevant and engaging visual outcomes.

Costs of AI in communication

01

Economic costs

Initial investment in tools

Budget-Friendly AI Tools for Multimedia Content. **Getting Started with Zero Investment!**

Free entry point

Start with free tools

Access AI tools through simple sign-up or basic registration with no upfront costs

Experimentation phase

Prototype and test

Use free versions to experiment and create professional-quality content without financial risk

Scale testing

Evaluate workflow fit

Test which tools best integrate with your existing processes and team workflow

Strategic growth

Strategic upgrades

Only invest in paid features when your needs scale or advanced capabilities become essential

1. Start free →

2. Test workflow →

3. Scale smartly →

4. Invest strategically

Recommended Free Software

Image Generation & Design

- **Canva AI**
  Free AI-powered design tools and templates
- **DALL-E 2**
  Free tier for AI image generation
- **Leonardo AI**
  Free credits for image creation

Video & Content Creation

- **Hootsuite**
  Free social media content scheduling and basic AI features
- **Runway ML**
  Free tier for video editing and AI effects
- **Clipchamp**
  Free video editing with AI enhancements

Open Source Solutions

- **GIMP with AI plugins**
  Free alternative to Photoshop
- **DaVinci Resolve**
  Professional video editing with AI features
- **Stable Diffusion**
  Open-source image generation

AI Tools for Research & Innovation Impact

Key benefits for research projects

Impact amplification

Stakeholder reach
Connect with more researchers, policymakers, and communities

Public understanding
Transform complex findings into accessible content

Visibility boost
Enhanced project recognition and citation potential

Collab. enhancement

Cross-sector engagement
Better communication with industry, academia, and society

Funding compliance
Meet EU requirements for dissemination and outreach

Knowledge transfer
Facilitate technology transfer and practical applications

EU research mission

Scientific excellence
Support the broader goals of EU research and innovation

Social relevance
Ensure research benefits reach intended communities

Sustainable impact
Create lasting value beyond project duration

Real value = Amplified project impact through better communication

02

Environmental Impact

Environmental impact of AI in multimedia content creation

Creating images, videos, and graphics with AI requires high energy consumption, both in training and using the models.

Data centers hosting these tools often run on non-renewable energy, generating a significant carbon footprint.

To reduce ecological impact:

- ➔ **Use efficient and lightweight** models for simple tasks.
- ➔ **Reuse generated content** and avoid unnecessary mass generation.
- ➔ **Prioritize platforms** that commit to renewable energy and energy optimization.

Efficient AI models: Training and responsible use

Training efficient models: Design and develop AI models that achieve good results using fewer resources and energy.

Using efficient and lightweight models: Choose optimized and less complex models for simple tasks, reducing energy consumption in daily use.

How is this achieved?

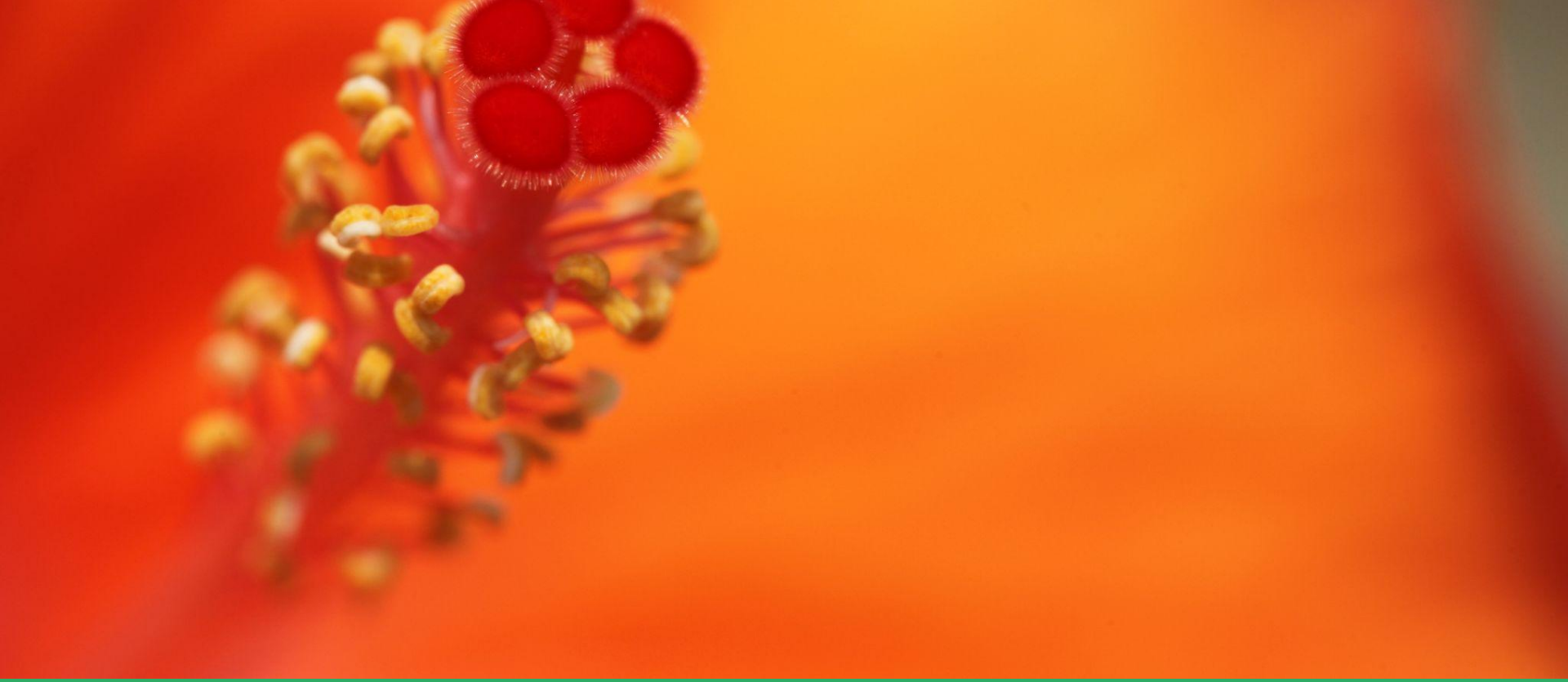
➔ **Smaller or specialized models.**
Optimization techniques and parameter tuning.

➔ **Reuse and transfer learning.**
Conscious selection of the appropriate model for each task.

Sustainability strategies

- ➔ **Use AI only when it provides real value** and avoid unnecessary mass generation.
- ➔ **Prioritise optimised models and sustainable platforms.**
- ➔ **Use AI to monitor and reduce the energy consumption** of your own processes and resources.

Food for thought: Responsible consumption and continuous optimisation are key to sustainable AI.



AI tools and their use

1. Pricing Models

Types of pricing models for AI content tools

- **Free Tier / Freemium:**
  Many AI tools offer a free version with basic features, ideal for beginners or occasional users.
- **Subscription Model:**
  Users pay a fixed monthly or yearly fee for access to a set of feat–ures (e.g., Canva Pro, ChatGPT Plus). This model is predictable and suitable for regular use.
- **Pay-Per-Use / Consumption-Based:**
  You only pay for what you generate (e.g., per image, per video minute, or per API call). This is flexible and cost-effective for sporadic or low-volume needs.

1. Pricing Models

Types of pricing models for AI content tools

Models	Pros	Cons	Example tools
Free/Freemium	No cost, easy access	Limited features, usage caps	**Canva, Clipchamp**
Subscription	Predictable, full features	Recurring cost, may overpay	**Canva Pro, ChatGPT+**
Pay per use	Pay only for what you need	Can add up with heavy usage	**DALL·E, Runway ML**

2. Tool selection criteria

Key factors to consider for non-creative profiles

1. Ease of use → The tool should have an intuitive interface and minimal learning curve, especially for beginners.

2. Features and capabilities → Ensure the tool covers your needs with templates, AI assistance, and export options.

3. Integration → Ability to connect with other tools you use (e.g., Google Drive, PowerPoint, social media platforms).

4. Support and community → Access to tutorials, help centers, and user forums.

5. Cost efficiency → Prefer tools with free plans or affordable entry-level subscriptions.

2. Tool selection criteria

Recommended tools for beginners

Image creation	**DALL·E**	Simple text-to-image, easy to use, accessible via web, no design experience required.
Video creation	**Clipchamp**	User-friendly, browser-based, free plan available, drag-and-drop editing, no technical setup.
Design/graphics	**Canva**	Extremely intuitive, vast template library, free plan covers most needs, AI-powered features.

Alternatives for video: *Runway ML (more advanced, but with a free tier and templates).*
Alternatives for design: *Adobe Express (simple, but Canva is generally easier for absolute beginners).*

3.1. AI workflow integration

Best Practices for Integrating AI Tools into Your Workflow

Start simple → Begin with one tool for each content type (e.g., Canva for design, Clipchamp for video, DALL·E for images) to avoid overwhelm.

Automate repetitive tasks → Use AI to handle time-consuming steps like resizing images, generating captions, or creating video intros.

Centralise assets → Store generated content in cloud folders (Google Drive, OneDrive) for easy access and sharing.

→ → →

3.2. AI workflow integration

Best Practices foºr Integrating AI Tools into Your Workflow

Template use → Leverage built-in templates to standardize branding and speed up creation.

Collaborate → Choose tools that allow real-time collaboration or easy sharing with team members.

Review and iterate → Use AI tools' analytics (where available) to track what works and refine your workflow.

3.1. Example Workflow for a Beginner:

1. **Draft visual idea with DALL·E**
   (generate an image from a prompt).
2. **Edit or enhance in Canva**
   (add text, combine with other elements, use templates).
3. **Create a short video in Clipchamp**
   (import Canva graphics, add voice-over or music).
4. **Store and organize assets in Google Drive.**
5. **Share or publish directly from Canva or Clipchamp.**

03

Practical use exemples
DALL·E, Midjourney

How to structure a prompt? Key elements

This type of structure helps DALL-E or Midjourney understand exactly what image you want. **The key is to be clear, specific and detailed in each section you describe.**

1. **Subject (theme) and detail:** Clearly define the main subject and its major features.
2. **Materials and textures:** Describe materials, finishes, surfaces and details of each element.
3. **Composition and framing:** Specify the framing, the distance, the type of lens...
4. **Light:** Details where and how the light in the scene comes from, its quality, quantity, atmosphere...
5. **Style and realism:** Indicate the aesthetics you are looking for.
6. **Background:** Define how the background should be, if it should be diffuse or not, if it is a clean background or one with elements?
7. **Technical elements:** Include specific elements of the style you are looking for and the finish.

A prompt in action:

‘A portrait of a golden retriever dog (subject), with soft and shiny fur (materials and textures), close-up framing with 85mm lens (composition), soft natural light from the left (light), realistic style (style), green blurred background (background), sharp focus on the eyes (technical elements)’.

A prompt in action:

A car in a flood (subject), with mud-stained bodywork and soaked windows (materials and textures), general shot framing with 35 mm lens (composition), hard light from above (light), realistic style (style), in the background other cars washed away by water, plants and in focus (background), sharp focus on the car's damage (technical elements)".

Additionally, DALL·E

- → **Maintains consistency between characters and image sequences:**
  By describing specific characteristics of a character or scene and repeating them in each request, DALL·E 3 can generate coherent images and maintain visual identity throughout a sequence.
- → **Image editing:**
  Allows modification of existing images by adding, removing, or altering elements through text instructions, as well as changing styles, backgrounds, or details.
- → **Animation:** While it doesn't generate videos, its images can serve as base frames for simple animations.

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04

Practical use exemples
Clipchamp

AI video creation workflow with Clipchamp

1. **Import and organise your material**
   Upload your videos, images and audio, or use free stock footage.
2. **Create voiceovers with AI**
   If you don’t have a voiceover, write your script and use text-to-speech to generate a professional AI voiceover.
3. **Improve your pre-recorded materials**
   Use AI noise reduction to remove background noise and improve audio clarity.
4. **Use automatic silence removal**
   AI detects and trims long pauses, making your video more fluid and dynamic.

AI video creation workflow with Clipchamp

5

Drag and arrange clips

You can easily trim, split and adjust duration.

6

Add automated subtitles

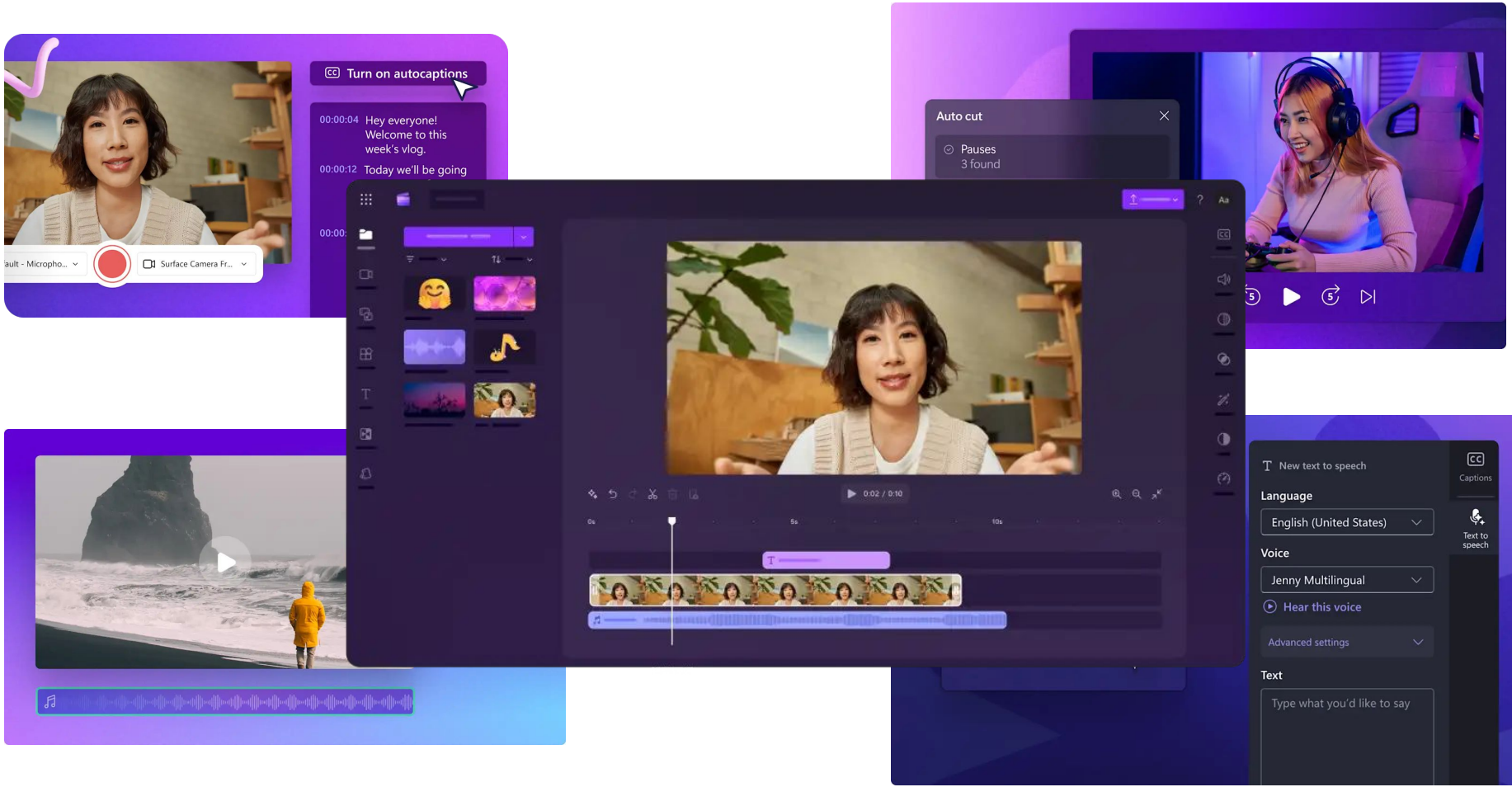
Generate subtitles in seconds with AI's automatic transcription feature, making it easy to access and understand your content.

7

Customise and export

Add text, transitions, effects and review the final result. When you're satisfied, export your video in the quality of your choice.

AI tools and their use



Benefit:

This workflow allows you to create videos from scratch, generate narration, improve the quality of your recordings and add subtitles.

You save time, reduce manual tasks and achieve professional results, even without prior video editing experience.

05

Practical use exemples
Canva

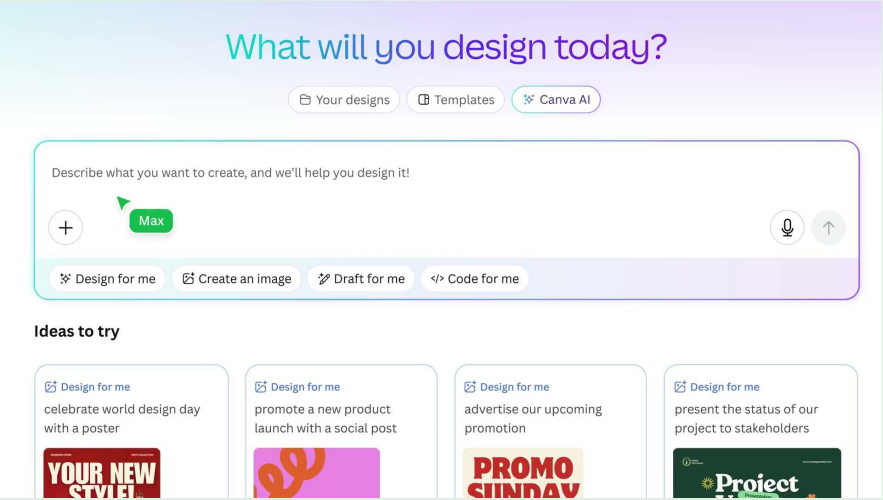
The entire creative process in one place

Canva visual suite 2.0

- Design, data and productivity
- Creation of presentations, images, videos, documents and websites.

Canva AI assistant

Generates images, text and slides from simple descriptions, making it easy for beginners and advanced users alike.



The entire creative process in one place

- **Smart one-click editing**
  Remove backgrounds, delete objects or expand images automatically with AI.
- **Magic Typing**
  Automatically enhance, summarise or rewrite text.
- **Visual data and interactive charts**
  Magic Insights and Magic Charts transform complex data into compelling, presentation-ready visualisations.
- **Task automation**
  Smart templates, automatic translation and mass content creation in seconds.

06

Other AI uses in communication

Other AI uses in communication

Area	What does AI offer?	Example tools
Translation Greater audience reach through multilingual content for diverse platforms	Instant and accurate translation of texts, audios, and images in multiple languages.	**Google Translate, DeepL**
Sentiment analysis User analysis to align communication and campaigns	Analyzes texts (social media, emails, surveys) and automatically detects emotions, tone, and opinions.	**MonkeyLearn, Lexalytics**
Chatbots and assistants Establish new communication channels and connections from projects	Responds to inquiries, automates customer service, and manages simple tasks in real-time.	**ChatGPT, Drift, Intercom**

Conclusions

1. Key Takeaways

- ➔ **Begin with Free Tiers:** Canva AI, DALL-E, Clipchamp without upfront costs
- ➔ **Test and Focus:** One tool per content type, evaluate workflow integration
- ➔ **Strategic Scaling:** Free tier → Test workflow → Scale smartly → Invest strategically

2. Start with Free Tools

- ➔ **AI as Essential Tool**: Adds speed, knowledge, and assistance but doesn't replace human creativity
- ➔ **Balanced Approach**: "AI talks, doesn't work" - sometimes traditional methods (Pexels, iStock) are more efficient
- ➔ **Work in Percentages**: Use AI as complement to traditional resources, maintain human oversight and strategic control

3. Impact on European Climate and Adaptation Projects

- ➔ **Enhanced Communication:** Multilingual content generation with cultural context adaptation
- ➔ **AI-Powered Capabilities:** Audience analysis, message personalization, campaign automation, and crisis detection
- ➔ **Competitive Necessity:** Content optimized for both human audiences and AI algorithms essential for visibility

4. Future-Ready Communication

- ➔ **Three Pillars:** Faster content production, precise targeted messaging, real-time adaptability
- ➔ **Transformation Outcomes:** Inclusive, multichannel, proactive communication with maximum impact
- ➔ **Sustainability Focus:** Use efficient models and platforms committed to renewable energy

Final Recommendation

AI is a powerful tool that **amplifies communication capacity**, but requires **intelligent and strategic human direction**. The key to success lies in finding the right balance between AI efficiency and human creativity, ensuring sustainable practices while maintaining competitive advantage in an increasingly AI-driven communication landscape.

Q&A

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