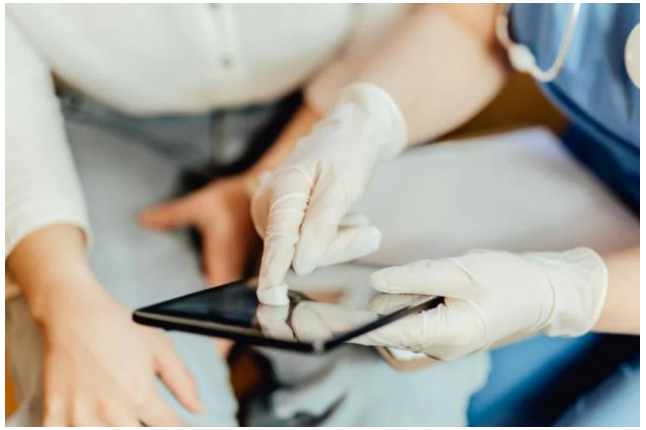
ThoughtLab

Building a People-First, AI-Powered City

An urban playbook for successful AI transformation

Executive summary



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Comprehensive research into urban AI strategies

To understand how cities can harness AI for the public good, ThoughtLab partnered with urban leaders from government, business, and academia on a four-pronged research program.

1. Benchmarking survey. In July--August 2026, we surveyed 526 senior officials in 215 cities worldwide, from mayors' offices to directors of technology, finance, and urban domains. The goal was to collect and benchmark data on the AI strategies, use cases, plans, and performance of these cities.

2. AI maturity model. Our economists built an AI maturity model that scored every city across eight pillars of people-first AI transformation. The model divided cities into four stages of AI maturity to create an index and roadmap for AI transformation in cities.

3. Database of city AI plans. To buttress the survey data, we collected 363 AI plans included in a range of published documents. Of those cities with AI plans, 96 were not surveyed, extending our city coverage to 459 municipalities.

4. Interviews and peer interchanges. We held Interviews and peer interchange meetings with more than 50 urban leaders from government, business, and academia. This qualitative research phase helped to shape the research direction and yielded case studies and practical insights.

Four prongs of our research

215

Benchmarking survey

525 senior officials in 214 cities across six world regions

8

AI maturity model

Eight pillars of AI best practice, dividing cities into four maturity stages

363

City AI plans database

Published AI plans from 212 cities across world regions and population levels.

50+

Interviews and peer interchanges

Urban leaders from government, business, and academia

Cities benchmarked and modeled

By region	Cities	Share
Europe and Central Asia	60	28%
North America	53	25%
Asia Pacific	51	24%
Latin America	20	9%
Middle East/North Africa	16	7%
Sub-Saharan Africa	15	7%
Total	215	100%

By population	Share
Smallest (50K–600K)	37%
Small (600K–1M)	16%
Medium (1M–5M)	34%
Large (5M–10M)	8%
Mega (10M–37M)	4%

City profile	
Advanced / developing economies	61%/39%
Average city population	2.23M
Average FY2026 operating budget	$5.5B
Average respondents per city	2.45

Sources: ThoughtLab benchmarking survey of 214 cities (525 respondents), July–August 2026; database of 212 published city AI plans; ThoughtLab AI maturity model; interviews and peer interchanges with 50+ urban leaders.

AI offers a huge opportunity for urban transformation

City leaders see AI as far more than an efficiency tool: it is an engine of urban transformation. Most believe it will ease workforce shortages, deliver personalized, frictionless services, and strengthen their city's competitiveness.

From reactive to proactive

By linking data across departments, AI replaces fragmented, reactive processes with coordinated action. Under the old model, the citizen requests and the city responds; with AI, the city anticipates, prevents, and personalizes.

Already delivering results

Cities apply AI most widely to data management, infrastructure, cybersecurity, and public safety. Residents are already seeing the benefits in faster services, smoother journeys, and safer streets. Over the next three years, cities will turn AI toward demographic change, budget deficits, and digital equity.

> *"What excites me most isn't the technology itself. It's the opportunity to fundamentally rethink how government works."*
>
> **Nicole Coughlin, CIO, Cary, North Carolina**

How city leaders see AI's role (% agreeing)

65% AI will become a key competitive and economic driver for my city

60% AI will help us deliver personalized, frictionless services

52% We aim to be a people-first, AI-powered city with people at the center of our strategy

Benefits residents are already seeing

- ✓ Faster, more efficient services
- ✓ Higher safety and resilience
- ✓ Improved sustainability
- ✓ Greater equity and accessibility
- ✓ Smarter mobility and infrastructure
- ✓ Proactive, transparent government
- ✓ Better healthcare and wellbeing

Urban issues addressed with AI today	% cities
Data management and interoperability	80%
Infrastructure management	80%
Cybersecurity and data privacy	76%
Public safety and emergency readiness	72%
Transportation and mobility	64%
Public trust and community engagement	60%
Staff shortages and workforce support	55%
Urban development, housing, and places	54%
Administrative backlogs and processes	54%
Environment and sustainability	56%

Survey questions: Which urban challenges are you addressing with AI solutions? Do you agree or disagree with statements about your city's AI strategy? What benefits have residents experienced from your city's use of AI?

Cities are already putting AI to work across urban domains

Cities are putting AI to work across seven urban domains. Use is most widespread in the core business of running a city: safety, security, and resilience; government administration; and physical and digital infrastructure.

Most cities also use AI for traffic management and public transport, and more than half for environmental and climate monitoring.

Adoption is thinner where success requires complex cross-sector coordination, specialized data, or equity-centered design, such as economic development, health, and education.

Connecting the city

But the biggest gains come when cities use AI to connect domains rather than optimize them one at a time. Unifying data across transport, utilities, and public safety enables faster decisions, predictive maintenance, and quicker responses to community everyday needs.

> *"AI allows cities to model worse case scenarios much faster—and be prepared for what comes next."*
>
> **Denys Nazarenko, Advisor to the CIO, Kyiv**

Urban domain	Key areas (% of cities using AI)	Example in action
Safety, security, and resilience Maturity score: **61**	**73%** Cybersecurity and digital safety **58%** Disaster risk and early warning **56%** Surveillance and situational awareness	**Seoul** is piloting an AI chatbot for emergency calls that gathers details by voice and prioritizes urgent reports for operators.
Government administration Maturity score: **56**	**69%** Digital citizen services **53%** Administrative and back-office work **51%** Urban and land-use planning	**Honolulu**'s CivCheck AI plan-review tool cut review cycles 58%, saving permit applicants 40.5 days on average.
Physical and digital infrastructure Maturity score: **54**	**63%** Digital connectivity and platforms **54%** Predictive asset maintenance **50%** Infrastructure resilience	**Gold Coast** uses smart-water telemetry and predictive pipe maintenance to pinpoint leaks, reporting a 60–80% ROI.
Energy, utilities, and environment Maturity score: **53**	**57%** Environmental and climate monitoring **50%** Water, wastewater, and utilities **49%** Energy systems and smart grids	**Konya**'s utility KOSKİ uses AI routing to dispatch the nearest crew in emergencies, cutting carbon emissions 15%.
Transport and mobility Maturity score: **50**	**70%** Network-wide traffic management **64%** Public transport **49%** Mobility platforms and digital twins	**New York**'s MTA uses AI predictive maintenance to fix bus faults before they disrupt service, cutting material costs 24%.
Economy, business, and industry Maturity score: **48**	**66%** Innovation and AI ecosystems **45%** Workforce and skills development **36%** Sector-specific AI initiatives	**Pittsburgh**'s PGH Lab pairs local startups with city departments in a paid, six-month program using the city as a testbed.
Living, health, and education Maturity score: **45**	**44%** Public health and wellbeing **41%** Community engagement **38%** Accessibility and language support	**Helsinki**'s Hester AI helps residents find online health and social-service guidance, including mental-health support.

Key-area percentages = share of all surveyed cities actively or widely using AI in that area. Maturity score = average AI maturity of cities in each domain based on use of AI (0–100).

But cities need to overcome AI roadblocks to advance

Capturing AI's promise is not easy. Eight in ten cities cite long-term costs, difficulty proving ROI, and competing budget priorities as major hurdles, while scarce AI skills and siloed, poor-quality data slow progress.

The trust challenge

Public unease is growing. Residents worry most about surveillance, dehumanized services, loss of control over decisions, and bias—concerns that often reflect low confidence in both AI and government.

From anxiety to confidence

Successful cities treat citizen concerns as a governance issue, not a communications problem. They disclose where AI is used, keep humans accountable for high-impact decisions, protect privacy, and show residents concrete benefits.

> *"The real question is not whether AI will transform cities, but whether cities can ensure that this transformation strengthens public value, trust, fairness and democratic accountability."*
>
> **Inga Rós Gunnarsdóttir, Chief Data Officer, Reykjavík**

Top barriers to AI adoption (% of cities)

Funding and returns	Long-term or unexpected costs	84%
	Difficulty justifying ROI	81%
	Competing budget priorities	80%
People and trust	Limited AI skills and talent	82%
	Over-surveillance and privacy fears	78%
	Limited change management	78%
	Citizen concerns over AI	70%
Data readiness	Siloed data, overlapping solutions	76%
	No clear roadmap, hard to scale	68%
	Data quality, access, and management	66%

69% say public trust and acceptance of AI is one of their biggest challenges (77% in Europe)

Six ways to turn AI anxiety into confidence

1. **Be transparent about AI use**
   Amsterdam and Helsinki publish public algorithm registers.
2. **Keep people accountable**
   Seattle requires human review of generative AI outputs.
3. **Protect privacy and data**
   Raleigh's traffic AI works without identifying people.
4. **Design for inclusion**
   Test with diverse communities; keep non-digital channels.
5. **Counter misinformation**
   NYC funds 22 groups to deliver AI literacy education.
6. **Explain benefits clearly**
   Kigali cites up to 30% shorter travel times from AI traffic management.

Survey questions: When adopting AI, what are the biggest challenges your city faces? What are the biggest AI misconceptions that citizens have expressed?

Cities are making progress on their AI journeys

We scored all 215 cities on eight pillars of people-first AI. Cities averaged 49 out of 100, indicating that most are moving from testing AI into execution.

Strong foundations, uneven progress

Cities are furthest ahead in AI-ready data and infrastructure, funding and partnerships, governance, and an AI vision tied to outcomes—reflecting years of smart-city investment in connectivity, cloud platforms, and data integration.

People are the binding constraint

Cities lag on citizen experiences and human-centered design, which depend on public trust and bridging digital divides. Talent gaps, as cities compete with the private sector, make it hard to move to advanced AI such as agentic systems.

Coordination lags behind

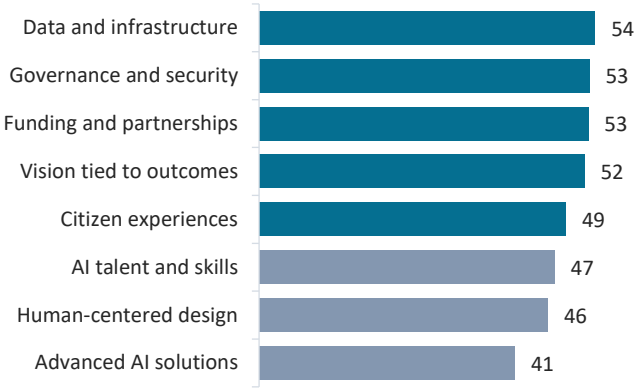
Many cities have named AI leaders and formed governance bodies, but only 27% have an integrated, citywide AI strategy. The rest run disconnected department-level efforts or are still developing a plan.

> *"You need the foundation, plumbing, and electricity in place, along with accountability, before you adopt AI."*
>
> **Eric Keane, CIO, Memphis**

Four stages of the AI journey

76 score	**Leaders** 17% of cities	Scaling AI broadly across operations and services on strong data, IT, talent, and governance.
58 score	**Accelerators** 29% of cities	Expanding AI across domains while fortifying the capabilities needed to scale.
41 score	**Implementers** 34% of cities	Moving from plans to execution; starting to close data, IT, talent, and governance gaps.
27 score	**Starters** 20% of cities	Testing AI through pilots and defining use cases; facing large skills gaps.

Average maturity by pillar (0–100)



How cities are organizing for AI	% cities
Have a named citywide AI lead	58%
Have a citywide AI governance body	45%
Have innovation labs to test and scale AI	44%
Rely on informal, ad hoc collaboration	44%
Have an integrated, citywide AI strategy	27%

Survey questions: How much progress has your city made in the eight pillars of people-first AI transformation? How is your city organized to plan, govern, and oversee AI?

Learning from the AI Leaders

Cities that qualified as people-first AI Leaders in our study offer a model for others in their approach to AI adoption.

Leaders start with a human-centered mindset. They build a long-term AI vision around people-first outcomes, then put in place the governance, data, IT, and partnerships to deliver it.

They know AI transformation is as much about people as technology. They build AI skills among staff and citizens, involve communities in AI decisions, and earn trust through responsible, secure practices.

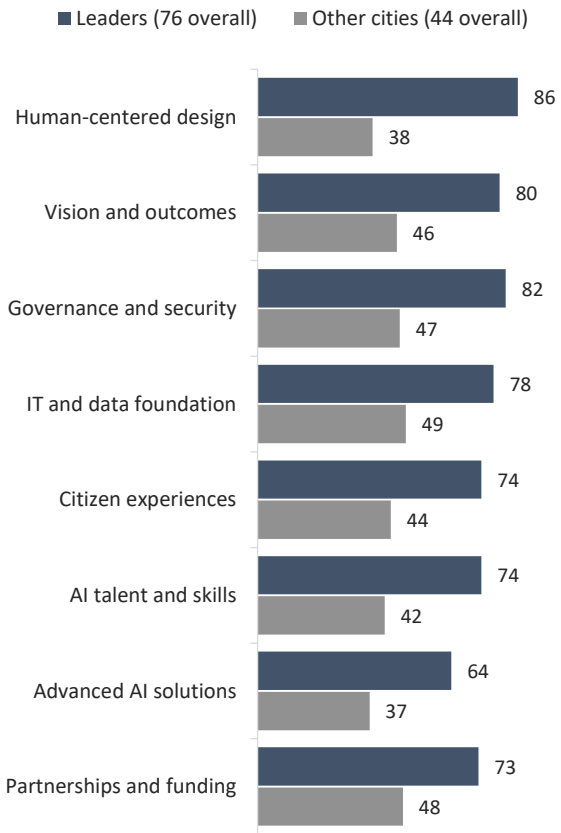
The widest gap

Leaders outperform on all eight pillars, but the gap is largest in human-centered design, where they score more than twice as high as other cities.

Leaders come from everywhere

AI leadership is not the preserve of any one type of city. The 37 Leaders span five regions, advanced and emerging markets, and cities large and small.

Pillar scores: Leaders vs. others



Leaders by region (37 cities)

38% **Europe and Central Asia**
14 cities: Aarhus, Amsterdam, Barcelona, Berlin, Copenhagen, Dublin, Helsinki, London, Madrid, Munich, Rotterdam, Stockholm, Tallinn, Tampere

30% **Asia Pacific**
11 cities: Hong Kong, Melbourne, Putrajaya, Sejong, Seoul, Shanghai, Shenzhen, Singapore, Sydney, Taipei, Tokyo

19% **North America**
7 cities: Austin, Boston, Montreal, San Francisco, San Jose, Seattle, Washington, DC

11% **Middle East and Africa**
4 cities: Abu Dhabi, Dubai, Kigali, Sharjah

3% **Latin America**
1 city: Buenos Aires

What Leader status delivers

Average ROI on AI investments

96%	42%
Leaders	Others

Leaders also recoup AI investments 10 months faster (39 vs. 49 months).

Leaders are more likely to see benefits vs. others

Improve social equity	2.9x
Build public trust	2.2x
See sustainability benefits	1.8x
See significant cost savings	1.8x
Raise quality of life	1.5x
Enhance service experience	1.4x

Survey questions: How much progress has your city made in the following areas (25 = exploring; 50 = starting to implement; 75 = actively implementing; 100 = widely scaling)? What ROI are you seeing from AI?

Best practices of AI Leaders

1 Human-centered design

Start their AI journeys by identifying residents' needs, rights, and concerns, then choose AI solutions that deliver public value.

92% train staff on ethical, responsible AI

81% embed human-centered design in AI plans

78% set transparency and explainability rules

2 Vision and outcomes

Build a long-term AI vision tied to city goals, backed by a roadmap with clear metrics and responsibilities.

100% have a structured roadmap with accountabilities

95% prioritize use cases with success metrics

95% Setting a shared long-term vision

3 Governance and security

Make governance an accelerator that gives staff clarity on how to act, while prioritizing data security and privacy.

100% build cybersecurity into the AI lifecycle

95% keep sovereign control of sensitive data

89% enforce responsible AI rules on ethics and bias

4 IT and data foundation

Modernize legacy IT, ensure data quality and accuracy, and connect data across departments before scaling AI.

95% replace legacy systems with modern IT

95% integrate AI across departments

95% ensure high-quality, integrated data

5 Citizen experiences

Ensure services are fast, personal, and proactive, freeing staff to focus on complex human needs.

97% make services faster and more reliable

81% provide AI enable self service

78% free frontline staff from routine tasks

6 AI talent and skills

Map future skills, train staff continuously, and build talent pipelines with partners.

97% identify the AI skills staff will need

97% partner with universities on AI talent

95% provide regular AI training and reskilling

7 Advanced AI solutions

Put generative, agentic, and physical AI into production alongside AI-enabled digital twins and other new tools.

86% use generative AI today

73% use AI-powered digital twins

41% use agentic AI today

8 Partnerships and funding

See AI as a team sport, working across the ecosystem and blending budgets, grants, and public-private partnerships.

95% build a broad partner ecosystem

92% pool resources with other cities

86% use PPPs and innovative commercial models

Percentages show the share of Leaders actively or widely implementing each practice today.

A people-first AI roadmap: Nine steps to becoming a Leader

Becoming a people-first, AI-powered city is a journey that requires a structured plan with metrics, guardrails, and responsibilities. It begins by assessing where your city stands, then setting an outcome-led vision, building accountable governance, and addressing resident concerns early.

1	**Assess your starting point**	Identify whether your city is a Starter, Implementer, Accelerator, or Leader across the eight pillars of AI maturity. Use this to find the most material gaps and sequence investment accordingly.
2	**Set an outcome-led AI vision**	Build an AI strategy and roadmap linked to social, service, economic, environmental, and resilience outcomes. Define priority outcomes, roles, milestones, investment needs, and success measures.
3	**Create accountable leadership and governance**	Appoint a citywide AI leader and a cross-functional governance body, with clear processes for strategy, investment, procurement, risk, testing, and scaling. Set policies for transparency, data minimization, resident data control, and vendors.
4	**Start with high-value public problems**	Prioritize a manageable portfolio of use cases with clear resident and workforce benefits, reliable data, appropriate risk controls, and measurable outcomes. Pilot, validate, and scale only when evidence supports it.
5	**Address citizens' AI concerns early**	Put in robust governance before scaling AI solutions to allay citizen AI concerns. Disclose where AI is used and who is accountable, keep humans in high-impact decisions, collect only necessary data, and show concrete benefits.
6	**Design with people, not just for them**	Embed human-centered design, equity, accessibility, and inclusion into AI planning. Document community needs before selecting use cases, engage citizens through co-design, and preserve non-digital service options.
7	**Build the shared foundations for scale**	Establish interoperable data, digital, connectivity, cybersecurity, and governance foundations. Improve data quality and access, connect systems across departments, and build secure infrastructure that supports AI at scale.
8	**Give workers the skills and tools they need**	Close AI skills gaps through training, hiring, and partnerships with universities and tech firms. Break work into tasks for AI or humans, give staff secure AI tools, and keep humans in the loop.
9	**Measure and communicate public value**	Track people (trust, equity), planet (climate resilience, emissions), and profit (time savings, cost efficiency) metrics. Publish results, refine the roadmap, and scale what demonstrably works.

Based on ThoughtLab's benchmarking of 214 cities, analysis of 212 city AI plans, and interviews with more than 50 urban experts.

ThoughtLab

ThoughtLab is an innovative thought leadership and economic research firm providing fresh ideas and evidence-based analysis to help business and government leaders cope with transformative change. We specialize in analyzing the impact of technological, economic, and demographic shifts on industries, cities, and companies.

To learn more about ThoughtLab, visit: **www.thoughtlabgroup.com**

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