



Session 2

AI Tools for Enhanced Efficiency for IPAC Members

Land Acknowledgment

With participants joining virtually from coast to coast, we acknowledge and respect the ancestral and unceded territories of all First Nations, Inuit, and Métis peoples.

We encourage everyone here to take the opportunity to learn about the diverse and unique histories, cultures, and aspirations of the peoples on whose territories you work and live and determine how you can take action towards reconciliation.



Session 2

AI Tools for Enhanced Efficiency for IPAC Members

KPMG's Subject Matter Experts with you today



Chitra Sridhar
Partner,
Lighthouse



Victoria Dunn
Consultant in Data &
AI, Copilot Coach

Training Materials Disclaimer

This document is provided to The Institute of Public Administration of Canada (IPAC) and its members in relation to the Artificial Intelligence training course facilitated by KPMG. The information contained in this document is of a general nature only, **is provided for the purposes of training, and does not constitute the provision of advice**, or provide any type of certification or accreditation status.

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Read full training materials disclaimer in the addendum.

Current Adoption State

2024

The latest KPMG AI Adoption survey shows that

61%

of respondents said they have implemented generative AI.

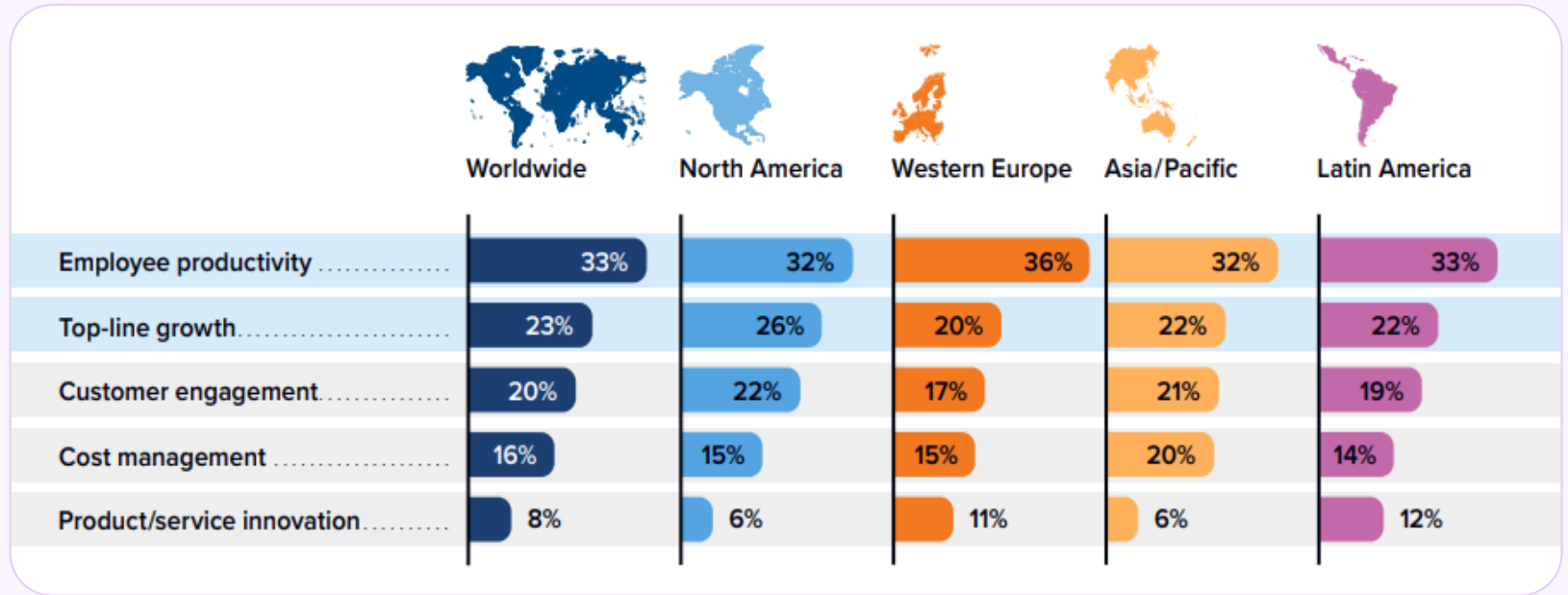
2023

22%

of respondents said they started using AI tools to help them in their jobs.

Source: [KPMG in Canada Generative Ai Business Survey](#)

Desired Outcomes of AI Initiatives



Note: This does not include “not sure”. n = 3,481 (worldwide), n = 915 (North America), n = 1,018 (Western Europe), n = 1,071 (Asia/Pacific), n = 435 (Latin America)

Source: Internation Data Corporation (IDC)’s Business Opportunity of AI Survey, August 2024 For an accessible version of the data on this page, see Supplemental Data in the Appendix.



Current Adoption Challenge

**Top Challenge Worldwide is a Lack of
Employees with necessary skills and
capabilities to utilize AI**

52% of respondents cited the lack of
skilled workers as a top challenge
From the IDC Global Report

The World of AI Tools

Legend: ● Text & writing ● Image ● Audio/Video ● MLOps ● Data & decisions

- Text & writing:**
 - Platforms** (+3 more in full universe): OpenAI, AI21 labs, Hugging Face, deepset, co:here, Replicate, Adept
 - Creative organization** (+4 more in full universe): notably, Capacities, Fermat, Elicit, mem
 - Synthetic data generation**: gretel, MDCLONE, hazy, betterdata, Replics Analytics, MOSTLY-AI, TOMIC, OCTOPIZE, SYNTEGRA, Mirry.AI
 - Vector search & curation** (+3 more in full universe): SeMI Technologies, raft, Twelve Labs, Metaphor, DASHWORKS
- Code generation & documentation** (+9 more in full universe): replit, Codiga, tabnine, MUTABLE, Mintlify, Debuild, symflower, CodePilot.ai, Amazon CodeWhisperer
- Customer support (chat/email/text)** (+23 more in full universe): ultimate.ai, CRESTA, PolyAI, ada, KAI ZAN, Stylo, mavenold, Forethought, viable, Certainly.
- General writing and content editing** (+25 more in full universe): WRITER, QuillBot, OTHERSIDE AI, LT, LanguageTool, wordtune, Correcto., Linguix, COMPOSE AI
- Marketing & sales copy** (+49 more in full universe): Demandwell, Jasper, Writasonic, copy.ai, regie.ai, anyword, peppercontent, LAVENDER, Creatext, SURFER, lyne, Scalenut, craftly.ai, DATA SKRIVE, neuroflash, INK, copysmith, Smartwriter.ai, Hypotenuse AI
- Text & data summarization** (+8 more in full universe): WEAVE AI, agolo, scholarcy, summari, TLDR this, Tome
- Image editing** (+2 more in full universe): PhotoRoom, Let's Enhance.io, Depix, Picsart, neural Jove, Autoenhance.ai, imagen
- Ad collateral** (+5 more in full universe): p-nc-h, Rocketium, AdCreative.ai, Simplified, COME2US
- Design** (+5 more in full universe): SWAPP, maket, Diagram Labs, BEAUTIFUL [AI], HYPAR, uizard
- Text to image** (+9 more in full universe): BRIA, >ROSEBUD.AI, NightCafe, Midjourney, crayon
- MLOps** (+11 more in full universe): Humanloop, Weights & Biases, LatticeFlow, COGNEX, alai, HUMAN INTELLIGENCE, Osterhout
- Audio Editing** (+2 more in full universe): Amberscript, VOICEMOD, PODCASTLE, krisp, Aharmonic
- Text to speech / Speech to text** (+14 more in full universe): coqui, Speechify, WELLSAID, MURFA, REPLICA, LOVO, RESEMBLE.AI
- Music generation** (+9 more in full universe): moises, boomy, supertone, i:USICO, DAACI, SPLASH
- Summarization & insights** (+8 more in full universe): Fathom, xembly, hume, clearword, SEMBLY, Sybill, Magnifi, VIDEOVERSE, Hume.
- Avatars & dubbing** (+16 more in full universe): Hour One, neosapience, Synthesia, METAPHYSIC, GeepDub.ai, PAPERCUP, VOODO, Rephrase.ai, elai, Colossyan, YEPIC.AI, D-ID, CEPHEUS
- Video** (+15 more in full universe):
 - Generation and Animation** (+1 more in full universe): runway, lumen5, plask, PICTORY
 - Editing** (+6 more in full universe): descript, invideo

Today's Agenda

1

**Exploring
Multifunctional AI
Tools**

*Deep Dive on
Copilot for M365*

2

**Exploring
Personalized AI
Chatbots**

3

**Exploring
AI Imagery Tools
& Advanced Tools**

4

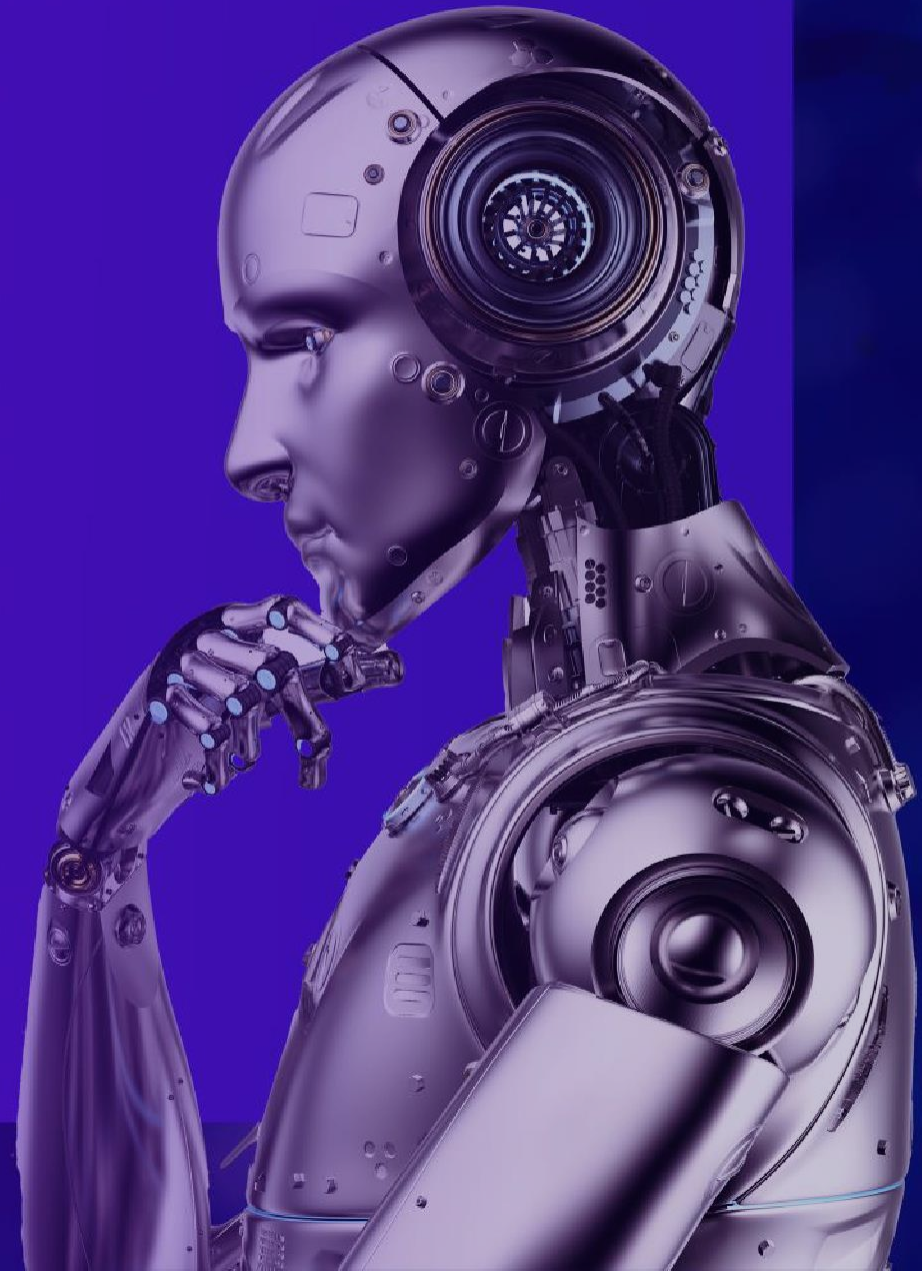
**Exploring Video and Audio AI
Tools**

WHAT DO YOU THINK?

MENTI TIME

<https://www.menti.com/alhn3ruqisgs>

Code: 1350 6181



Understanding the Mechanics Behind our Favourite Tools



- ### Gen AI Text Models
- GPT series from Open AI
 - PaLM from Google
 - Claude from Anthropic
 - BLOOM, open-source model
 - LLaMa from Meta

- ### Applications
- Open AI's ChatGPT
 - Microsoft's Copilot
 - Google's Gemini
 - Claude's Anthropic
 - Perplexity
 -

- ### Key Features
- Natural Language Understanding
 - Context Awareness
 - Real-Time Responses
 - Multi-turn Conversations
 - Task Adaptability


Multifunctional Generative AI Tools


Experience the future of intelligent communication where artificial intelligence transforms your queries into precise, contextual text responses.

This technology **bridges the gap between human inquiry and comprehensive understanding**, empowering users to access instant, nuanced information across virtually any domain of knowledge.


Multifunctional Generative AI Tools


Capabilities & Benefits

 **Summarizing**
Quickly summarizing large quantities


 **Translation**
Translate text into multiple languages

 **Simplifying Ideas**
Handles nuanced concepts and compositions

 **Software code**
Generating code in various programming languages







 **Creating Tables**
Organizes large lines of text into clear tables

 **Rapid Creation**
Generates images in seconds

 **Creating text**
Writing essays, articles, and creative content

Leading Tools



| Tools | Specialties | Capabilities | Applications |
|---|--|--|--|
|  ChatGPT | <ul style="list-style-type: none"> • Conversational AI and content generation • Processing large amounts data | <ul style="list-style-type: none"> • Natural language understanding • Creative writing | <ul style="list-style-type: none"> • Customer service • Content creation • Tutoring |
|  Claude | <ul style="list-style-type: none"> • Nuanced language processing • Writing code | <ul style="list-style-type: none"> • Ethical reasoning • Complex task analysis | <ul style="list-style-type: none"> • Academic research • Detailed writing • Problem-solving |
|  Perplexity | <ul style="list-style-type: none"> • Information retrieval and research | <ul style="list-style-type: none"> • Real-time web searching • Source-cited answers | <ul style="list-style-type: none"> • Academic research • Fact-checking • Comprehensive Q&A |
|  Copilot | <ul style="list-style-type: none"> • Productivity enhancement in work tools • Integrated with Microsoft M365 | <ul style="list-style-type: none"> • Code generation • Data analysis • Task automation | <ul style="list-style-type: none"> • Software development • Project management • Reporting |
|  Meta AI | <ul style="list-style-type: none"> • Conversational AI and advanced search engine • Multimodal integration (AR/VR) | <ul style="list-style-type: none"> • Image generation • Conversational AI • Platform-wide assistance | <ul style="list-style-type: none"> • Social media content creation • Real-time information retrieval • Creative tasks |
|  Gemini | <ul style="list-style-type: none"> • Video analysis • Integration with Google apps | <ul style="list-style-type: none"> • Content creation and translation • Task Automation • 3D object recognition | <ul style="list-style-type: none"> • Academic research support • Personal productivity • Software development |

Copilot M365

Microsoft's multifunctional tool



Copilot M365

Microsoft's multifunctional tool



PowerPoint



Teams



Excel



Loop



OneNote



Word



Outlook



Whiteboard




Copilot Chat



Copilot Web


A New Way to Interact with Data



Creating Documents



Data Extraction



Content Creation



Data Analysis


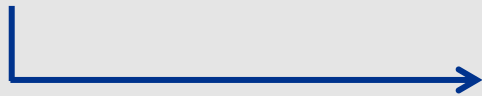


Image & video Creation

A New Way to Interact with Data



It relies on three main sources of information



Your
Organization's
Data



Data from
the Web










Pre-Trained
Data

The power of Copilot M365 in your favorite applications



There is a Copilot for each application, with features specific to each application.

The application-specific Copilots are directly integrated into the applications.

|  Application |  Capabilities |
|---|---|
|  Word | <ul style="list-style-type: none">Analyze and visualize dataGenerate formulas and information |
|  Excel | <ul style="list-style-type: none">Clean dataCreate and design presentations |
|  PowerPoint | <ul style="list-style-type: none">Suggest improvements in content and design |
|  Outlook | <ul style="list-style-type: none">Summarize emails and generate responsesWrite emails based on context |
|  Teams | <ul style="list-style-type: none">Provide real-time meeting summariesPropose follow-up questions during meetings |

How can Copilot support you throughout your day?



Create content following a template



The screenshot shows a Microsoft Word document in a browser window. The document title is "Social Media Publications for New Loyalty App". The ribbon is set to "Home". The main content area is mostly blank, with a small Copilot icon and the text "Select the icon or press Alt+i to draft with Copilot" centered on the page. The status bar at the bottom indicates "Page 1 of 1", "0 words", "English (U.S.)", "Text Predictions: On", and "Editor Suggestions: Showing".

How can Copilot support you throughout your day?



Summarize a meeting based on a transcription



RFP Discussion Chat Shared **Recap** +

Sept 16, 2024 9:00 - 9:30

Open in Stream Copilot

RFP Discussion
2024-09-16 9:00 PST

Recorded by: Charlotte De Crum, Kat Larsson
Presented by: Charlotte De Crum, Kat Larsson
00:00 / 29:16

Speakers # Topics Chapters

- Aadi Kapoor
- Daniela Mander
- Babak Shamm
- Kat Larsson
- Charlotte De Crum

Show all 11 speakers

Content [See all](#)

- Project Outline Ro...
- Evaluation criteria...
- Marketing demo f...

Notes AI notes Mentions (3) Transcript

Generated by AI. Be sure to check for accuracy. [Copy all](#)

Meeting notes

- > **Evaluation Criteria:** Danielle proposed adding the following:
 - **Technical:** Ray will review technical components of the RFP.
 - **Cost:** Evaluations need to be done for cost-effectiveness and budget alignment. Babak will oversee this.
- > **Timeline Development:** Charlotte will coordinate the project milestones.
- > **Collaboration and Communication:** Aadi emphasized the importance of transparent communication with the client about the gap and our plan to address it. Kat suggested collaborating with the product team to expedite the development of the missing feature.

Are these notes useful? [Like](#) [Dislike](#)

Follow-up tasks

Copilot

- Check the facts**
A response could be inaccurate or incomplete. Share feedback to help Copilot improve.
- It's your Copilot**
Other people in the meeting can't see this conversation.

What are all the unresolved questions?

Copilot 9:45 AM

The unresolved questions in the meeting are:

1. What are their budget constraints? [1](#)
2. Have we started outlining our competitive positioning? [2](#)

These questions were asked in chat but were not answered during the meeting.

AI-generated content may be incorrect [Like](#) [Dislike](#)

[View prompts](#)

Ask me anything about this meeting [Send](#)

How can Copilot support you throughout your day?



Create a presentation

The screenshot displays the Microsoft PowerPoint application interface. The main window shows a presentation slide titled "Customer First Strategy : Presentation Plan". The slide content includes:

- Slide 1: Title and Introduction
 - Title: "Customer First" Strategy: Putting Our Customers First
 - Subtitle: Why and How to Adopt a Customer-Centric Approach
 - Introduction: Presentation of the meeting's objective and key points to be discussed
- Slide 2: Definition of the "Customer First" Strategy
 - What is the "Customer First" strategy?
 - Placing the customer at the center of all company decisions and actions
 - Importance of understanding and responding to customer needs

The Copilot sidebar on the right is active, displaying a welcome message: "Welcome Dunn,!" and a description: "I'm Copilot, your AI assistant for work. I can help you understand, edit, and catch up on this document. Here are some ideas to get you started." Below the message are three suggested actions: "Summarize this doc", "Generate an image of [description]", and "List the pros and cons of [the different project ideas mentioned in this document]". At the bottom of the sidebar is a "Message Copilot" input field with a microphone icon.

The status bar at the bottom of the application shows: "Page 1 of 2 408 words English (U.S.) Text Predictions: On Editor Suggestions: Showing".

The power of Copilot M365 in **one** application - Copilot Chat



Copilot Chat

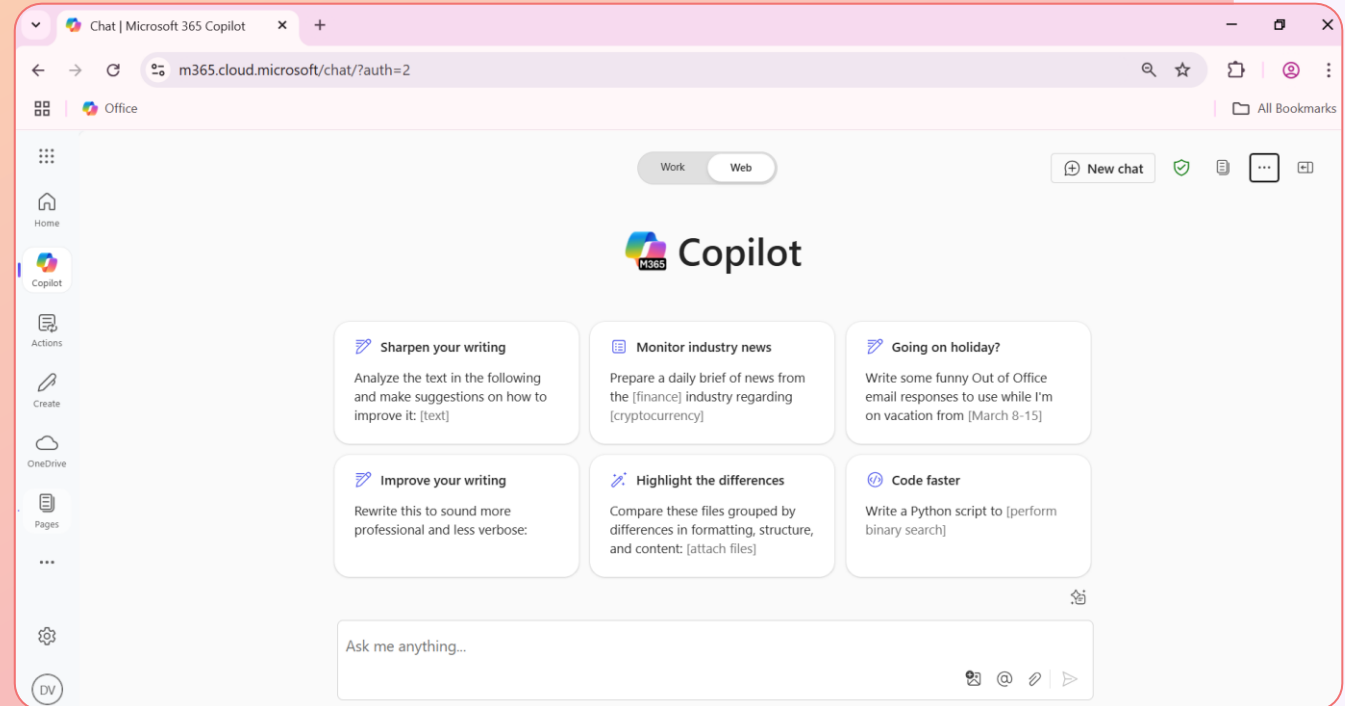
The Copilot that is **connected to all your applications**.
Anchored in web and professional data.

Analyze these 3 documents to create a summary /PPT /Word /PDF /Excel

Help me prepare for my 3 o'clock meeting.

How many hours have I spent in meeting this past month?

Compare my forecasted budget and my actual expenses and draft a report i can send to the team including visual graphs.



How can Copilot support you throughout your day?



Summarize a PowerPoint presentation

Customer First Strategy | Copilot | Microsoft 365 Copilot | Customer First Strategy | Mail - Dunn, Victoria - Outlook

m365.cloud.microsoft/chat/?auth=2&home=1&from=ShellLogo&username=vdunn%40kpmglh.onmicrosoft.com&login_hint=vdunn%40kpmglh...

Office 80% Reset All Bookmarks

Work Web New chat

Copilot

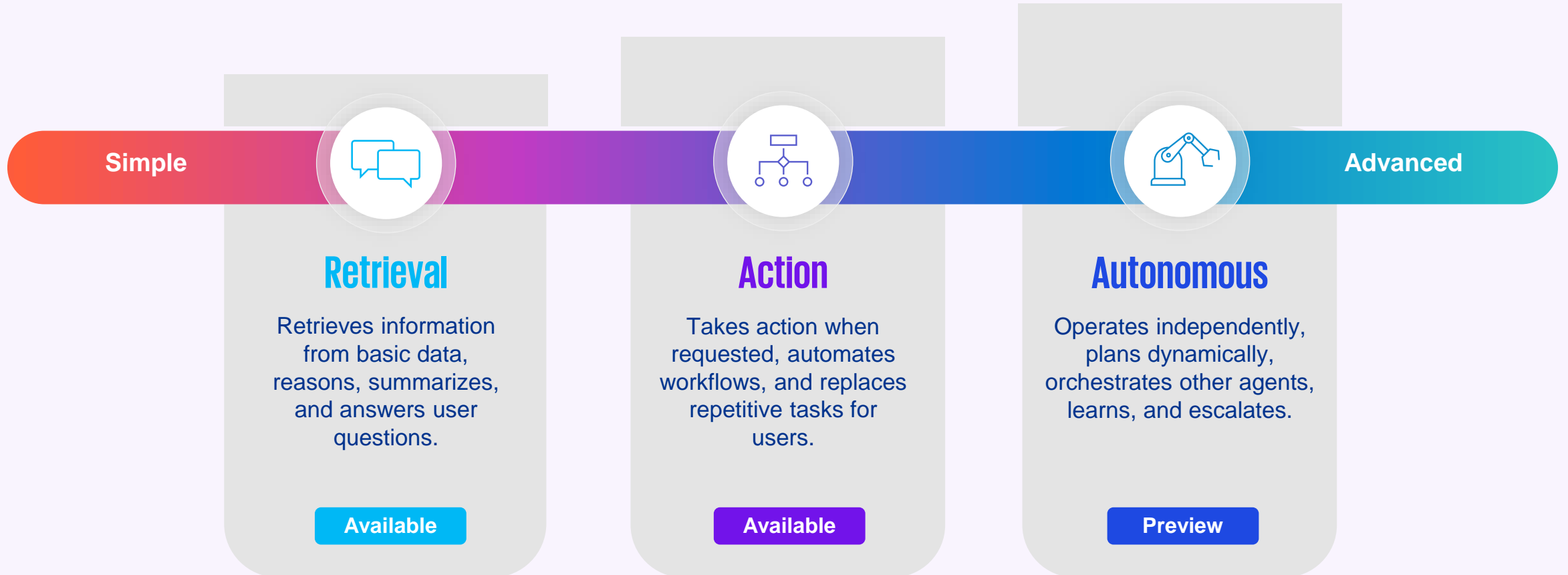
- Stay informed**
What's the latest from El Joughfi, Lina, organized by emails, chats, and files?
- Laugh at work**
Summarize my week in the style of a comedy roast
- Graph the data quickly**
Create a pie chart showing the market share of smartphones in the United States
- Bespoke Teams backgrounds**
Create a professional-looking background that highlights [the early signs of Spring]
- Boost your knowledge**
Help me learn about [topic]
- Sharpen your writing**
Analyze the text in the following and make suggestions on how to improve it: [text]

Message Copilot

+ Add content @ | >

Copilot Agents – the way to automating our tasks

Agents vary in complexity and capabilities based on specific requirements, merging generative AI and robotic process automation (RPA) to meet specific needs



Accelerating your tasks with the help of Agents.



AI policy tracker



Chat | Microsoft 365 Copilot

m365.cloud.microsoft/chat/?auth=2

Office

Work Web

New chat

Copilot

- Gauge the temperature**
Give me a concise summary of recent news about [product or company]
- Show me the result**
Execute and explain this code...
- Get instructions**
Give me step-by-step instructions for making an Instagram Reel
- Kickstart a draft**
Draft an email to [person] about...
- Make an informed decision**
Create a table that compares top-selling office printers
- Understand the main points**
List key points from this document: [upload file]

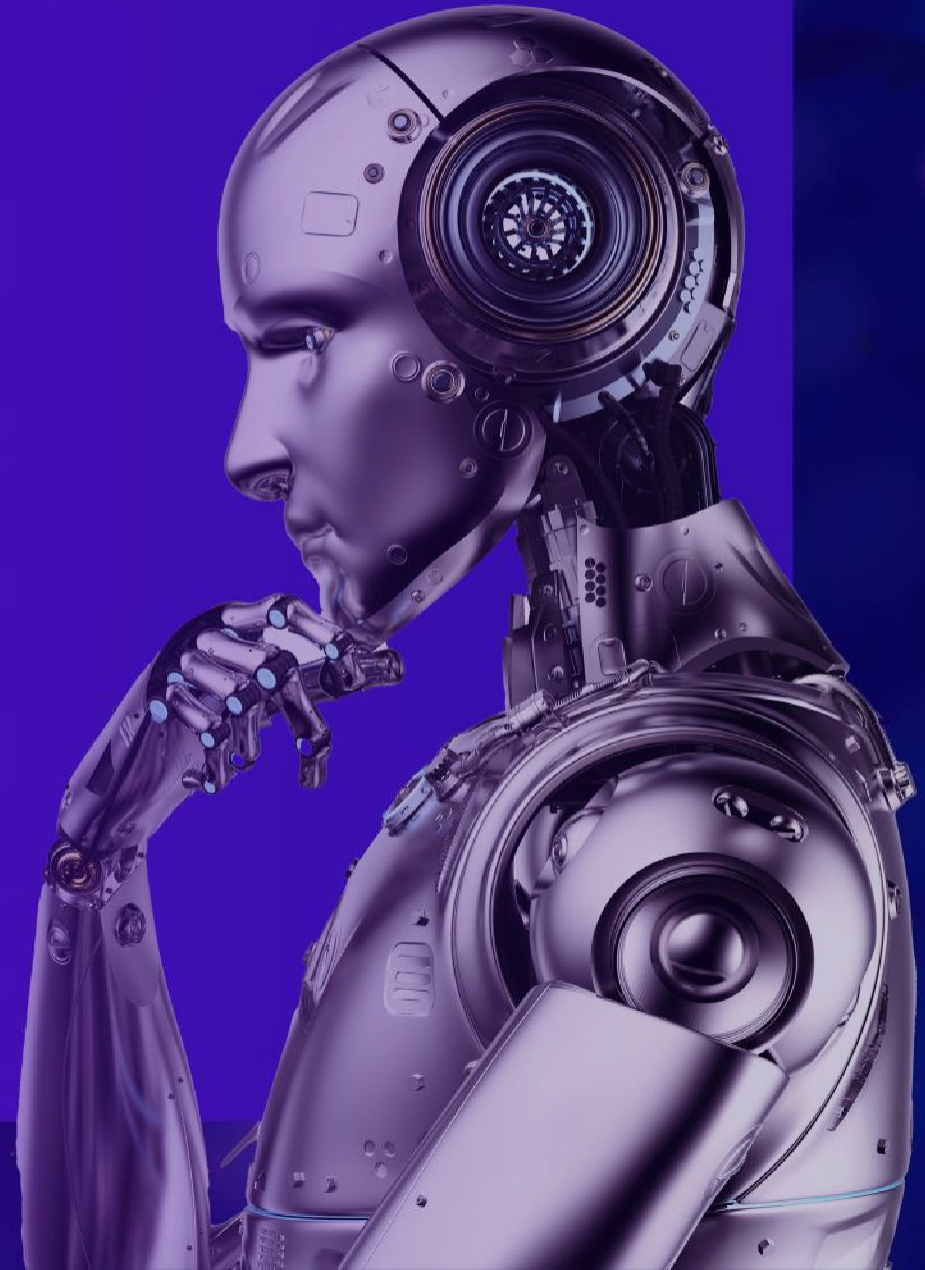
Ask me anything...

WHAT DO YOU THINK?

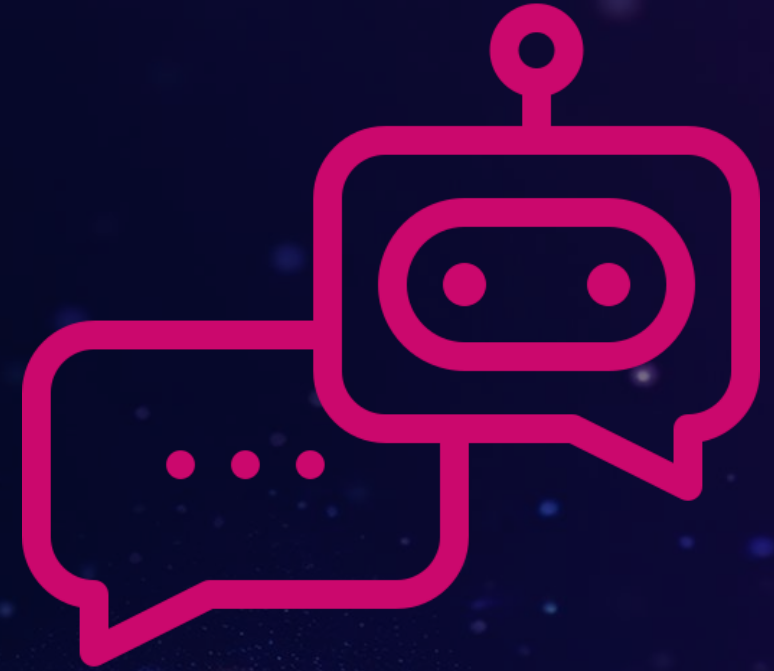
MENTI TIME

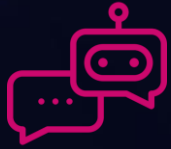
<https://www.menti.com/alhn3ruqisgs>

Code: 1350 6181



Text-Based Conversational Agents: **Chatbots**





Text-Based Conversational Agents: **Chatbots**



Capabilities & Benefits

24/7 Availability

Provide round-the-clock support ensuring quick customer support.



Multilingual Support

Offer better customer service by serving users in their preferred language



Improved Efficiency

Chatbots can handle multiple interactions simultaneously, reducing wait times and increasing overall productivity



Data Collection, Analytics and Management

Process and analyze large volumes of data, identifying patterns and providing insights

Cost Efficiency

Lower operational cost by automating

Chatbots for Citizens

Rise of personalized virtual assistants (chatbots) in the Public Sector

By leveraging AI-powered solutions, government agencies can provide faster response times, personalized assistance, and more consistent decision-making processes.

As the most common use case of AI in governments, governmental organizations at all levels have **implemented virtual assistants** to perform tedious tasks that tie up resources.



Use Case

Australian Taxation Office AI Assistant

A virtual assistant in their taxation office to help answer the multiple queries and ensure the citizens had the answers needed in order to properly file their taxes.

Benefits:

- Easy navigation on gov. portals and resources
- Availability
- Efficient and Economical
- Consistency

88%

Queries Resolved on the 1st contact.



Use Case

Other Public Sector Chatbot

- City of Kelowna, BC (various Chatbots)
- Municipality of Saint-Lin-Laurentides, Quebec (AMI Linotte)
- Government of Kansas City Chatbot (OpenDataKC)
- Government of San Francisco's Chatbot (PAIGE)
- Government of Dubai's Chatbot (Rammas)

AI Imaging Generative AI

Experience the future of visual creation where artificial intelligence **transforms your words into stunning imagery.**

This revolutionary technology bridges the gap between imagination and visualization.

AI Imaging Generative AI



Capabilities & Benefits



Unique Creation

Generates original artwork for each prompt



Simple Interface

Natural language descriptions to image output



Style Control

Maintains visual consistency across generations



Complex Ideas

Handles nuanced concepts and compositions



Learning Capability

Improves from reference examples



Rapid Creation

Generates images in seconds



Versatile Output

Multiple styles and formats



Collaborative

Iterative refinement with users

Leading Tools

 Tools

 Specialties

 Capabilities

 Applications



DALL-E

- Advanced text-to-image
- Photorealistic outputs

- High accuracy
- Contextual understanding

- Commercial use
- Product visualization



Stable Diffusion

- Customization options
- Open-source

- Fine-grained control
- Various styles

- Research
- Experimental art



Midjourney

- Artistic flair
- Stunning compositions

- Creative
- Imaginative outputs

- Digital art
- Illustrations



Ideogram

- Text generation
- Typography focus

- Text effects
- Font synthesis

- Logo design
- Brand identity

Comparing AI Image Generation Platforms

Input Prompt:

Generate an image of a sign in Montreal, beside the river, with the city in the background. The sign should ask individuals to please not pollute. Please make the sign in English and French.



Ideogram



Generation Time: 3.2s

Quality Score: 6.5/10



DALL-E



Generation Time: 3.8s

Quality Score: 3/10



Stable Diffusion



Generation Time: 4s

Quality Score: 3/10

Governmental Promotional Campaigns

Real World Application Example

Input Prompt:

Create an image that could be used to promote voting in the next elections of Canada.

Visual Creator

Sure! Here's a vibrant and inspiring image promoting voting in the next elections of Canada. It includes elements such as the Canadian flag, diverse people of different ages and backgrounds, and a bold slogan like "Your Vote Matters!" The image uses a patriotic color scheme with red and white, and dynamic graphics to make it eye-catching and motivational. I hope you find it helpful!



Considerations and Limitations

Copyright Considerations

- AI-generated artworks **are not considered copyrightable** however existing legal framework does not provide clear guidance on the ownership and protection of AI-generated art
- In the U.S., AI-generated images **cannot be** copyrighted

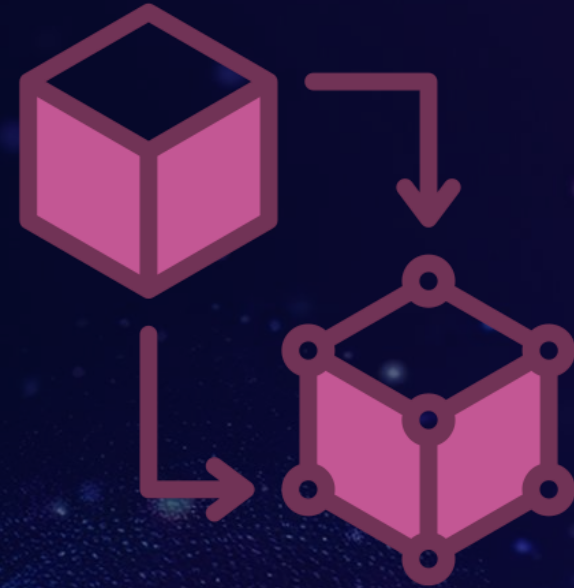
Commercialization Limitations

- AI-generated artworks for commercial purposes (depends on the platforms).
Midjourney allow commercial use only for paid subscribers
- Ensure that the generated images do not infringe on existing copyrights

Content Creation Limitations

- Established usage policies that prohibit the generation of objectionable content, including anything that is defamatory, obscene, or harmful
- limitations on generating images that include recognizable individuals, particularly public figures

Advanced Generative AI Imaging Solution Digital Twin



Text-to-Video and Audio Generative AI

Experience the future of multimedia creation where artificial intelligence **transforms your text into captivating audio and video content.**

This groundbreaking technology bridges the gap between written words and dynamic media, empowering anyone to become a multimedia storyteller.

Text-to-Video and Audio Generative AI



Capabilities & Benefits



Personalization

Tailor content to specific audiences by generating personalized videos that address individual needs or preferences.



Rapid Production

High-quality audio in seconds, saving hours of studio work.



Cost Efficiency

These tools significantly reduce costs



Ease of Updates

Users can modify scripts or visuals quickly, ensuring that the information remains current without needing a complete re-shoot.




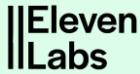



Rapid Creation

Allows for iterative refinements, ensuring the final output meets exact requirements.

Leading Video and Audio AI Platforms



| Tools | Specialties | Capabilities | Applications |
|--|--|--|--|
|  Synthesia | <ul style="list-style-type: none"> AI-generated videos with lifelike avatars | <ul style="list-style-type: none"> Multilingual support, customizable avatars | <ul style="list-style-type: none"> Corporate training, marketing videos, social media content |
|  Descript | <ul style="list-style-type: none"> Audio/video editing with transcription | <ul style="list-style-type: none"> Text-based editing, screen recording, voice generation | <ul style="list-style-type: none"> Podcasting, video editing, educational content |
|  Animaker | <ul style="list-style-type: none"> User-friendly animated video creation | <ul style="list-style-type: none"> Drag-and-drop interface, extensive template library | <ul style="list-style-type: none"> Educational videos, marketing campaigns, presentations |
|  ElevenLabs | <ul style="list-style-type: none"> Realistic voice generation | <ul style="list-style-type: none"> Voice cloning, multilingual voices | <ul style="list-style-type: none"> Podcasts, audiobooks, advertisements |
|  Murf AI | <ul style="list-style-type: none"> Customizable voiceovers | <ul style="list-style-type: none"> Bulk voiceover projects, audio editing | <ul style="list-style-type: none"> E-learning, presentations, content creation |

Creating a PSA video in 3 languages

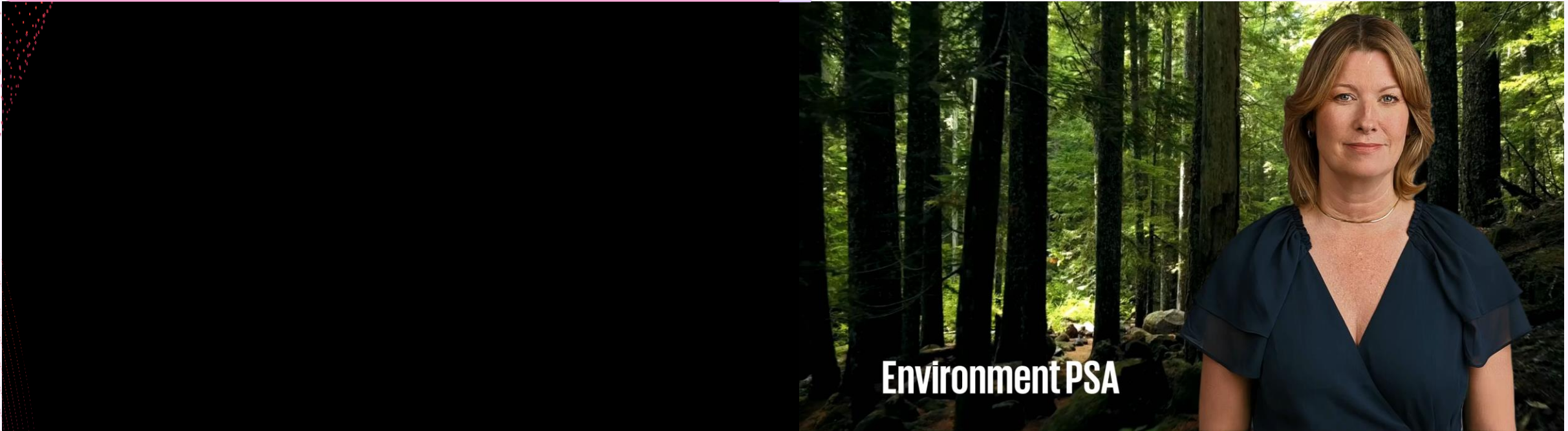
Real World Application Example (Video)



Creation Process



Final Product



Source: Built by KPMG Canada on Synthesia.ai

Uniformity in Public Service Announcements

Real World Application Example (Audio)



Public Sector Real-World Use

1. A city's transit authority integrates an AI voice generator into their announcement system.
2. The system is programmed with pre-written scripts for common announcements.
3. When needed, staff can input new text for immediate broadcast.
4. The AI voice reads the text in a clear, natural-sounding voice. Announcements are played over speakers in stations and vehicles.



Benefits (audio and video)



Uniformity In Messaging



Rapid Response



Multilingual



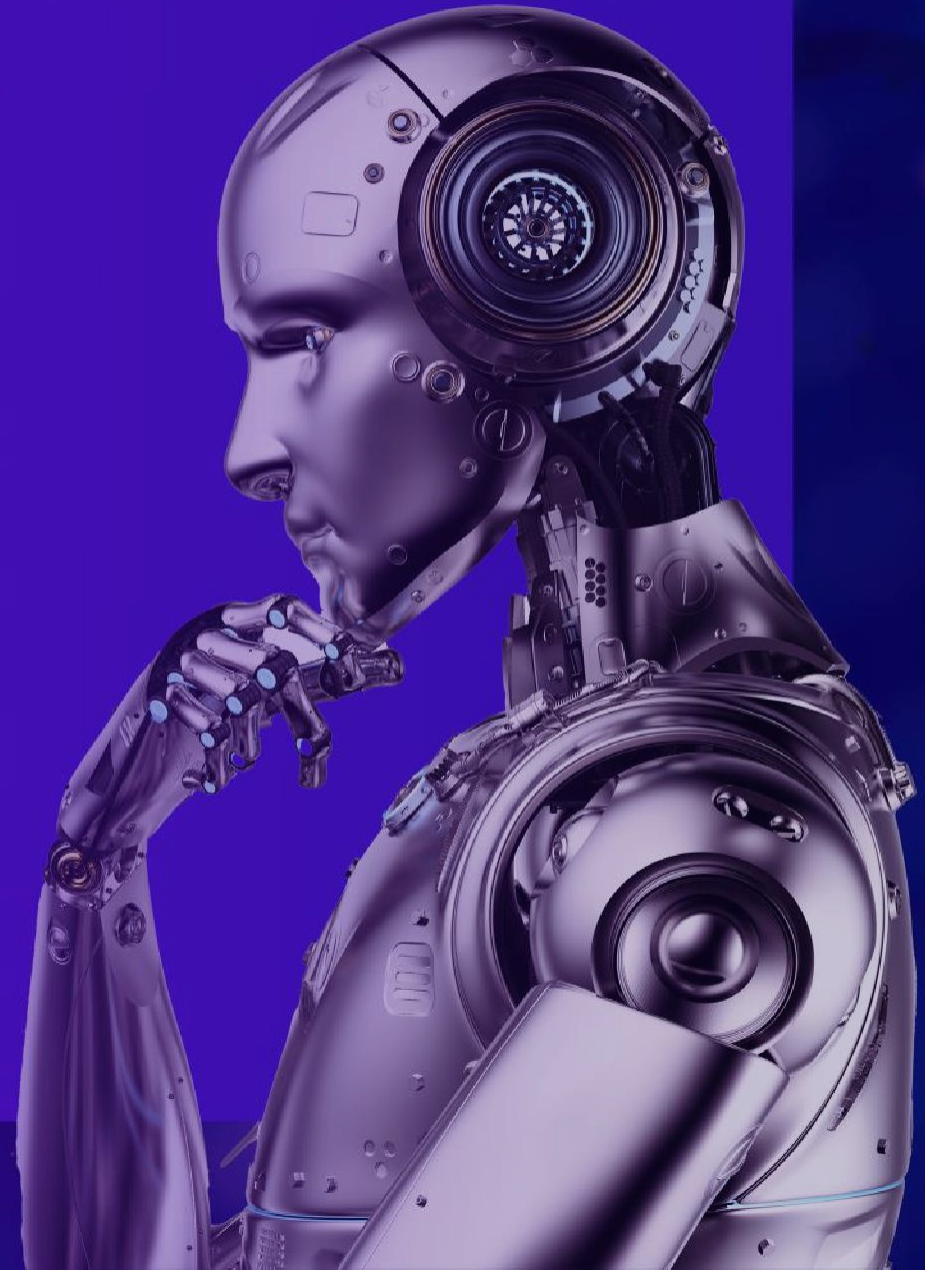
Cost Effective

WHAT DO YOU THINK?

MENTI TIME

<https://www.menti.com/alhn3ruqisgs>

Code: 1350 6181





**Thank you &
Continue the
conversation and
reach out for any
additional inquiries!**



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Victoria Dunn
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Intelligence, Copilot Coach
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Keep learning and access resources!
IPAC learning centre to access the
presentation, recording and additional
learning sources.

AI Skills Training Series for Canadian Public Servants | IPAC

Addendum

Training Materials Disclaimer



Training Materials Disclaimer

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