



Reinvention with Gen AI: Setting Policy for the Use of AI in Transportation

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Economic Impact of Generative AI

Ecosystem Investment

Technology companies are investing in AI more than any other technology

\$130B

Economic Impact

Generative AI could increase global GDP by

\$7T

Generative AI could increase annual US GDP by

up to **1.5%**

Catapulted by advances in gen AI, Technology is the no. 1 cause of change

76%

of executives saw gen AI as more of an opportunity than a threat

only **27%**

of executives claim their organizations are ready to scale up gen AI.

95%

of executives believe gen AI will compel their organization to modernize its tech architecture

(Accenture research)

Gen AI has become a top priority for Executives

80%

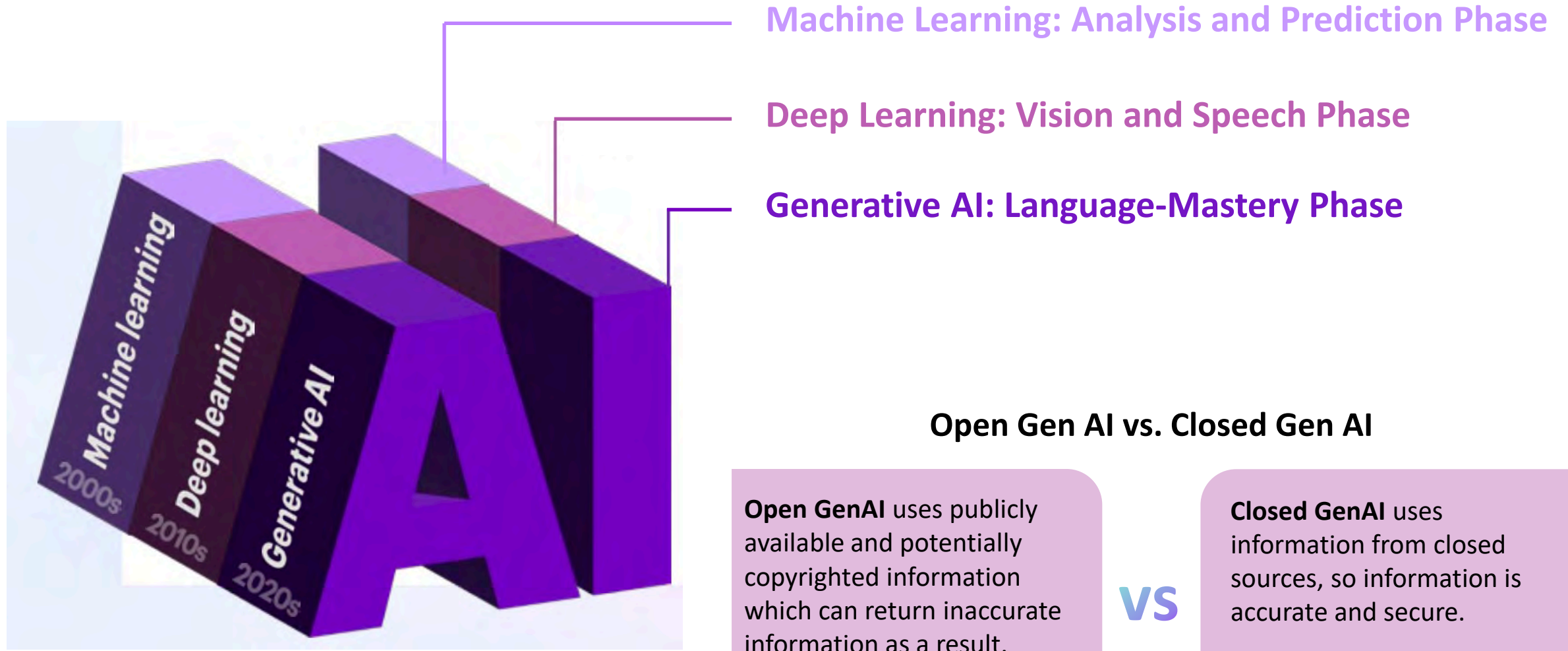
of conversational AI offerings will have gen AI embedded by 2025, up from 20% in 2023.

90%

of service providers will use gen AI for software development services by 2027

(Gartner)

Generative AI is a step change in the evolution of AI.



Open Gen AI vs. Closed Gen AI

Open GenAI uses publicly available and potentially copyrighted information which can return inaccurate information as a result.

VS

Closed GenAI uses information from closed sources, so information is accurate and secure.

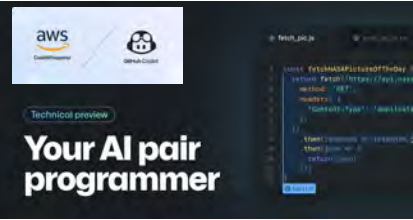
Generative AI is pushing creative expression forward by giving people tools to create content and can optimize organizations

Code

For developers who enabled it, 40% of their code is written by CoPilot, GitHub's AI assistant or AWS CodeWhisperer. This will make the creative use of code more accessible to non-developers

Text

The most advanced domain, which has already passed Medical, Law, and Business exams. As models improve, we will see higher-quality outputs and longer-form content.



Video

The Crow, an AI movie, won the 2022 Cannes festival in the category of short films

Images

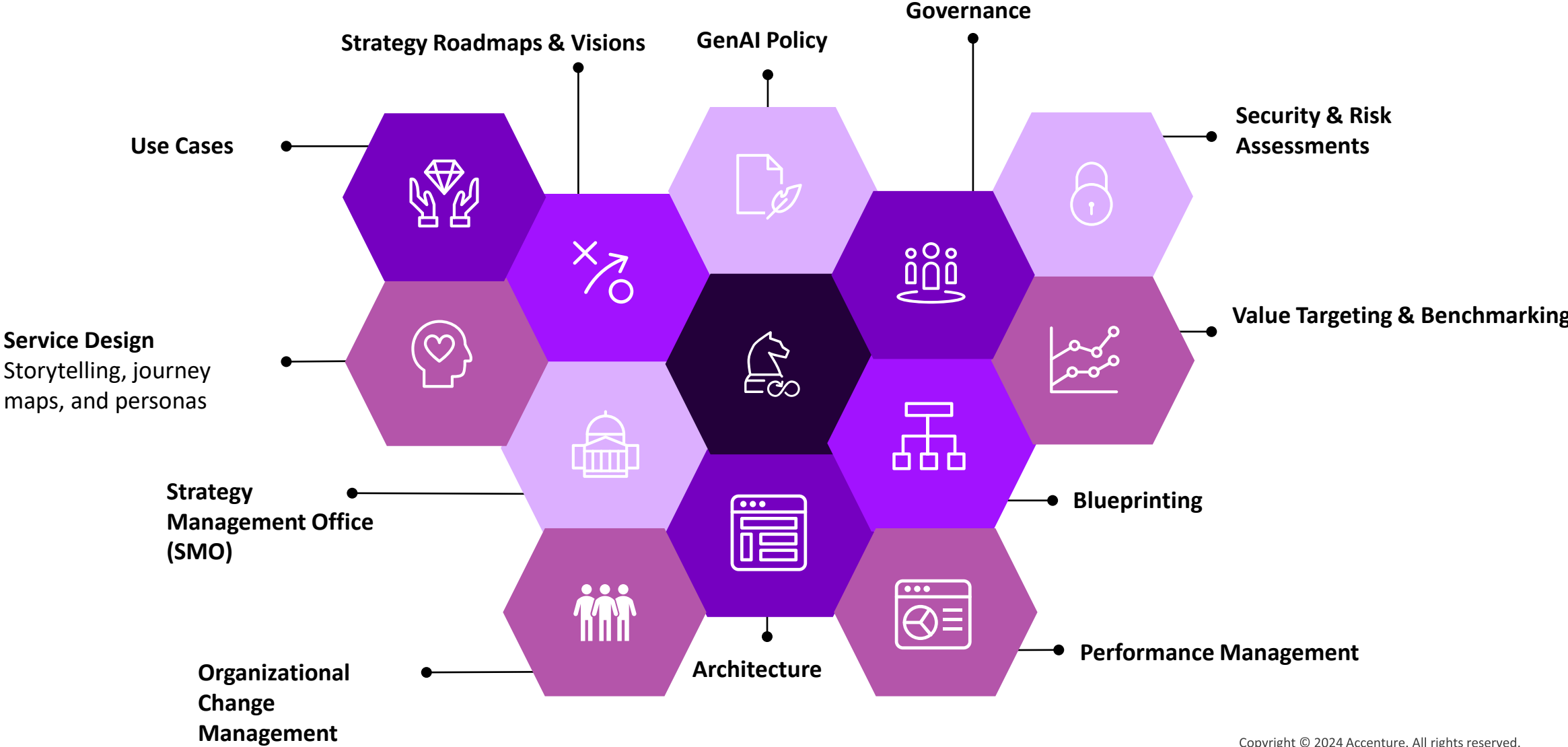
This is one of the most famous applications as the images AI can create are incredible and even won the top prize in a painting competition

Speech synthesis and translation

Whisper understands speech better than humans, even with background noise, and can translate between virtually any language.



Core building blocks for an organization's GenAI strategy



Policy Formulation Inputs

U.S. Federal Government Policies & Guidance

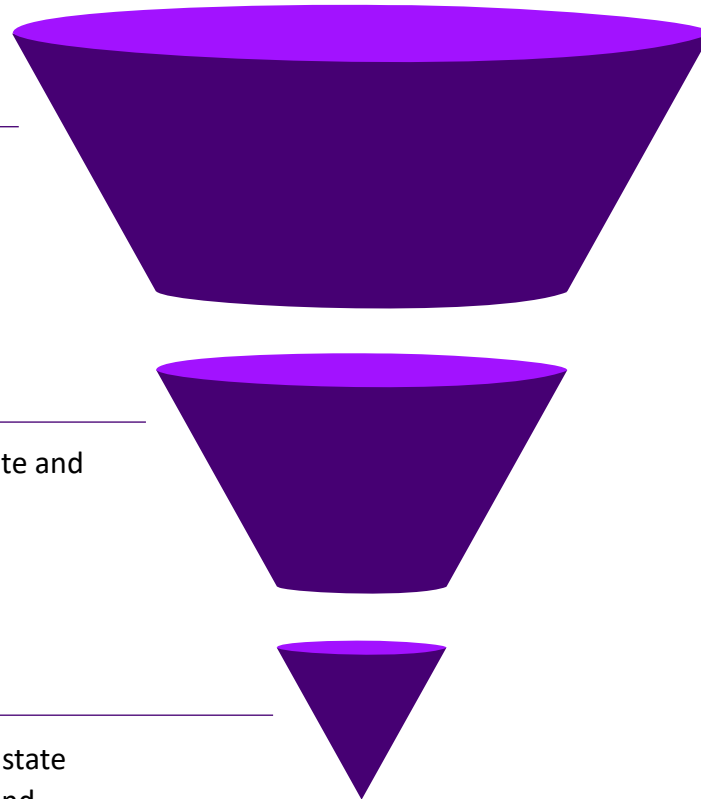
Consider policies and advisories from Cybersecurity and Infrastructure Security Agency, US Department of State, the White House and any other relevant Federal U.S. Government body

State Level Policies

Consider policies and advisories from various state bodies across the state and work within the provided guidance

Tailored Inputs for Transportation

Building upon the existing framework from US Federal Government and state government, add industry leading insights from other countries, states and transportation organizations within US to develop a policy framework



Building on existing national and state level policies, transportation organizations can develop an industry-leading policy, conducive to innovation, providing barriers to bias, and safeguards against the adverse effects of AI



Policy Formulation Inputs: Summary

US Federal Government

Other US States

European Union

Vision & Values

- Safe & Secure
- US to lead in responsible innovation, competition and collaboration
- Support American workers
- Support American Civil Rights
- Responsible use by Government

- Advance understanding on use of AI
- Understand risks and challenges of AI
- Understand AI systems used by agencies and their impact on constitutional rights
- Ensure safety and security of residents

- The use of artificial intelligence in the EU will be regulated by the AI Act, the world's first comprehensive AI law
- Safe Environment
- No Discrimination or Bias
- Transparency

Guidance

- Develop **Safe Systems**
- Incorporate **Algorithmic Discrimination Protections**
- Ensure **Data Privacy**
- Provide **Notice and Explanation on AI in use**
- Provide **Human Alternatives to AI**

- Enable **interdisciplinary collaboration**
- Provide protection from **unsafe or ineffective systems**
- Ensure **data privacy**
- Ensure **accountability**
- Protect from **discrimination & bias**
- Ensure **transparency**
- Curb **manipulation of media**

- Divide systems on basis of risk
- **Unacceptable risk to be banned in EU**, such as social scoring or cognitive behavior monitoring
- **High risk to be monitored strictly in EU**, such as law enforcement, immigration etc.
- **General purpose AI** to be transparent, such as Chat GPT
- **Limited risk AI systems should comply with minimal transparency requirements**, such as deep fake generation systems

Systems in Scope

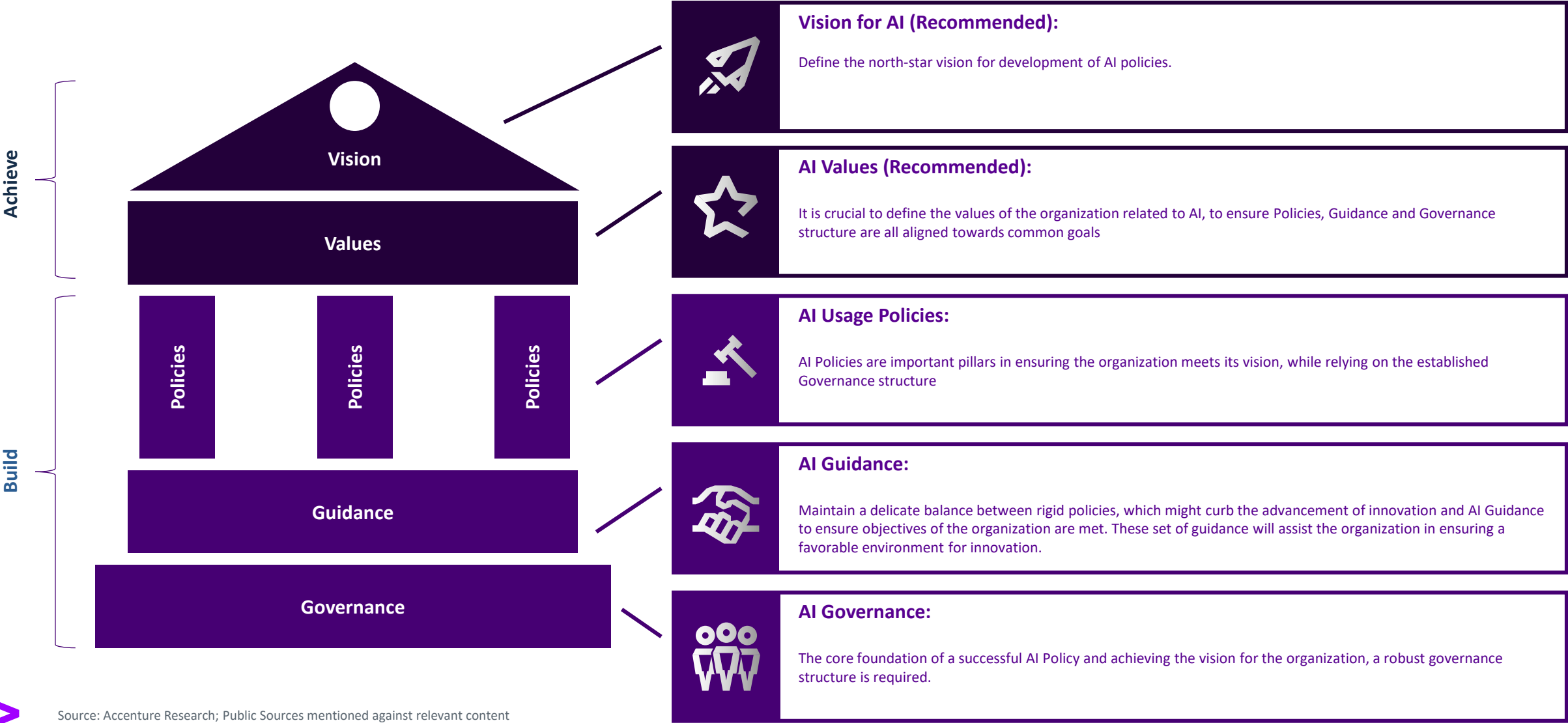
- Speech related systems
- Surveillance related systems
- Voting related systems
- Education related systems
- Housing related systems
- Employment related systems
- Health and Health Insurance systems
- Financial systems
- Safety systems
- Benefits systems

Policies vary in scope but majority are blanket policies for now, without any scope definition

Policy is divided by risk level and each type of system falls under one of the risk levels



To develop a robust AI policy a systematic approach is required



Source: Accenture Research; Public Sources mentioned against relevant content

There are certain key elements, to ensure a robust policy which is conducive to innovation and provides enough checks & balances

A EXPLAINABILITY OF AI

AI should have an accurate output, with rationale within the given conditions while operating for a specific defined purpose

B ALGORITHM DISCRIMINATION & BIAS

Biases in AI training data can unintentionally cause unfair outcomes.

C ACCOUNTABILITY

Accountability requires clear plans so that the right people are ready and trained to handle AI risks.

D THIRD PARTY RISK MANAGEMENT

We need rules and plans to deal with risks and benefits of AI from third-party software sources and supply chain issues.

E DATA PRIVACY

Data without strong protections could be accessed by unauthorized people, risking the exposure of private citizen and government information

F DATA ELEMENTS

The accuracy, representation, and quality of individual units of data are critical for the efficacy and ethical operation of AI systems

G AI TESTING REQUIREMENTS

AI systems need to be tested and checked using recognized measures to make sure they work as expected and operate correctly

H TRANSPARENCY

AI systems must be clear about how they work, need permission to use data, offer human options, and provide accurate information when asked.



Five most Important Questions for Reinvention with AI

1

How do I
prioritize
investments?

2

Is my data &
tech ready for
AI?

3

How do I make
the right
ecosystem
decisions?

4

Are my people
ready?

5

Where is AI being
used? Am I
balancing the value
and risks?

Examples of Gen AI Transportation Use Cases

Road congestion – AI driven integrated corridor management decision support system to dynamically adjust speed limits to reduce congestion and increase safety

Project selection – data informed prioritization of transportation projects with AI minimizes subjectivity and maximizes efficient resource allocation

Proactive Safety – AI driven decision making using multiple types of data to detect near-miss traffic incidents and recommend proactive safety interventions before deaths and serious accidents occur

Emergency Management – AI can keep advise on up-to-date emergency response procedures and suggest resource allocation, optimize evacuation routes and coordinate emergency services.

Streamline Contracting – AI can automate workflows, improve accuracy and efficiency of contracts and enable data-driven evaluations of contractors improving the thruput of project awards

Infrastructure planning - AI can model different scenarios to predict population changes and traffic patterns to inform infrastructure needs

Road Maintenance – AI can assess and predict road health to enable proactive maintenance planning to optimize resource allocation



Thank You

