Investment, Innovation and Compulsory Spending

A Model of Public-Private Partnerships in Smart City Initiatives

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Richard Schilling

Career

Engineering -> Lead -> Management -> Logistics

Seattle Area	**Bay Area**
Aesir Machina (just me)	Cetecom
DTG (logistics)	Salesforce
Microsoft Research	
Universal Studios	
Disney Interactive	**SoCal**
Autograph	
Synapse	
Point Inside	Dexcom
Salesforce	
POP AgencyRoot Metrics	
Ontella (Photobucket)	
Boeing	
Brooks Rand Labs	
Cognition Group	
Skagit Regional Health	
Providence Hospital	
Central Washington University	

Training

Central Washington University
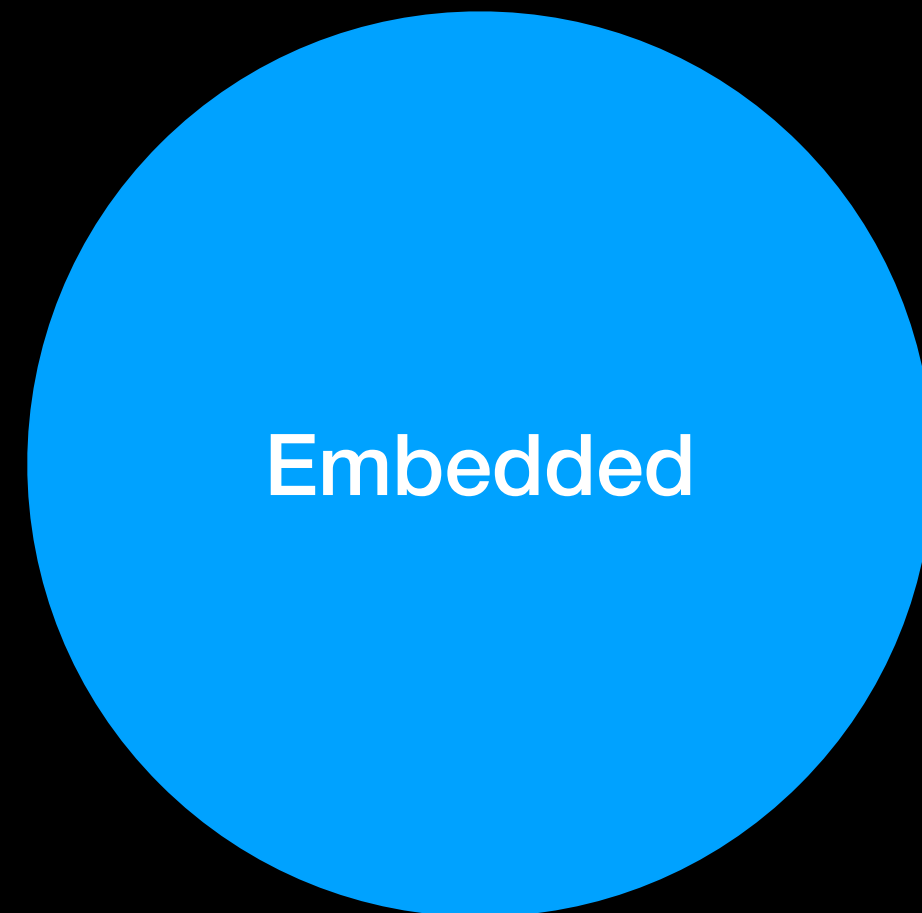CompSci/Eng (AI)

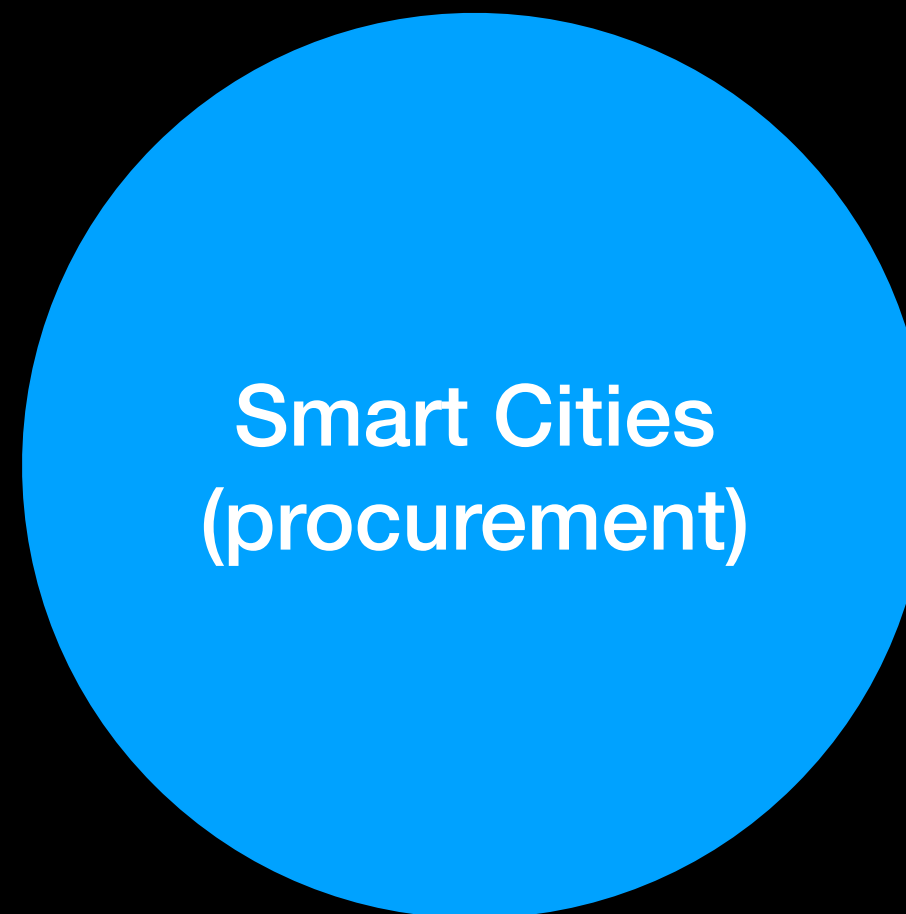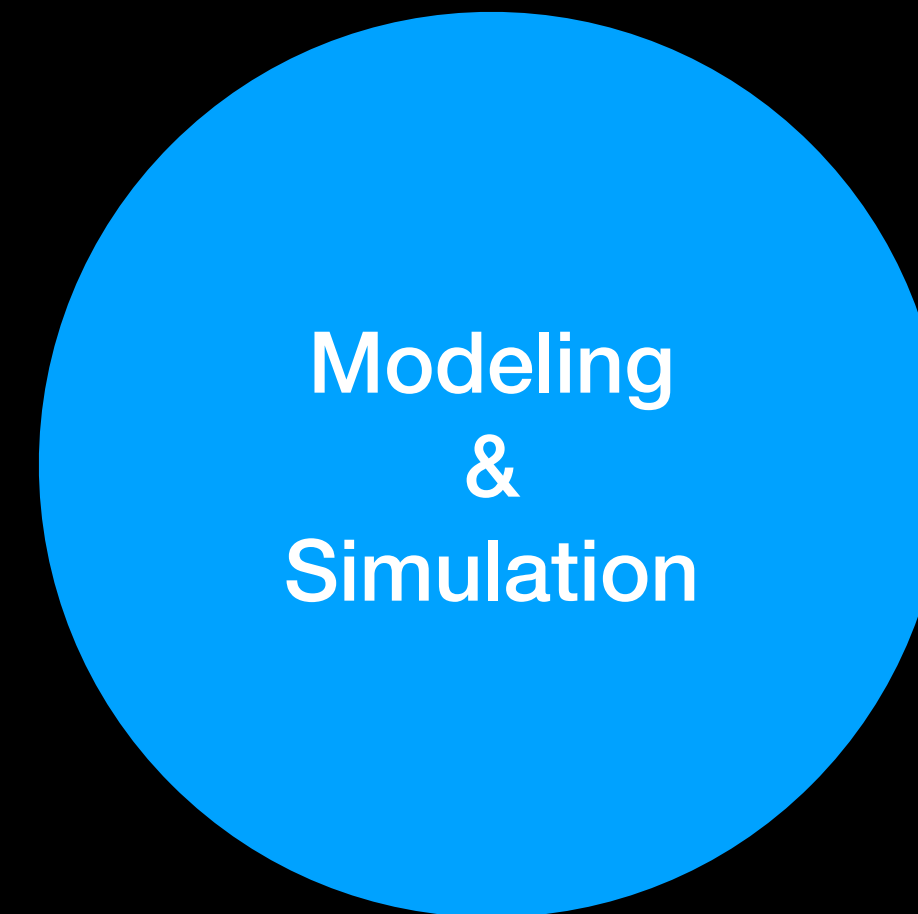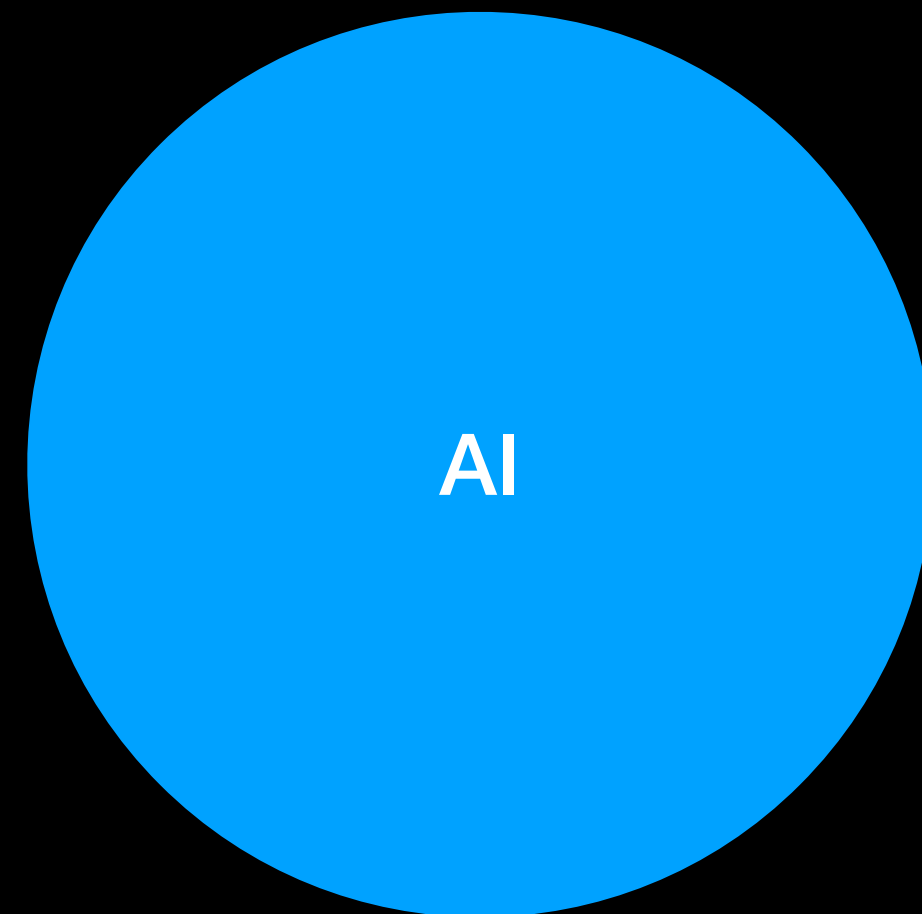City University, Seattle
MBA

Patents & Publications

Distributed Neuromorphic Infrastructure
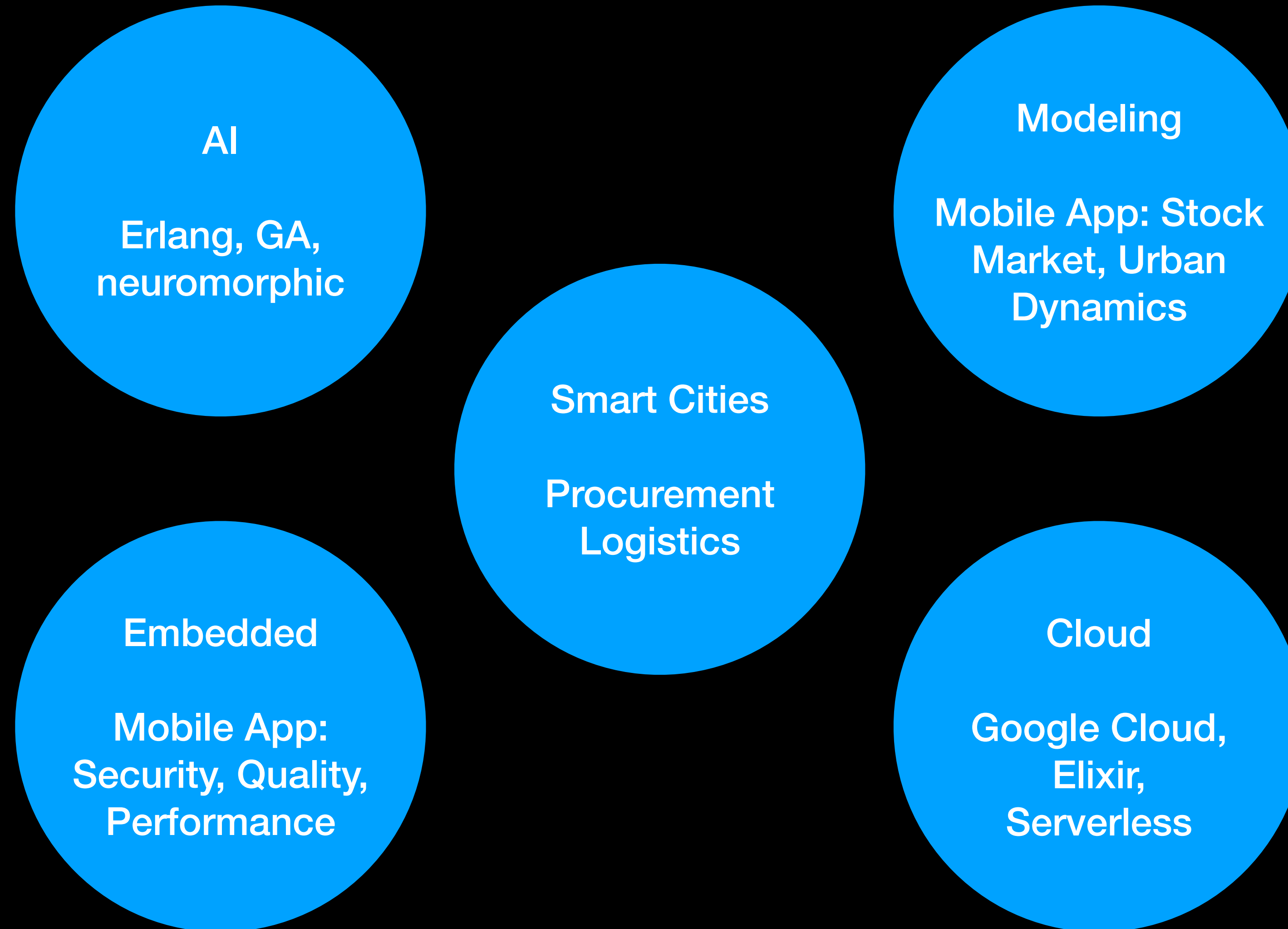US20210312257A1

Mechanism for facilitating dynamic and segment-based monitoring of cellular network performance in an on-demand services environment
US 8412178

Agent Feedback Messaging: A Messaging Infrastructure
DOI: 10.4018/978-1-60566-236-7.ch007

Interests

Current Work

AI

Erlang, GA, neuromorphic

Modeling

Mobile App: Stock Market, Urban Dynamics

Smart Cities

Procurement Logistics

Embedded

Mobile App: Security, Quality, Performance

Cloud

Google Cloud, Elixir, Serverless
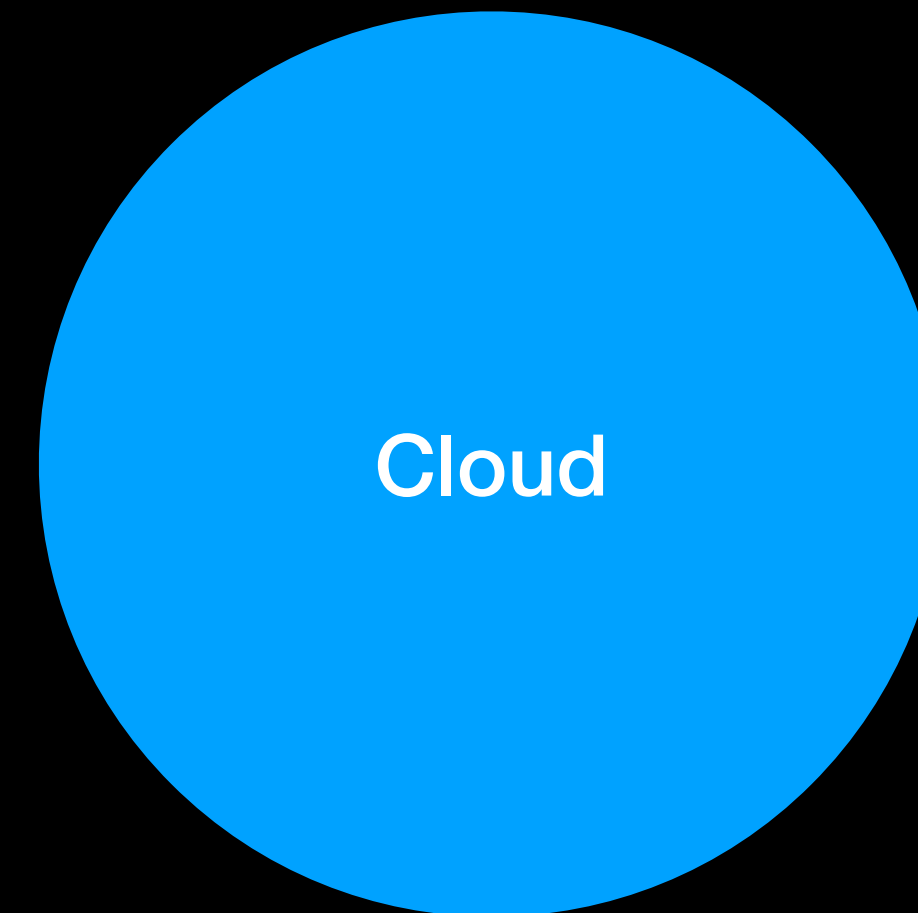
Why?

Municipal Procurement is Hard

Understand the Context/Environment

Protect Investment

Analyze Smart City Projects Objectively

Why: Field Research Required

Understanding logistics is key.

Why: Failure Point Identification

Vehicles are in scope for smart cities. Can you spot the failure?

Example
Automated Fingerprint Identification System (AFIS)

Ballot measures

April Special 2025

King County
Proposition No. 1
Regional Automated Fingerprint Identification System (AFIS) Levy

The King County Council has passed Ordinance No. 19884 concerning this proposition for the regional automated fingerprint identification system (AFIS) levy. This proposition would fund the continued operation of the AFIS program to provide enhanced forensic fingerprint and palmprint technology and services to aid in the administration of justice. It would authorize an additional property tax for seven years beginning in 2026 at $0.0275 per $1,000 of assessed valuation, use the 2026 levy amount to compute limitations under Chapter 84.55 RCW for subsequent levies in 2027-2032, and exempt eligible seniors, veterans, and disabled persons under RCW 84.36.381. Should this proposition be:

Approved

Rejected

2023 Revenue and Expenditures

Revenue	
Property Taxes	$23,311,264
Investment Interest	$1,888,045
Other / Misc.	$3,856
Total	**$25,203,165**

Expenditures	
Salaries & Benefits	$10,049,963
City of Seattle*	$4,239,424
Intragovernmental Overhead	$3,392,771
Supplies & Services	$1,060,160
Capital Equipment	$67,047
Total	**$18,809,365**

*This number includes salaries, benefits, supplies, and training.

Example: AFIS Value Proposition
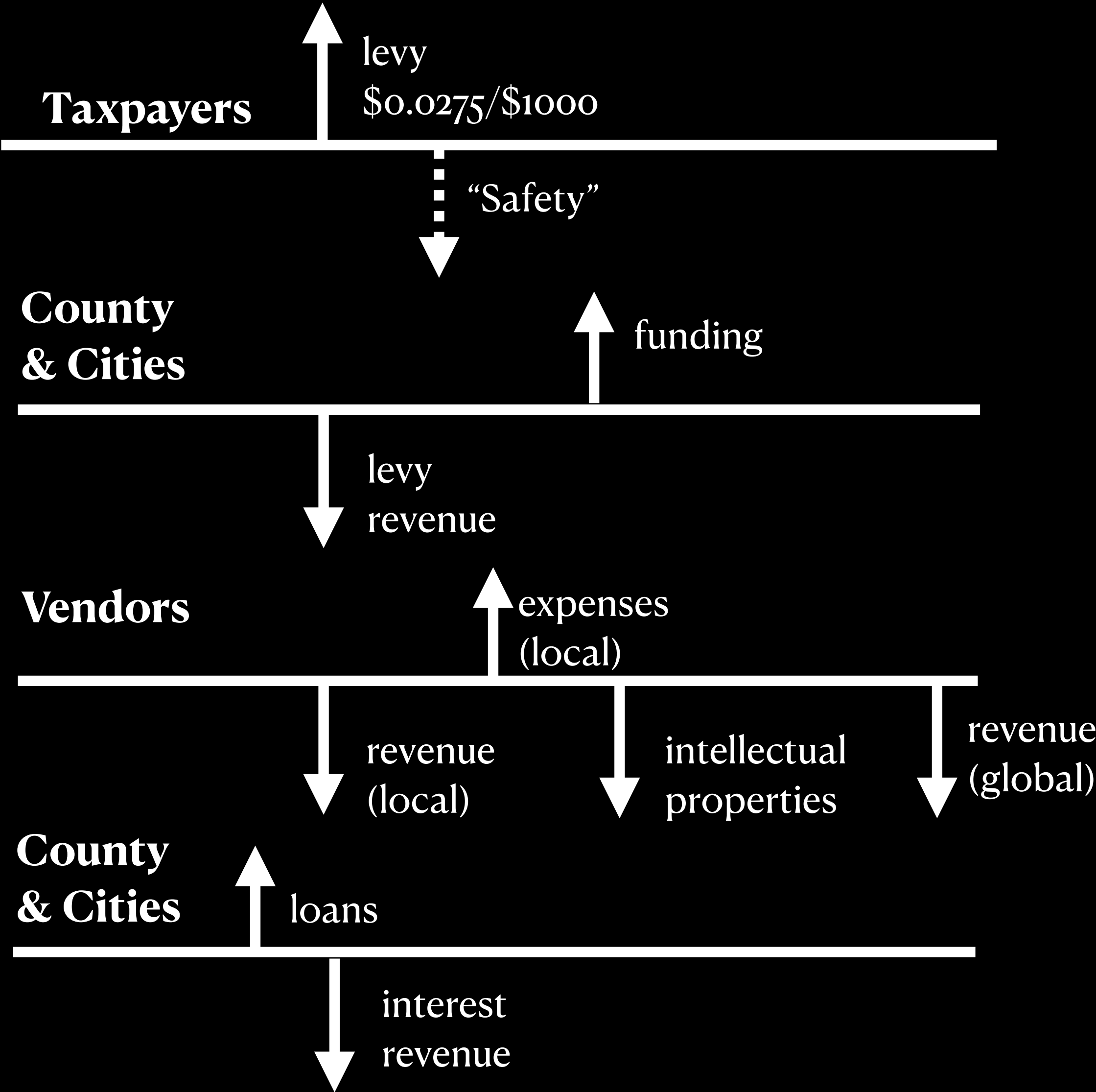
Stakeholder	Value Proposition	Obligations	Value Metric	Notes
Taxpayers	none	provide funds, secured with property	10	not used directly
County & Cities	law enforcement staff, resources.	procure/manage resources, subject to funding	100	is optional without funding
Vendors	business/profits/ intellectual property	provide system and support, subject to contracts	100	not advertised
Banks	interest income on non-bonded loans	originate & service loans	50	participation is optional

Diagram labels:

Taxpayers — levy $0.0275/$1000 — "Safety" — funding

County & Cities — levy revenue

Vendors — expenses (local) — revenue (local) — intellectual properties — revenue (global)

County & Cities — loans — interest revenue

Paper Walk-Through