AI 101
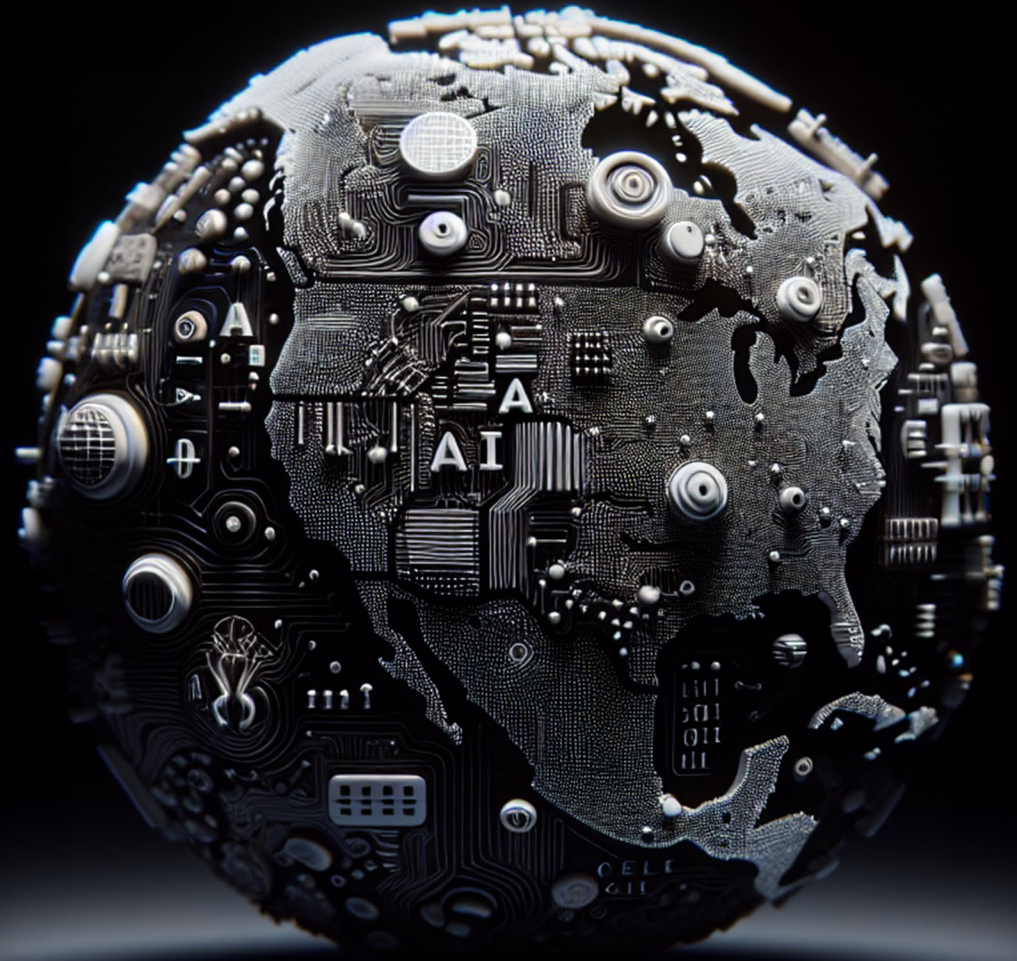
Thursday, December 4th

3:30 – 4:00 PM EST

CCAO | AI Workshop Agenda

Agenda and Topics

TIME	MODULE	Presenter	ACTIVITY DESCRIPTION
3:30 – 3:40 *10 min*	AI & GENAI 101	AD Desai	Provide level-setting and overview of AI, including the difference between AI and GenAI, foundational elements of the technology and an overview of AI Risk and Governance.
3:40 – 4:00 *20 min*	PeoplePrism Demo	Mike Daggitt	Overview of advanced analytics & AI platform & interactive demo of solution
4:00 – 4:30 *30 mins*	Hands On AI Training	AIOwl	Interactive session on the application of AI Tools in day-to-day

Introduction

Meet the Presenters

Adarsh (AD) Desai
Deloitte AI & Data Leader for Ohio

Mike Daggitt
People Prism Leader

What is Artificial Intelligence?

A SIMPLE DEFINITION

Artificial intelligence (AI) is the capability of a computer program, using math and logic, to **simulate human cognitive functions** like:

✓ Mimicking human cognitive functions

✓ Gathering information and solving problems

✓ Using math and logic to simulate reasoning

✓ Learning from new information and making decisions

✓ Generating new content

AI is all about getting **computers to do tasks** *that would normally require human intelligence.*
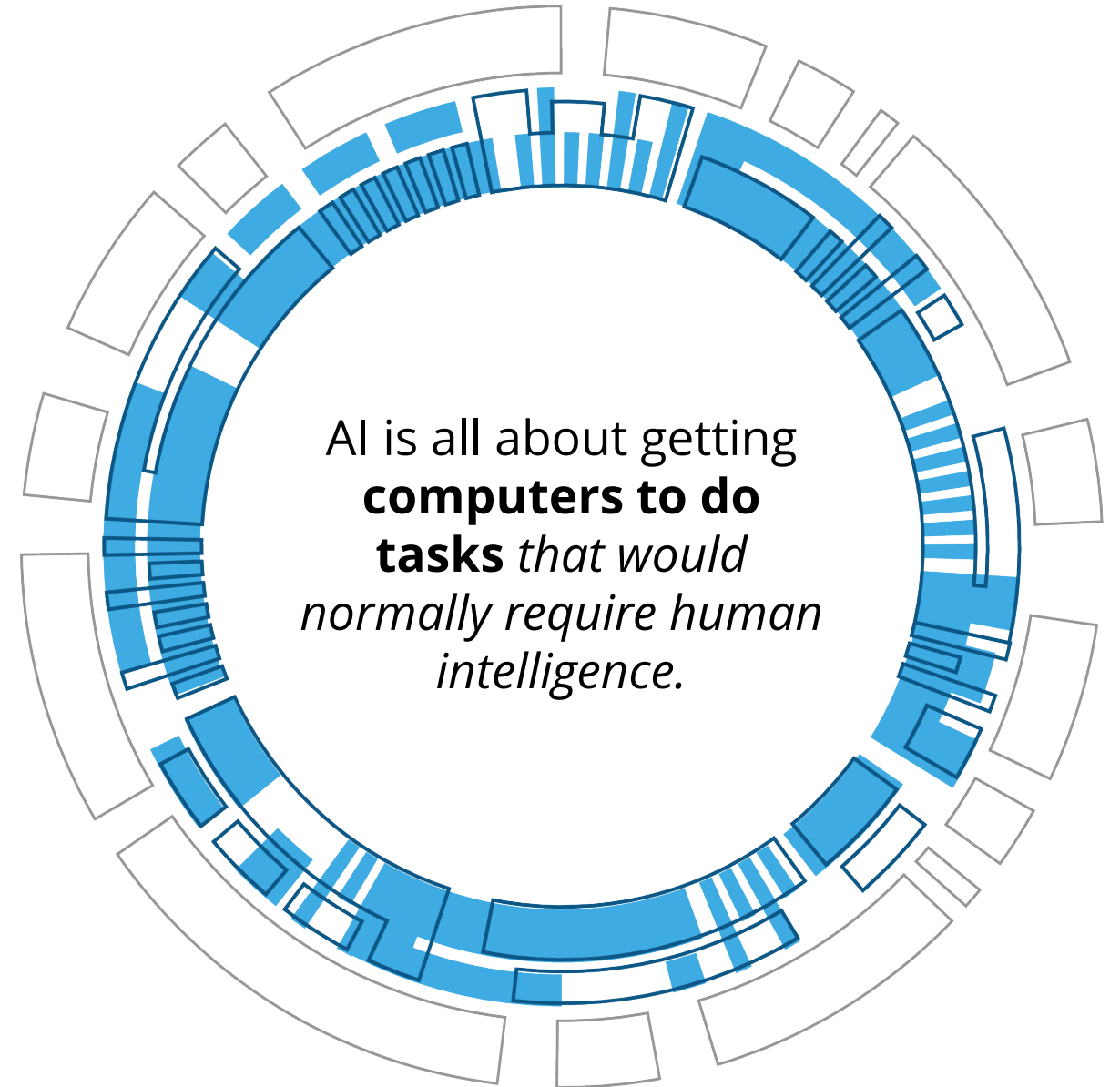
Spectrum of AI Capabilities

Email Autocomplete Hope ...all is well.

Automate
Includes executing processes that require little human judgment or intervention.

Movie recommendations

Predict
Includes comprehensively analyzing large amounts of detailed data to identify high-impact patterns and trends to generate a series of predicted or possible outcomes.

Airport Security using Eye Scanner

Detect
Includes identifying objects and patterns through the analysis of documents, pictures, and video streams.

Auto-generated News or Captions

Interpret
Includes reading documents, converting text and speech into data, and deriving language analysis from that data.

Smart Assistants

Interact
Includes engaging with humans in real-time, two-way communication, acting as a virtual assistant.

'Try On At Home' AR

Simulate
Includes creating a virtual representation that serves as a real-time digital counterpart of a physical object or process, a technique called "digital twin."

Generated Art
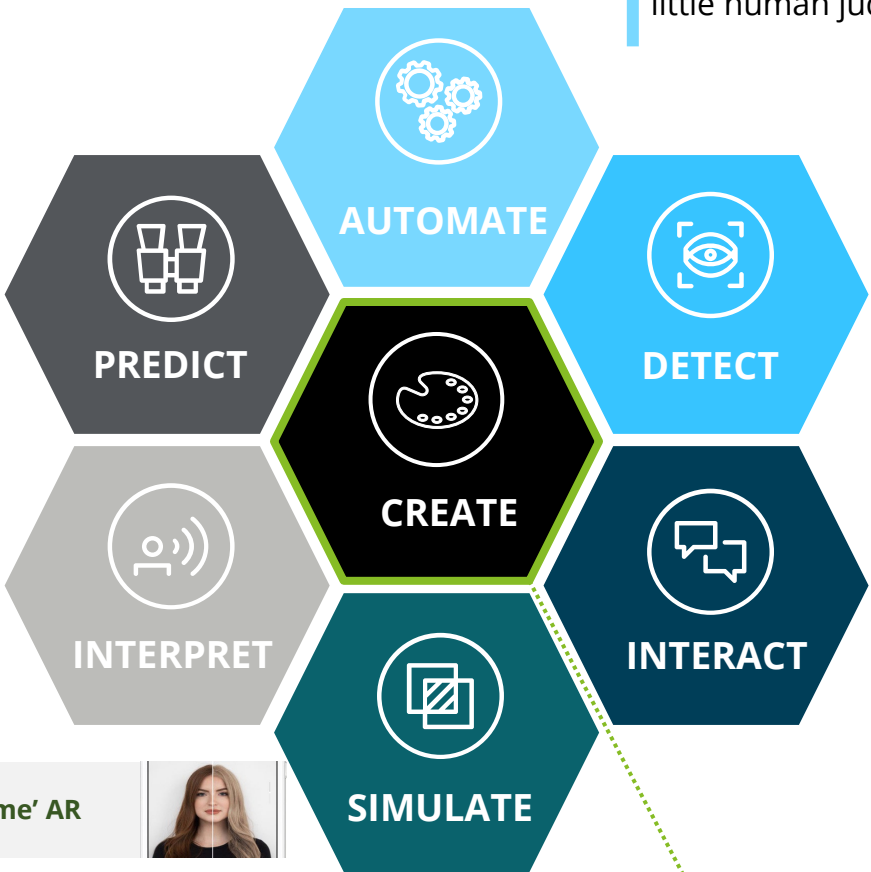
Create
Includes generative capabilities to create new content in text, images, audio, videos, and simulations.

AUTOMATE

PREDICT

DETECT

CREATE

INTERPRET

INTERACT

SIMULATE

What is a Large Language Model (LLM)?

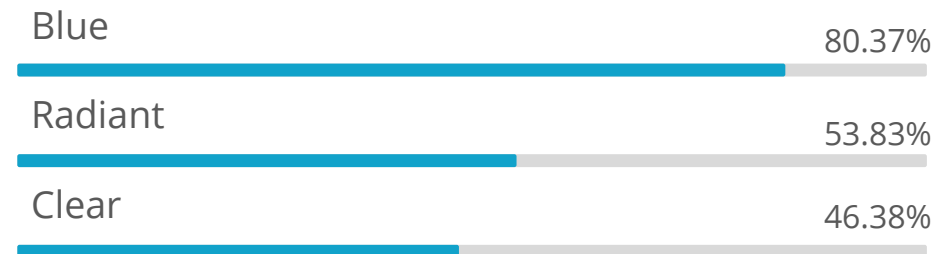A *Language Model* is a probability distribution over sequences of words.
Given a **sequence of words**, a language model **predicts words** that are **likely to follow**:

The sky is

Falling	72.48%	Overhead	3.78%
Blue	22.05%	Everywhere	0.47%
The	16.93%		
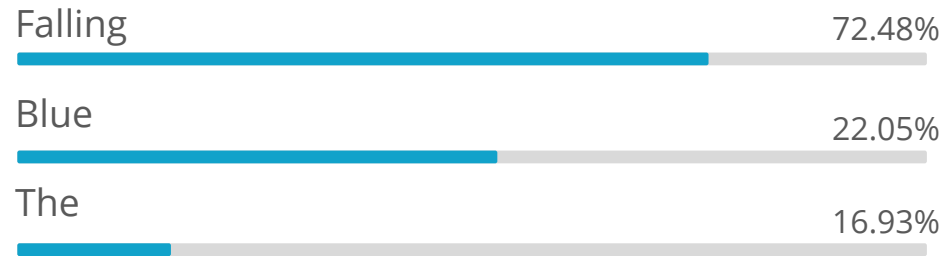
The sun is shining, the sky is

Blue	80.37%	Cloudless	38.83%
Radiant	53.83%	Beautiful	23.34%
Clear	46.38%		

Generative AI (GenAI) Capabilities

Text

Prompt: Explain the business impact of Generative AI in 50 words
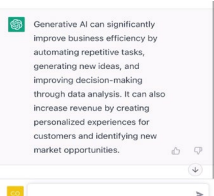
Video

Prompt: Create a video of a teddy bear painting a portrait

Image

Prompt: A bowl of soup that is a portal to another dimension as digital art

Code

Prompt: In python, code a program that predicts the likelihood of customer conversion
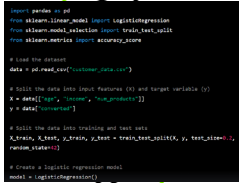
Audio

Generative AI-powered customer service agents

- Phone / Voice
- Multi-Lingual
- Multiple Tasks
- Empathy / Humor
- Ensures Resolution
- Systems Integration

3D

Prompt: A beautiful dress made out of garbage bags, on a mannequin. Studio lighting, high quality, high resolution.

Potential Uses of GenAI

Summarization
Generate a concise and coherent summary of a long text or a collection of texts
E.g., Reports, Policy Documentation Summaries

Content Generation
Generate content based on a set of input examples, documents, data and/or a specific theme or topic
E.g., Training Content generation, Synthetic Data Generation

Conversational Q&A
Generate a natural language answer to a natural language question based on a given text or a knowledge base
E.g., Policy Document Q&A

Reasoning
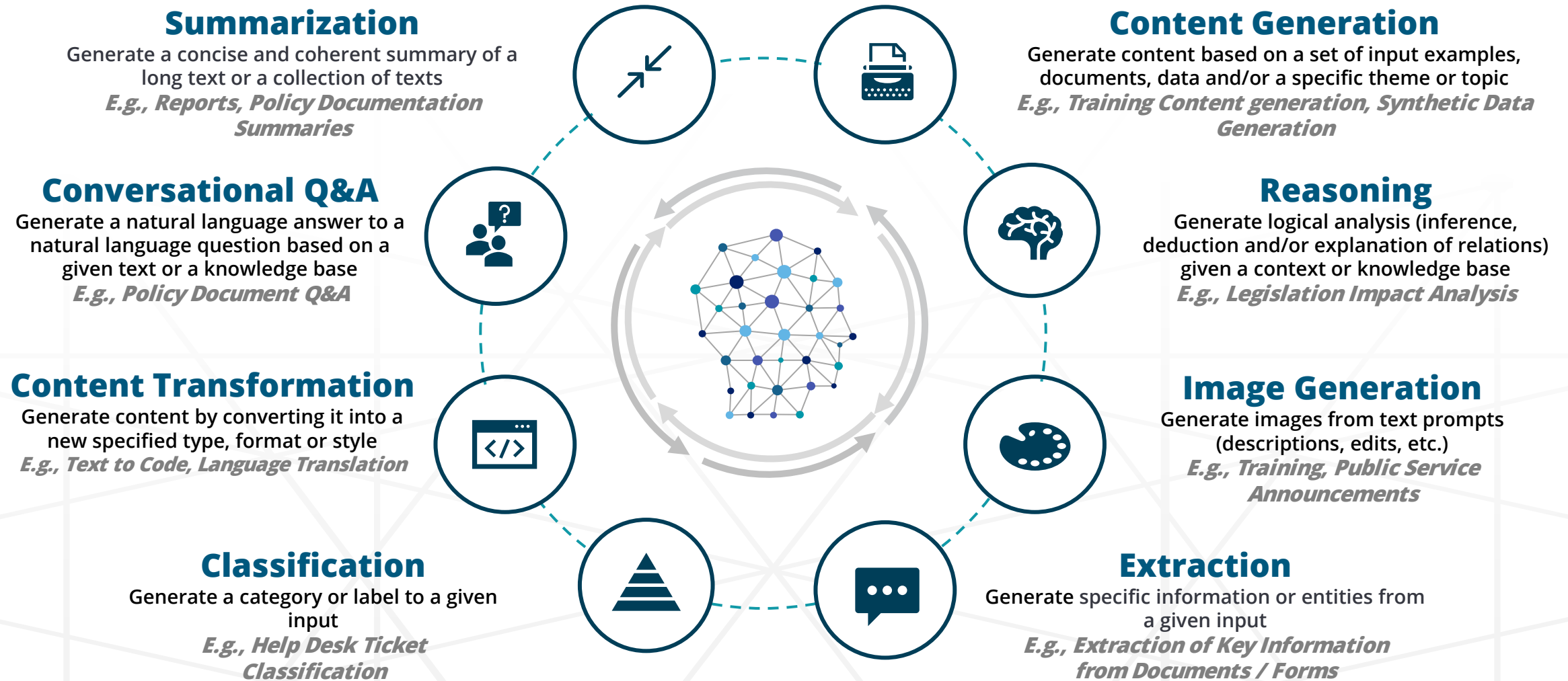Generate logical analysis (inference, deduction and/or explanation of relations) given a context or knowledge base
E.g., Legislation Impact Analysis

Content Transformation
Generate content by converting it into a new specified type, format or style
E.g., Text to Code, Language Translation

Image Generation
Generate images from text prompts (descriptions, edits, etc.)
E.g., Training, Public Service Announcements

Classification
Generate a category or label to a given input
E.g., Help Desk Ticket Classification

Extraction
Generate specific information or entities from a given input
E.g., Extraction of Key Information from Documents / Forms

The Evolution of AI Capabilities

The Powers of Humans + Machine
Agentic AI will revolutionize how humans and machines **work together** to solve problems faster and more accurately, through innovative solutions that can propel the workforce to the next level of the technological evolution.

Agentic AI
Agents and Agentic Workflows integrate RPA, Intelligent Automation and LLM/LMM chatbots to execute a variety of tasks alongside humans.

GenAI
GenAI can provide reasoning to answer questions on unstructured data and surface insights across domains. Based on advancements in transformers.

Intelligent Automation
Automation of more complex tasks using RPA with AI technologies (e.g., intent-based chatbots, phishing classification).

Robotic Process Automation
Automation of basic tasks through simple scripts; structured, rule-based processes to handle repetitive tasks (e.g., data entry, basic customer queries).

Capability

Time

MATURING

EMERGING

PeoplePrism™

Please contact Mike Daggitt (mdaggitt@deloitte.com) if you'd like to have a follow-up.

About PeoplePrism™

PeoplePrism use predictive analytics, geospatial capabilities, and the largest known population insights dataset to provide unique and compelling insights into people, places, and environmental impact.

12.5M
Ohio Adults

4.9M
Ohio Households

Customizable Personas & Outreach Playbooks

1,700+
Lifestyle Variables

Data is refreshed every month

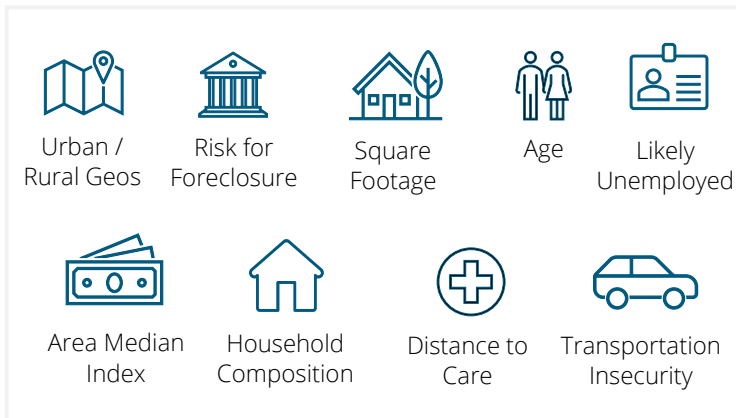Granular reporting options include households, neighborhoods, and counties
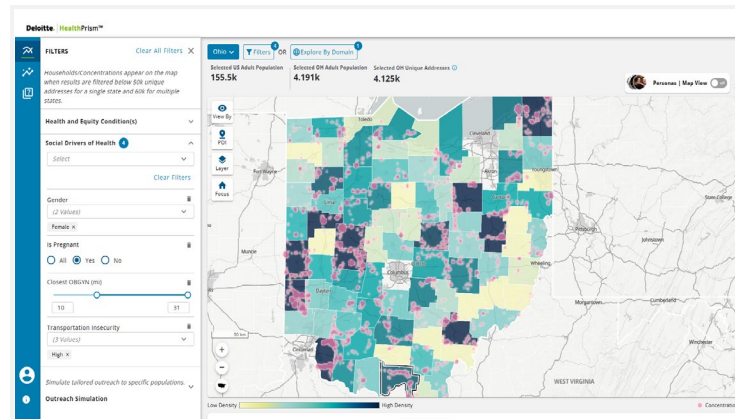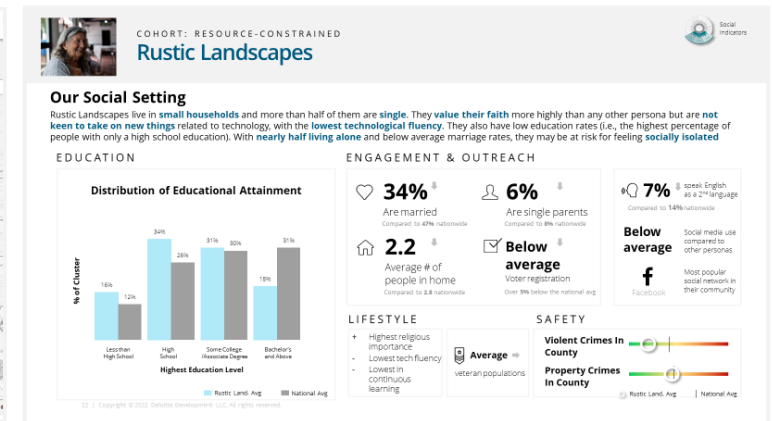
10+
Years of history

REPRESENTATIVE CAPABILITIES

Contextual Data Layers

Urban / Rural Geos

Risk for Foreclosure

Square Footage

Age

Likely Unemployed

Area Median Index

Household Composition

Distance to Care

Transportation Insecurity

Analytics and Dashboarding
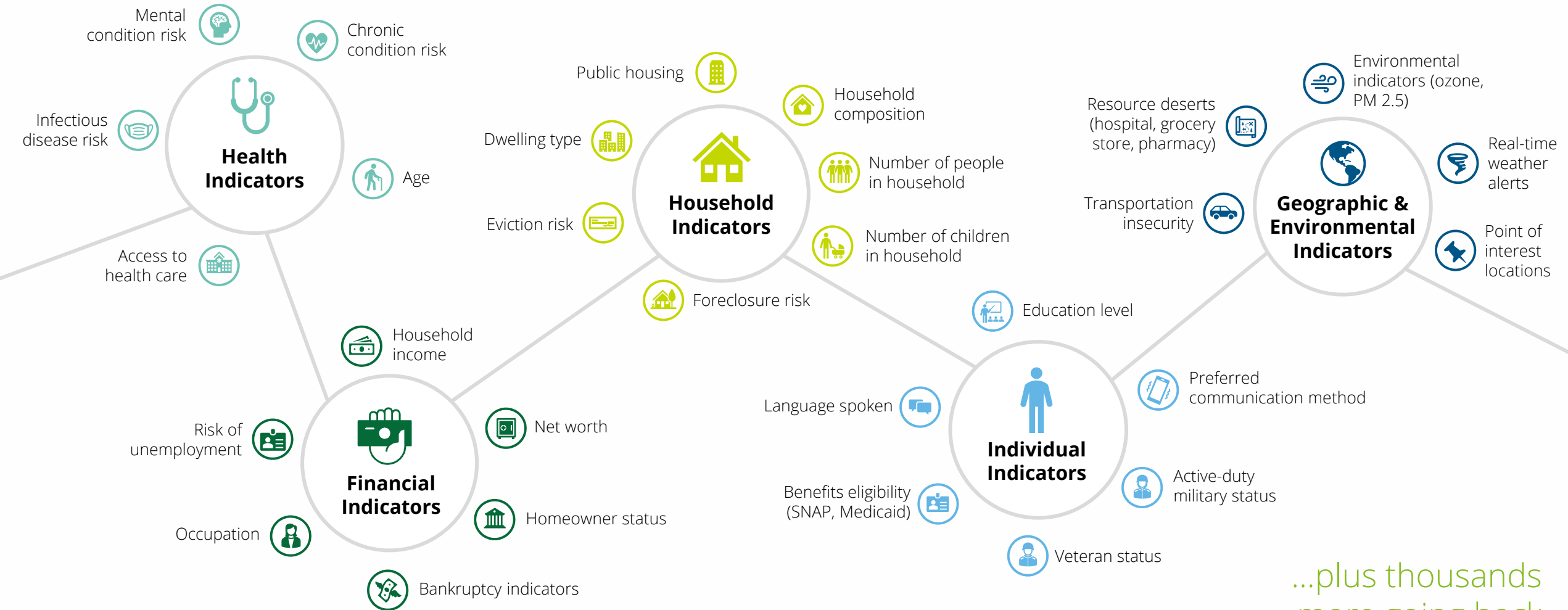

Outreach & Engagement

Use powerful insights in PeoplePrism to interconnect and draw meaningful conclusions across multiple use cases

STATE & COUNTY GOVERNMENT DOMAINS

SAMPLE USE CASES

Public Health	Behavioral Health	Human Services	Medicaid	Family Assistance
Healthcare • Analyze supply and demand to improve *health care access and utilization* • Inform *specialty-specific resource allocation* (e.g., obstetrics, oncology, cardiology, neurology) **Maternal & Infant Health** • Reduce *NAS births* • Improve *maternal care access and utilization* **Rural Health** • Identify citizens at elevated risk for adverse health outcomes living in rural areas with a distressed healthcare system	**Substance Use Disorder** • Analyze supply and demand to improve *SUD treatment access and utilization* • Implement more *targeted preventative measures* for specific substance use disorders **Mental Health** • Find populations at *high risk for depression* • Improve *mental health services access and utilization*	**Eligibility & Enrollment** • Discover those *eligible-but-not-enrolled in benefits* (e.g., SNAP, TANF, WIC, LIHEAP) **Affordable Housing** • Identify those who are at risk for losing their home due to *foreclosure or eviction* • Identify those living in overcrowded housing with the financial means to move to a larger dwelling, freeing up capacity for those seeking their first starter home.	**Eligibility & Enrollment** • Conduct *targeted outreach* to mitigate disenrollment due to more timely redeterminations and work requirements • Improve *Medicaid & Medicare services utilization* • Discover *pathways to self-sufficiency* **Veteran Transition** • Identify Veterans utilizing Medicaid and willing to transition to VA healthcare to *save on Medicaid spend and move Veterans to a more tailored set of services*	**Child Care** • Expand *access in childcare and daycare availability deserts* **Child Welfare** • Increase *foster home recruitment* **Food Insecurity** • Discover those *eligible but not enrolled for free and reduced school lunches* • Analyze supply and demand to improve *food source (e.g., grocery stores, food pantries) access and utilization*

Health Outcomes   Eligibility & Enrollment   Program Evaluation

PeoplePrism Data Categories

Health Indicators
- Mental condition risk
- Chronic condition risk
- Infectious disease risk
- Age
- Access to health care

Household Indicators
- Public housing
- Household composition
- Dwelling type
- Number of people in household
- Eviction risk
- Number of children in household
- Foreclosure risk

Financial Indicators
- Household income
- Net worth
- Risk of unemployment
- Homeowner status
- Occupation
- Bankruptcy indicators

Individual Indicators
- Education level
- Language spoken
- Preferred communication method
- Benefits eligibility (SNAP, Medicaid)
- Active-duty military status
- Veteran status

Geographic & Environmental Indicators
- Environmental indicators (ozone, PM 2.5)
- Resource deserts (hospital, grocery store, pharmacy)
- Real-time weather alerts
- Transportation insecurity
- Point of interest locations

...plus thousands more going back 10 years in time

Questions?