Arman Latif
Chief Information Officer
Virginia Department of Health

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AI and Public Health

Discussion Topics

Key principles of AI in public health

Identify common barriers to VDH and state agencies

Updates and innovations in the workspace

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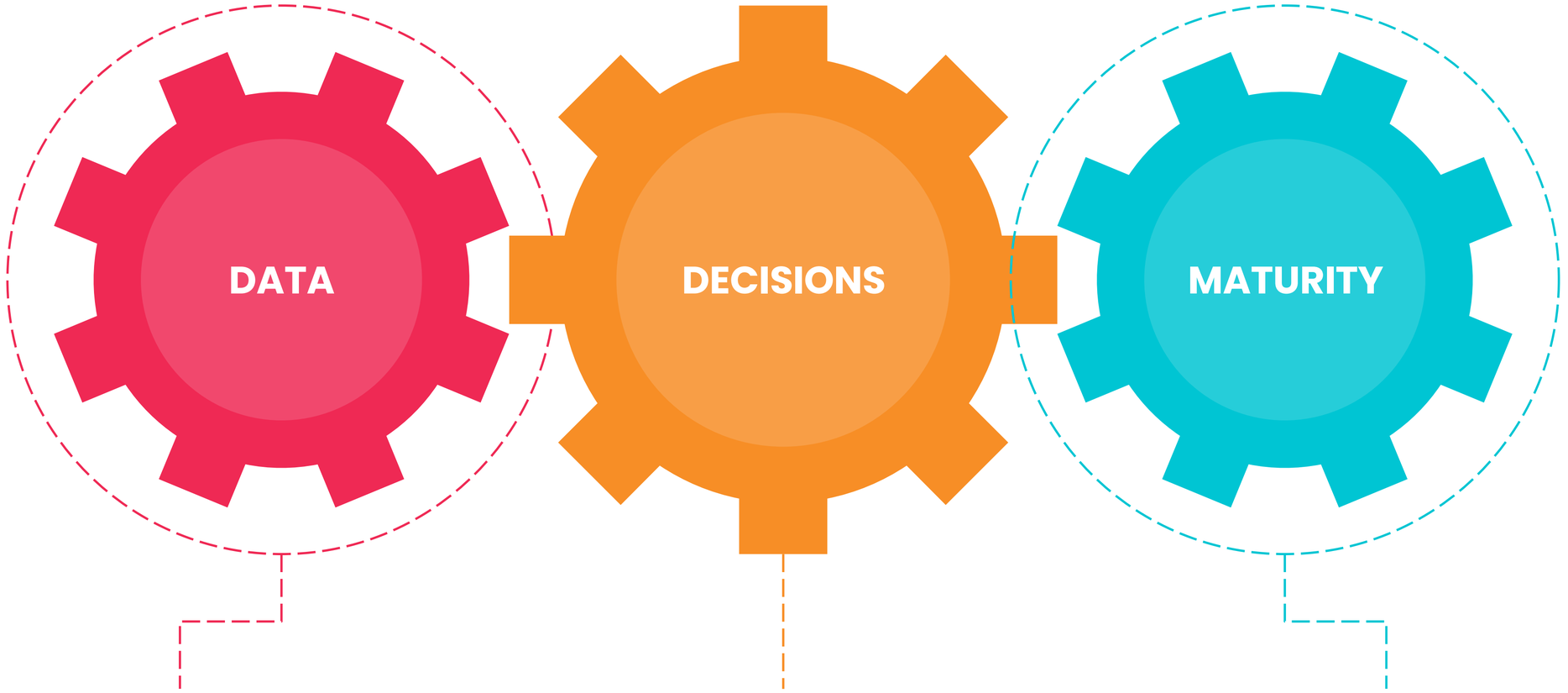
AI and the Future of Public Health

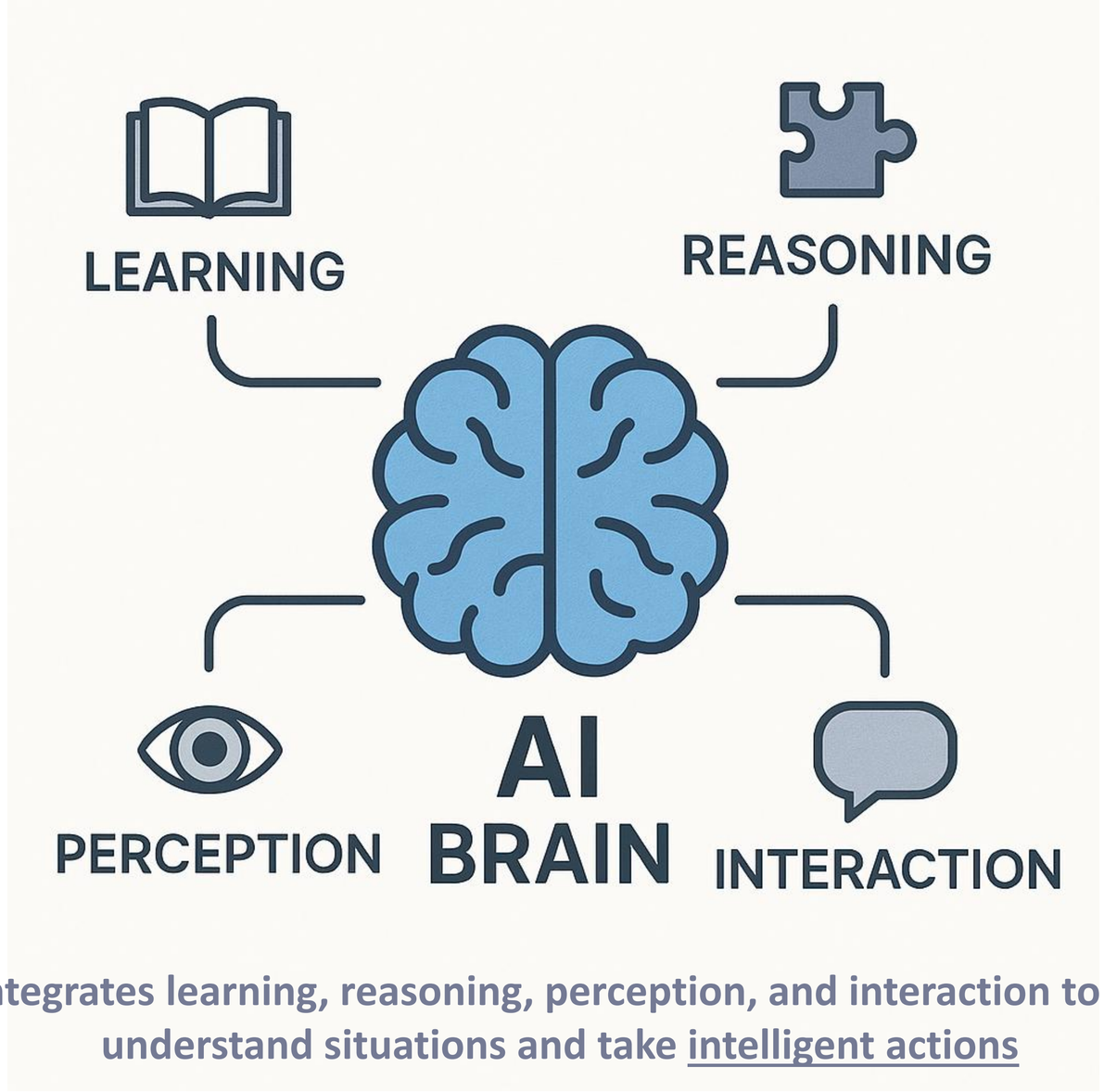
How AI can strengthen prevention, response, and operational efficiency



Public health agencies manage massive, fragmented datasets

AI enables faster detection, better decisions, and targeted interventions

Responsible adoption requires governance, data maturity, and leadership



Agentic AI – integrates learning, reasoning, perception, and interaction to independently understand situations and take intelligent actions

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Core AI Capabilities in Public Health

PREDICTIVE

Machine Learning(ML)

Use historical data to predict outcomes

- Forecast disease outbreak
- Identify high-risk populations
- Public health inequity

GENERATIVE

Create content, images

- Draft policy memos
- Create communication
- Summarize reports

NLP

Natural Language Processing

Analyze images and visual data

- Extract insights from clinical notes/surveys
- Sentiment analysis

AUTOMATION

Robotic Process Automation (RPA)

Automate repetitive manual processes

- Data entry/validation
- Case management workflows

AI transforms large public health datasets into insights, automation, and decision support

Responsible AI: Risks & Considerations

ETHICAL DILEMMAS

Ensuring AI decisions support equitable public health outcomes

PRIVACY CONCERNS

Protecting sensitive health and citizen data

BIAS, FAIRNESS

Preventing algorithms from reinforcing health inequities

JOB DISPLACEMENT

Preparing the workforce for AI-augmented roles

Responsible AI adoption requires addressing ethical risks, protecting privacy, and workforce impacts

Barriers to AI Adoption

EO 30

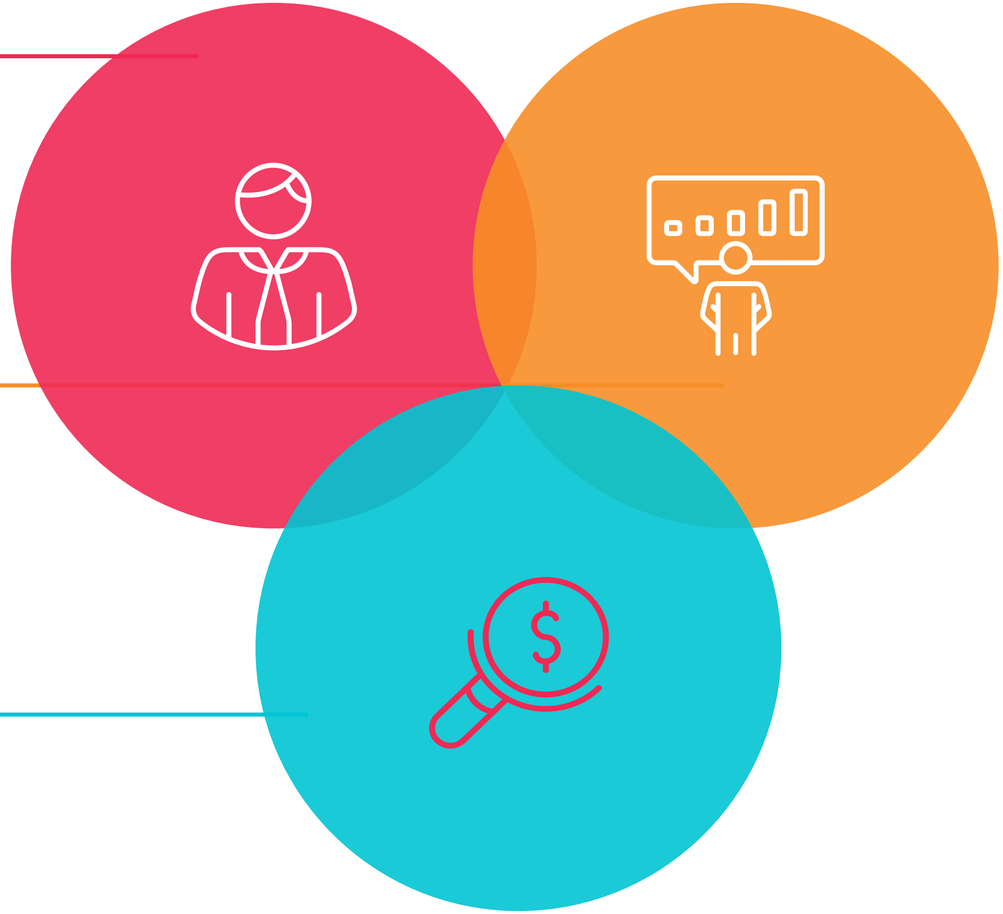
Policy and regulatory requirements

TECHNOLOGY GAPS

Limited environments for model training and deployment

STRATEGY & FUNDING

Sustainable funding models



AI Governance in the Commonwealth

If the AI solution meets any of the following criteria, VITA registration is required:

Includes sensitive data (SEC 530)

Requires COV Ramp (Cloud)

Externally facing

Uses people data (PII)

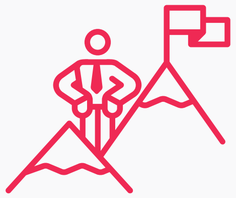
Supports business critical processes

AI Governance in the Commonwealth

If the AI solution meets ALL three, VITA registration is not required:

INTERNAL FACING

Used by state employees for internal operations – no public interaction



Public-facing AI has higher risk of legal accountability

NO PEOPLE DATA

Does not process or analyze PII data (name, address, SSN, patient data)

People data raises HIPAA risks

NO PRODUCTION SYSTEM

Not used in live operational systems that support real government services

Proof-of-concept, sandbox

ALLOWED/NOT ALLOWED

- Feeding commonwealth data into model training pipelines
- Using citizen or agency data to improve or personalize large models (retraining ChatGPT or CoPilot)
- Sharing Commonwealth datasets with vendors for ‘model/algorithm optimization’

- Using pre-trained, approved AI tools to process, summarize or analyze Commonwealth data
- Inference-only workload – data NOT used to modify the model

AI innovation must balance experimentation with responsible governance

CAPABILITY CHALLENGES

SKILLS GAP

Limited AI expertise within workforce

COST PROHIBITIVE

Require significant computing power & infrastructure

MODEL TRAINING LIMITATIONS

EO 30 governance limits training AI models/algorithms

AI adoption requires coordinated policy, technology, and workforce readiness

VDH UPDATES & INNOVATION

1 ADOPT CLOUD

- ✓ Azure cloud
- ✓ Google cloud
- ❖ Oracle cloud (planning)

2 DIGITIZE BUSINESS OPS

Modernize administrative functions such as IT, Finance, procurement, grants, etc

3 DIGITIZE PUBLIC/COMMUNITY HEALTH OPS

Transition public health programs to digital platforms/data-driven workflows

4 DATA MODERNIZATION

Integrate, govern, and standardize data to enable advanced analytics and AI

AI innovation depends on strong digital and data foundations

VDH OPPORTUNITIES

HEALTH ANALYTICS

Detect outbreaks and inequities earlier

01

ADMIN AUTOMATION

Reduce manual processing

03

COST FORECASTING

Anticipate healthcare and program demand

02

DETECTION

Identify unusual financial or operational patterns

04

Focus AI initiatives on targeted opportunities for effective execution

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AI Innovations Shaping Public Health

SOCIAL DETERMINANTS

Integrate social determinant data to inform targeted public health actions

GENOMIC ANALYSIS

Determine disease susceptibility, predict disease onset based on genomics data

HEALTH MONITORING

Monitor signs and symptoms, recommend helpful resources

HEALTHCARE OPS OPTIMIZATION

Streamline clinic operations, optimize patient flow, enhance resource allocation

TELEHEALTH & MONITORING

Remote patient monitoring with wearable tech and IoT

How you can participate?

TOPIC	BENEFIT	IMPACT
IDEAS	Helps gauge agency needs and priorities	Inventory of ideas to consider
IDEA GROUPINGS	Enables better prioritization	Allocate resources to achieve the greatest impact
MINIMALLY VIABLE PRODUCT	Focus on value instead of project	Deliver discrete working solutions incrementally
CONFIGURABLE SOLUTIONS	Requires minimal investments – SharePoint, PowerApps, ServiceNow, Teams	Deliver solutions faster
SOLUTION AWARENESS	Learn from each other - Tech Talk, Data Camp, IT Training Team	Avoid duplicative solutions

Start small, learn fast, and scale what works

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Questions?