

Responsible Deployment of AI at SMUD

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Powering forward.
Together.



About SMUD

SMUD is your community-owned, not-for-profit electric service.

6th largest
community-owned
in the U.S.



75+
Years
Est. 1946

Power mix
that's on average
about
50%
carbon-free



The most
ambitious goal
of any large
utility in the
United States

~**645,000** Customers

~**2,300** Employees



7 member
Elected
Board of Directors

Rates among the lowest in CA. On average **49%** lower than PG&E

[CleanPowerCity.org](https://www.CleanPowerCity.org)



Agenda

- AI Vision
- Governance & Security
- Program Structure
- Value Delivered



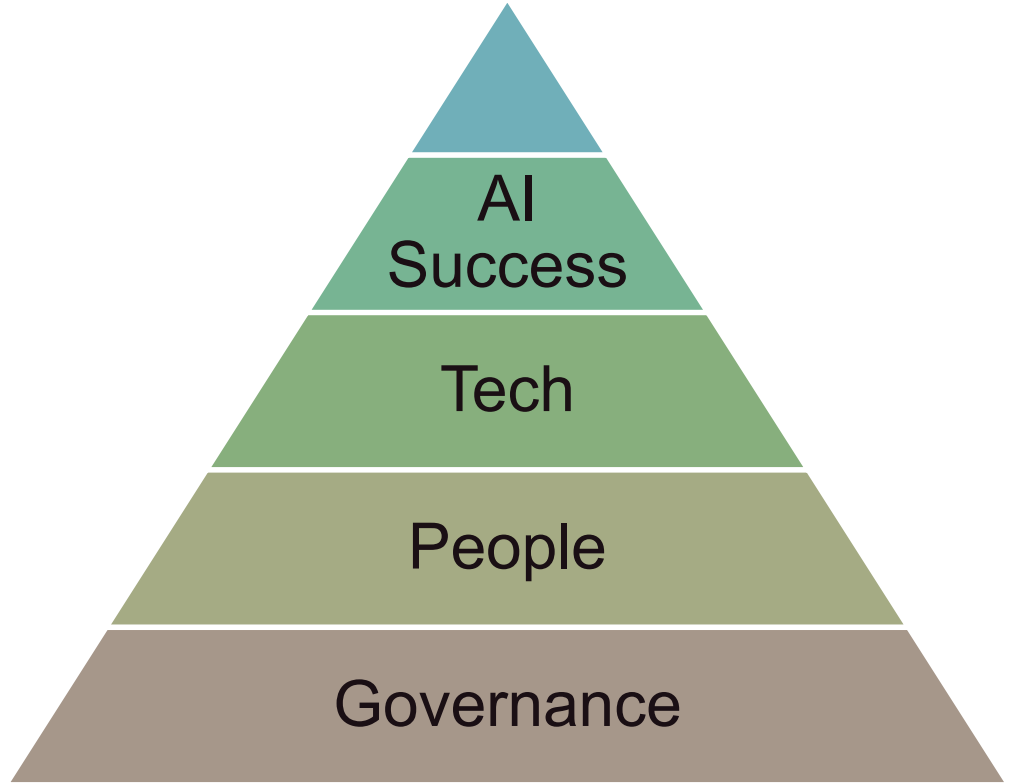
AI Vision

Responsible Adoption of AI has the potential to:

- **Empower each employee** to be more productive and engaged
- **Transform the way we do business**
- Help us achieve **reliable, clean, affordable power**
- Provide an **excellent customer experience**


Governance

- Policy
- Council
- Use Case Review
- Risks and Controls



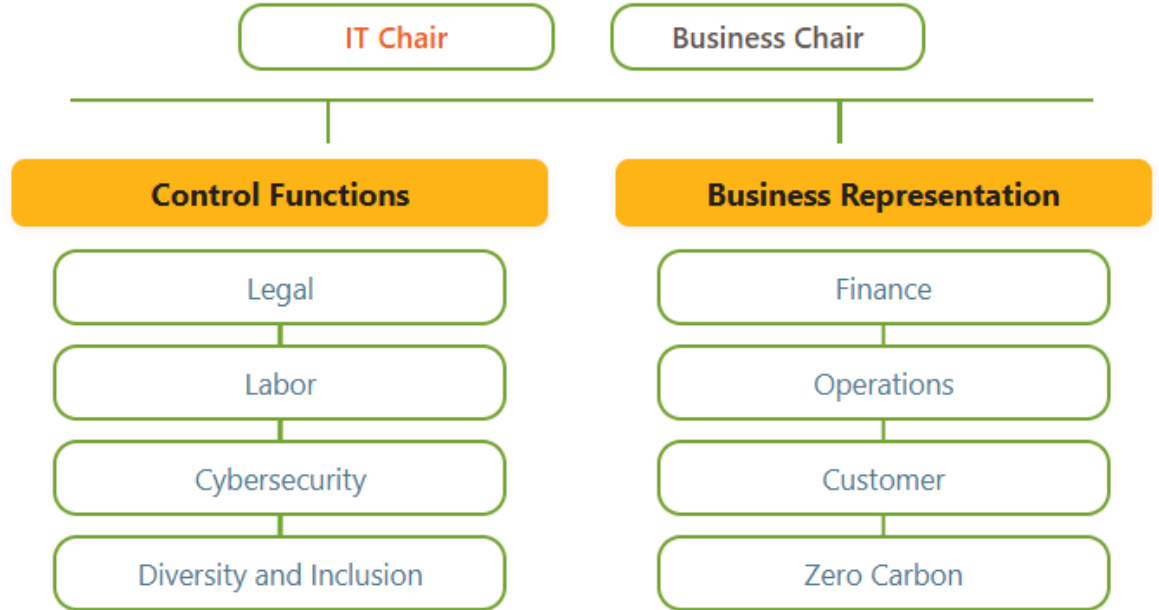
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 Administrative Policy		AP 07.01.06
Section	Subject	Title
Information Governance	Information Protection	Artificial Intelligence
Purpose	<p>Artificial Intelligence (AI) brings significant opportunities to create new products and services, improve decision speed and quality, and increase operational efficiency. However, it also involves risks, such as the potential for inaccuracy or bias in outputs, breaches of cybersecurity, release of private data, violation of intellectual property protections, and ethical concerns. As an essential service provider, SMUD has a special responsibility to manage risks to ensure reliability of service, and protection for customers', employees', and other stakeholders' privacy, data, and information.</p> <p>SMUD is committed to achieving the benefits of AI technologies in a responsible and ethical manner, while mitigating the risks. This policy outlines the secure, acceptable, and ethical use of generative AI technologies at SMUD.</p>	
Scope	<p>This policy covers SMUD's information and enterprise technology, including operational technology (OT) where applicable, co-located devices, and devices within SMUD's control and connected network, as well as infrastructure and services. This policy is applicable to all executives, directors, officers, and employees of SMUD (collectively "Covered Persons").</p> <p>Defining AI – For the purpose of this policy, Artificial Intelligence</p>	

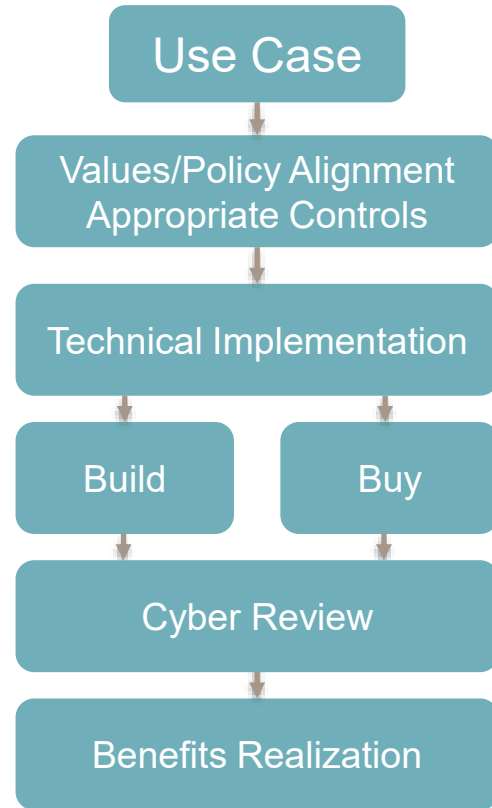
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Governance

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- **Risks and Controls**

Risk	Ethics & Governance	Testing & Validation	Regulatory & Legal	Transparency & Accountability	Oversight & Human Involvement
Ethical concerns	•Ethical guidelines & codes of conduct •AI ethics committee oversight			•Regular ethics reviews	•Critical decisions require human approval
Bias and discrimination	•Fairness policies	•Bias testing procedures •Diverse data sampling	•Compliance with anti-discrimination laws	•Reporting & appeal channels for biased outcomes	•Staff training on bias risks
Inaccuracy of outputs		•Routine output validation •Accuracy benchmarks & audits	•Conformance to industry standards		•Human review for critical results
Lack of transparency (Black box problem)				•Interpretability tools & documentation •Model explainability for users	•Governance with clear roles
Regulatory compliance		•Compliance testing (e.g. SOX, ADA)	•Ongoing legal/reg compliance reviews •Data usage license verification	•Regulatory reporting requirements	•Escalation to compliance officer
Accountability issues	•Defined roles & responsibilities			•Audit trails for AI decisions •Appeals and incident reporting process	•Human sign-off on policy matters
Unintended consequences	•Scenario and impact assessments	•Post-implementation monitoring		•Public and stakeholder feedback channels	
Copyright and IP violations		•Data & training content vetting	•IP and copyright compliance reviews •Third-party licensing checks		•Escalation to legal counsel
Over-reliance on AI	•Culture of informed skepticism			•User guidance on limitations	•Mandate human involvement in key decisions •Regular staff training

Security

Risks



- Off-the-shelf privacy policies
- Services providers
- Prompt Injection
- Vibe-coded vulnerabilities
- Prompt Poisoning

Controls



- Trusted Models
- Limited Scope
- HITL
- Prompt Shields
- Prompt Guardrails
- 3rd party reviews

Program Structure

Technical

- General User Platform
- Custom Development
 - Infrastructure
 - Cybersecurity
- In-house vs. 3rd party
- Product, Platform, or Service

People

- Vision and Intent
- Proficiency Path
- AI Training Program
- Promoting Change

Enabling the Workforce

- Vision and Intent
- Proficiency Path
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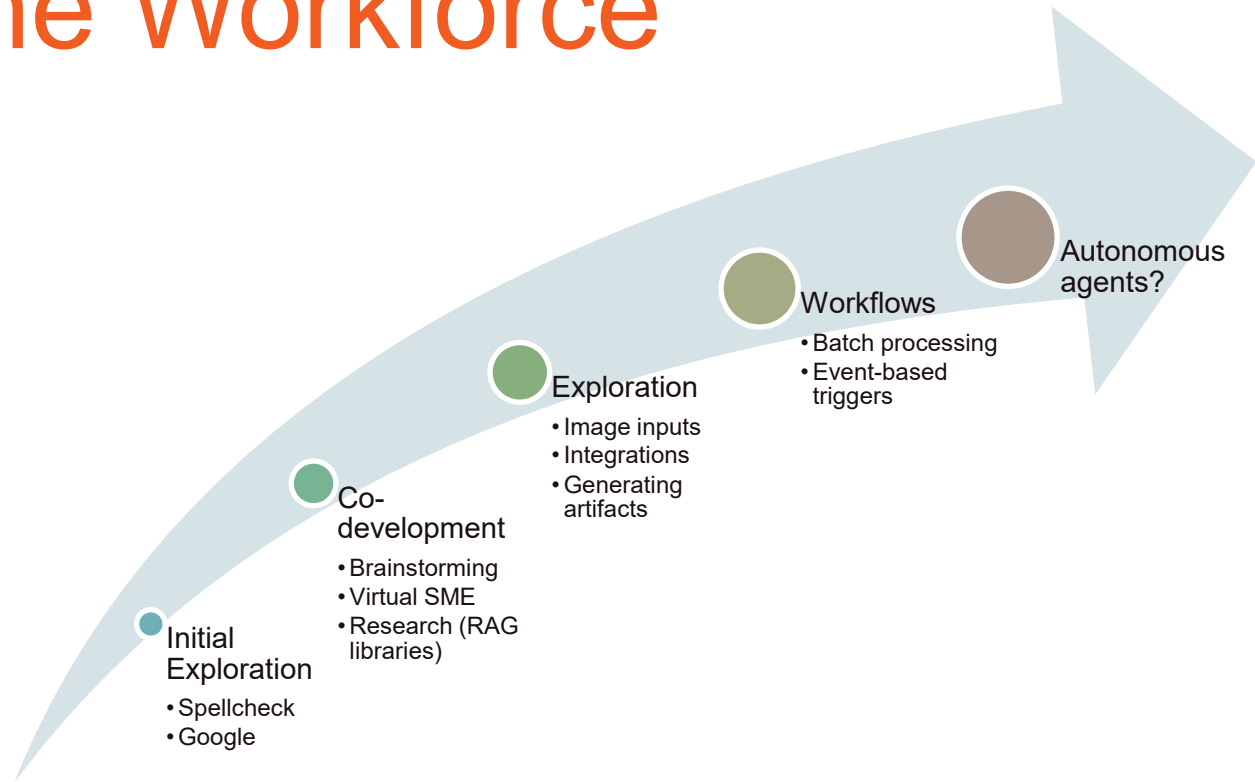
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- Mandatory training
- Planned time for AI exploration
- AI shares in team meetings
- Community of Practice
- Job-specific use case shares
- Certification levels
- Consider AI before approving resources
- Designated AI leads and superusers
- AI workshops/hackathons

Use Cases

General Purpose

- Self-appraisal
- Project Management
- Coding
- Troubleshooting
- Writing Assistance

RAG (70+ models)

- Regulatory
- Hydro
- Safety
- CEQA
- Design
- Corporate Communications
- Procurement
- Equipment Data

Custom Development

- Transformer Nameplate Processing
- Real Estate Easement Processing
- Storm Impact Forecasting

Third Party Tools

- Adobe
- Vyond/Articulate
- Rovo
- MS Teams Transcription
- Clarity PPM

Lessons Learned

- Invest in people and change management
- Build in security from the beginning
- Start small