Improving Productivity for Local Government Using AI
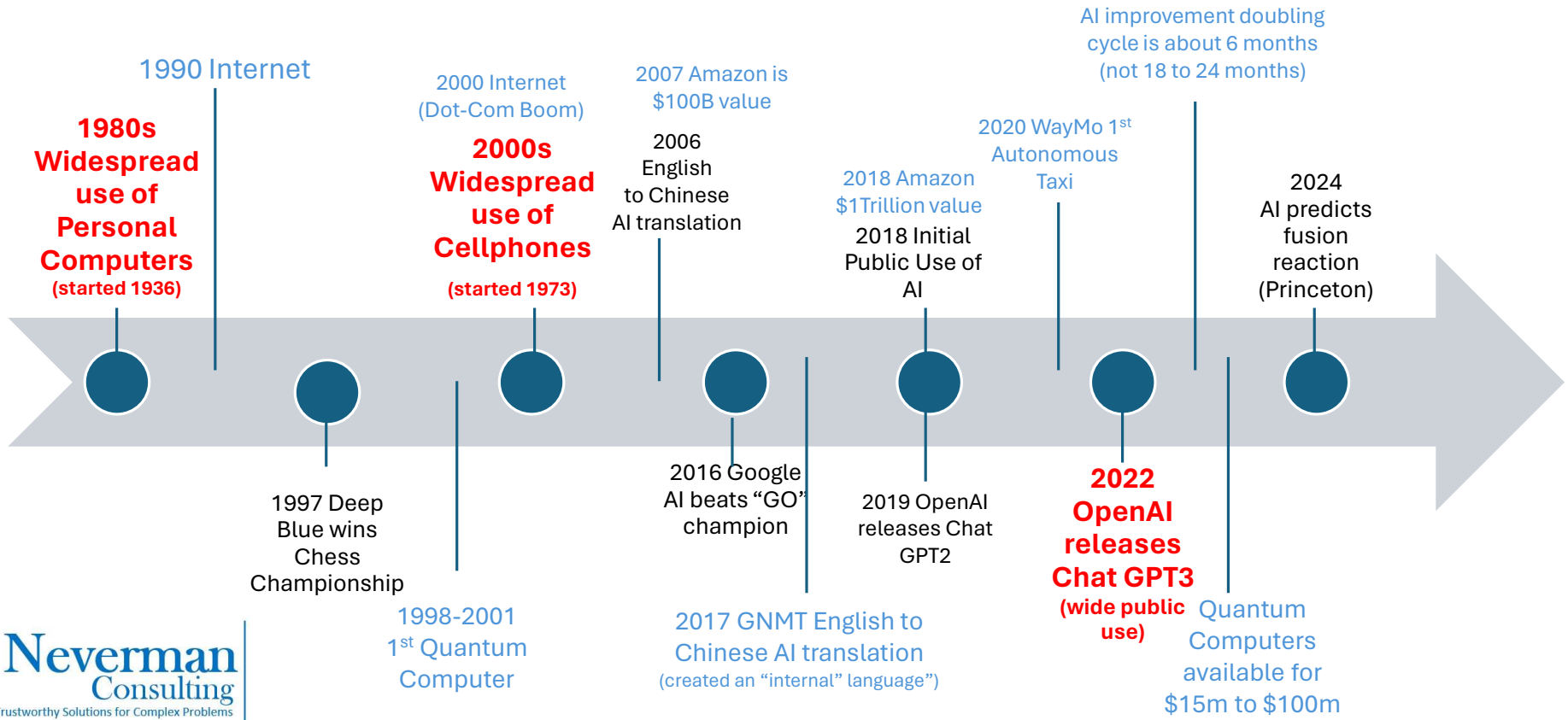
GIPAW Spring Conference 2024

AI Introduction

AI or Artificial Intelligence refers to technology that can do "human-like thinking". The technologies include: neural nets, Large Language Models (LLMs), and expert systems.

Common AI tools include: ChatGPT, Siri, Perplexity.AI, Google Gemini, Microsoft CoPilot, etc.

NOTE: Real / "True" / "General" artificial intelligence (ie human-equivalent AI) does not exist yet.

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AI 1980s thru 2024

1990 Internet

1980s Widespread use of Personal Computers (started 1936)

1997 Deep Blue wins Chess Championship

2000 Internet (Dot-Com Boom)

2000s Widespread use of Cellphones (started 1973)

1998-2001 1st Quantum Computer

2007 Amazon is $100B value

2006 English to Chinese AI translation

2016 Google AI beats "GO" champion

2017 GNMT English to Chinese AI translation (created an "internal" language")

2018 Amazon $1Trillion value

2018 Initial Public Use of AI

2019 OpenAI releases Chat GPT2

AI improvement doubling cycle is about 6 months (not 18 to 24 months)

2020 WayMo 1st Autonomous Taxi

2022 OpenAI releases Chat GPT3 (wide public use)

Quantum Computers available for $15m to $100m

2024 AI predicts fusion reaction (Princeton)

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How fast is AI changing?

Moore's Law

Computer chips, phones etc. have historically doubled in power roughly every 24 months since 1965 (Moore's Law). Since OpenAI ChatGPT came out in 2023, AI functionality is doubling more quickly. (old standard)

Kurzweil's Law

The new standard for AI models is Kurzweil's Law of Accelerating Returns. Performance is currently doubling roughly every 6 months, and it's accelerating.

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How can I use AI right now?

You can use AI, LLM/Expert Systems for:

- Legal departments & contract creation/management
- Policy and Paperwork creation
- Accounting and Modeling
- Tools such as: JailTracker & OfficerTracker
- Programming/Scripting assistance
- Documentation Creation

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AI Tools

You can leverage other AI tools in technical areas such as

- **Cyber Security** *(numerous tools will be discussed this afternoon)*

- **Helpdesk and Business Operations**

- **Network Management**

Use AI to stretch limited resources. And keep track of your existing tools. Tyler/NewWorld is starting to implement AI features and IBM Watson Government also has a suite.

Remember, **continuous adaptation is critical**, as tools could be available 3 to 6 months from now that are not in existence today.

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Which Tools & How?

There are numerous, probably hundreds of AI tools available already and the number is growing. But for our discussion we will focus on ones you can use right away and are free or likely already paid for.

- **Free Microsoft CoPilot** uses ChatGPT model and runs in a public instance

- **PAID Microsoft CoPilot** - Available inside of Office365 licensing and keeps content shared with CoPilot isolated. This is currently the best option for local government.

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Other good AI tools 1

These are good tools but keep in mind you should NEVER share confidential information, HIPAA or PPI with these tools

- **Perplexity.AI** – current favorite because it can search the web effectively realtime, and you can upload files for it to analzye (only upload PUBLIC non-confidential. Can be used for document creation also.

- **ChatGPT 4** – great tool for writing contract, policy, procedure or other draft documents

- **ChatGPT 4o -** is interesting and gives you an idea of how the AI Personal Assistants will interact with us

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Other good AI tools 2

These are good tools but keep in mind you should NEVER share confidential information, HIPAA or PPI with these tools

- **Gemini.AI** – This one will sometimes refuse a search and may periodically hallucinate (make up things). It is changing quickly and the quality can vary. For esoteric information it is an ok search & data creation tool.

- **Meta.AI** – Fairly good tool for document creation

- **Gab.ai** – Fairly good for creation of advertising and human language documents.

Other good AI tools 3

There are numerous other tools such as: Canva (for Design & Content Creation), Zapier (for Workflow Automation & App Integration), You (AI Search/research), DALL-E 2 (Image Creator), Copy.ai (for Content "copywriting" Creation), GFP-GAN (Photo Restoration), Lumen5 (Video Creator), Canva's AI Art Generator, Lalal.ai (Splits out a single voice from audio stream), HayoAI (AI game generator, Dungeon "storytelling"), Grok (x.ai Twitter/Elon Musk AI)

** NEVER use a FREE AI TOOL for anything confidential **

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Using AI Right Now - Microsoft Teams

You already have great AI options for real time transcription in **Microsoft TEAMS** meetings.

You can then use the transcribed text to create meeting minutes, TODO lists, and/or meeting summaries. You can ask co-pilot to summarize if you join late (assuming transcription and co-pilot are turned on)

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Using AI Right Now – LEGAL

Use one of the PAID or FREE tools to search and organize information. You can have the AI create tables, make estimates, create project documents, contracts, policies or agreements.

An LLM can write contracts, answer legal questions. This can reduce costs by reducing the time you need to spend with a lawyer or legal specialist. Double-check any laws it references.

- "Write an agreement for a township in Wisconsin to acquire land for a radio tower that includes 1.5% of revenue from operations of any profit from the tower."

- "Write a three-way intergovernmental emergency service cyber response agreement for a County, City and Village in Wisconsin. Include at-cost labor exchange."

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Using AI Right Now – Marketing

Use LLMs to write advertising copy, social media posts, public notices, marketing plans, and other material. Details matter – for example, if you are referring to a County, include the State. Adding more context generally gives better answers.

- "For XYZ County in Wisconsin, write 10 example funny social media posts for lawn waste pickup for spring for March 1, June 1, August 1, and November 15."

- "Write a funny social media post to remind people to get their septic tanks pumped. It should remind them to turn in the proof of pumping to the County."

- "Write a quick news release regarding Highway X being unavailable due to flooding until further notice, they should use Bighouse Rd or Smallhouse Lane as alternatives and call 999-999-9999 if they have any questions or go to EXAMPLE.GOV/HighwayXdetour for more info."

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Using AI Right Now – Policy/Procedure

Use LLMs to write up organization policies/procedures, write up instructions for common activities, create guidelines, forms, handbooks etc.

- "Write a policy for County XYZ for the state of Wisconsin for employee use of credit cards."

- "Create an AI policy for County XYZ following Wisconsin state law. The policy should only permit the use of Copilot by default, all others should require written permission, and it should talk about human verification and oversight."

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Using AI Right Now – Decision Making

The LLM tools can provide summaries of large documents or bodies of information.

- "Provide a complete list of responsibilities and/or expectations of local government (town/village/city/County) identified in (link to a PDF file)"

- "Summarize tax changes for Wisconsin from 2023 to 2024 for a sole proprietor."

- "Are 3 bids required for a village or city for a highway project over $50k assuming the work will be performed intergov by the same County, per WI State law?"

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Starting Right Now – I/T functions

The LLM tools can assist with writing code and helping with I/T functions.

- "Write a PowerShell script to increase the minimum password length for all domain users to 16 characters and explain it."

- "What AI tools are currently available for purchase, for local government (in Wisconsin), to perform functions such as: legal assistance, contract tracking/management, I/T support, accounting, law enforcement, tax collection, human services, jail and all other local govt services?"

- "write an AI training plan for an I/T staff member including links to training materials"

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Digital / Virtual / AI Assistants

AI assistants are on the way.

The are already using natural language processing to tasks such as answering questions, providing recommendations, scheduling appointments and reminders, automating workflows, and more. To get an idea watch the video of ChatGPT 4o.

The availability timeline for a true AI personal assistant is roughly 6 to 12 months for the basics. With advanced features in the 3-5yr window.

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AI and Robotics

Robots have recently been linked with AI. The AI and therefore the robot, can learn new tasks by simply observing human demonstrating a skill, rather than being explicitly programmed. This is already occurring, so odds are they will become far more available in the next 12 to 36 months.

- Kepler Forerunner K1 https://gotokepler.com theoretically available for $30k by end of 2025 https://youtu.be/bH1XzArE9rM
- Xiaomi's CyberOne https://twitter.com/i/status/1557720705747210242 $100k
- Optimus Tesla Robot 2025/2026
- Unitree H1 humanoid robot is estimated at $90k, likely before 2034. https://youtu.be/GtPs_ygfaEA
- Boston Dynamics Spot $74,500 available now (quadped small), new-Atlas from Boston Dynamics is pending also https://youtu.be/29ECwExc-_M
- Figure A1 robot $50k to $80k Figure (has LLM/AI back end) not publicly available, yet.

AI and Change Management

The AI technology landscape will keep changing. There will new be new options every 6 to 18 months.

At minimum AI tools' capabilities will double at least annually.

This will create both risks and opportunities.

Remember, continuous adaptation is critical. Tools that don't exist today could be available a few months.

Questions and Answers

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