AI-ENABLED CITIVERSE

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11 May 2026

AGENDA

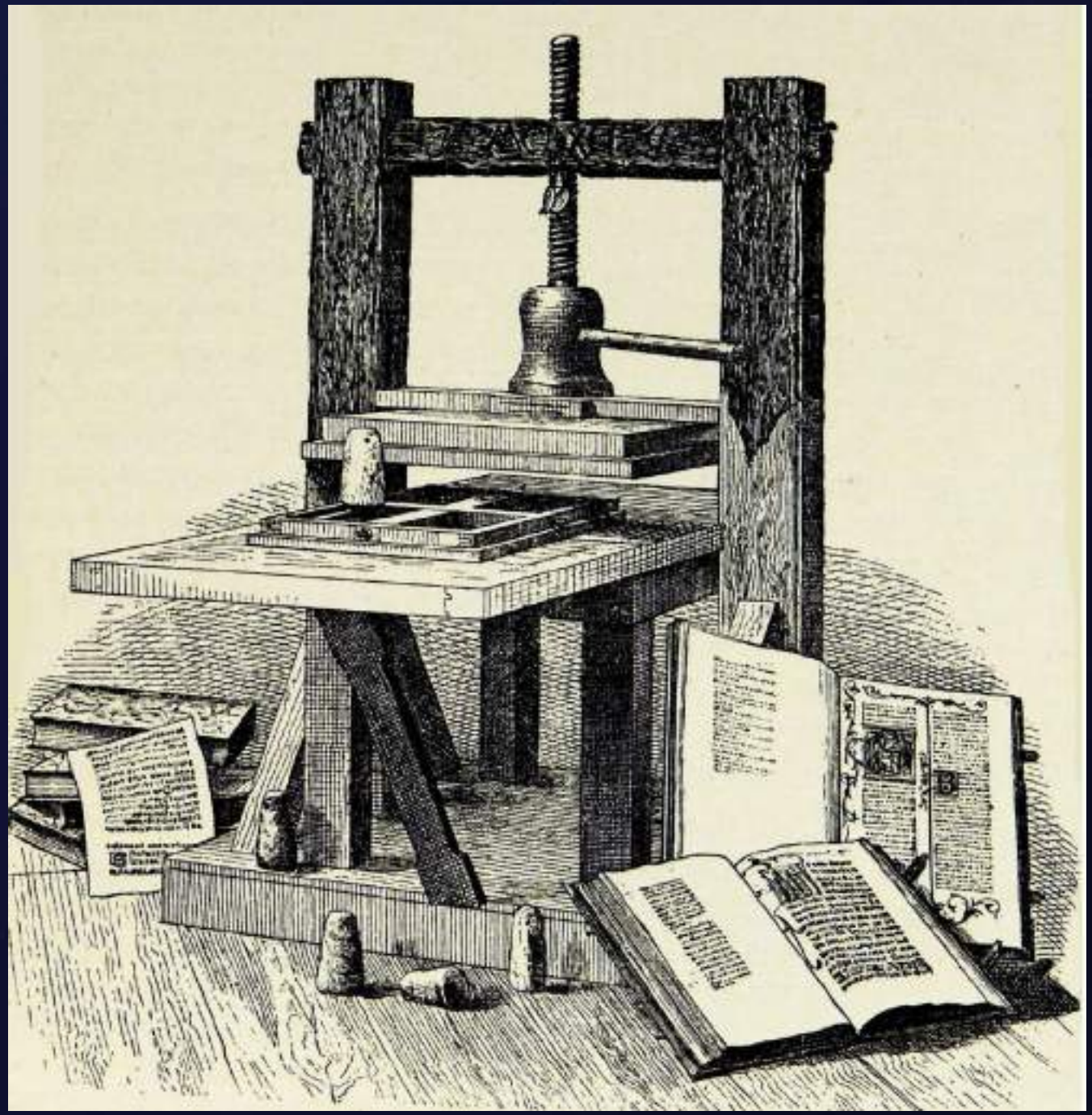
AI & VIRTUAL WORLDS: A PARADIGM SHIFT UNDERWAY

REDEFINING THE FRONTIER OF URBAN SYSTEMS

POWERING THE AI-ENABLED CITIVERSE: ECOSYSTEM ENGINE

Q&A

A PARADIGM SHIFT UNDERWAY



THE LAST ONE YEAR HAS SEEN

UNPRECEDENTED CHANGES IN TECHNOLOGY.

> “The future isn’t coming. It’s already here.

WE ARE NOT JUST WITNESSING TECHNOLOGY EVOLVE.

WE ARE LIVING A ONCE-IN-A-GENERATION TRANSFORMATION.

5 TRENDS SHAPING THE NEXT ERA

Five transformative shifts redefining how we build, operate, and experience the world.

1 WORLD MODELS

WHAT IS NEW

AI models that understand the dynamics of the real world—physics, objects, behavior, economics, and cause-effect.

They simulate, predict, and explain how the world works.

THE SHIFT

- From static data to dynamic understanding.
- From descriptive analytics to predictive intelligence.
- From reacting to events to anticipating outcomes.

2 AGENTIC AI

WHAT IS NEW

AI agents that perceive context, reason, plan, and act autonomously to achieve goals.

They collaborate, adapt, and continuously improve with feedback.

THE SHIFT

- From task automation to goal-driven autonomy.
- From human-in-the-loop to AI-on-the-lead.
- From isolated tools to intelligent teammates.

3 PHYSICAL / EMBODIED AI

WHAT IS NEW

AI that operates in the physical world through robots, drones, and intelligent machines.

They perceive, manipulate, and interact safely and effectively.

THE SHIFT

- From digital intelligence to physical impact.
- From observing the world to operating in it.
- From automation to autonomous action.

4 AI-NATIVE VIRTUAL WORLDS

WHAT IS NEW

Persistent, interactive virtual worlds built and populated by AI.

They are intelligent, adaptive, and designed for experiences, learning, and enterprise.

THE SHIFT

- From 2D interfaces to 3D experiences.
- From information consumption to immersive participation.
- From engagement to presence.

5 DIGITAL TWINS & IMMERSIVE COLLABORATION

WHAT IS NEW

Real-time digital twins of systems, assets, and entire cities—connected, accurate, and actionable.

Immersive collaboration brings teams together in shared 3D spaces.

THE SHIFT

- From isolated data to living systems.
- From siloed teams to connected ecosystems.
- From planning in theory to deciding in real time.

FIVE TRENDS. ONE DIRECTION.
INTELLIGENT SYSTEMS FOR A BETTER WORLD.

Smarter Cities | Sustainable Future | Human-Centric | Limitless Potential | Global Impact

REDEFINING THE FRONTIER OF URBAN SYSTEMS

WORLD MODELS → CITY-SCALE SIMULATION

WHAT IT MEANS

AI systems that simulate how the city behaves—traffic, economy, infrastructure, citizen behavior—before actions are taken.

THE SHIFT

- From descriptive analytics → predictive & simulation-based intelligence
- From reacting to problems → testing decisions in advance

IMPLICATIONS FOR A CITY

- Policy becomes testable before deployment (zoning, pricing, mobility)
- Major reduction in policy failure and unintended consequences
- Enables anticipatory governance, not reactive administration

SIMULATE. TEST. DECIDE. BETTER OUTCOMES FOR CITIES

SCENARIO COMPARISON

SCENARIO A	Congestion Pricing	+18% Mobility Improvement
SCENARIO B	New Transit Corridor	+24% Mobility Improvement
SCENARIO C	Land Use Reform	+31% Economic Impact

KEY OUTCOMES

Lower Costs | Better Services | Sustainable Growth | Higher Resilience

TEST POLICIES. ANTICIPATE OUTCOMES. BUILD A BETTER TOMORROW.

> When we can simulate the city, we can shape the future.

DATA
Real-time city data

→

MODEL
AI models & simulations

→

SIMULATE
Explore scenarios & predict outcomes

→

DECIDE
Act with confidence & precision

→

BETTER CITY
Smarter decisions. Stronger impact.

AGENTIC AI → AUTONOMOUS DECISION SYSTEMS

AI agents that plan, reason, and execute tasks independently across workflows and systems.

WHAT IT MEANS

AI agents that can plan, reason, and execute tasks independently across workflows and systems.

THE SHIFT

- From task automation → goal-driven autonomy
- From human-in-the-loop → AI as an operational collaborator

IMPLICATIONS FOR A CITY

- Government workflows become self-orchestrating (permits, approvals, case handling)
- Significant reduction in manual administrative overhead
- Enables 24/7 adaptive service delivery at scale

REAL IMPACT FOR CITIES

Always-on service delivery
AI agents keep city operations running 24/7, without delays.

Lower overhead, higher efficiency
Automated decisions and actions reduce manual effort and cost.

Smarter decisions at scale
Agents adapt in real time for better outcomes across the city.

EXAMPLE: PERMIT APPROVAL WORKFLOW

Citizen submits permit application → AI agent reviews, validates, and gathers required information → Agent coordinates with relevant departments → Agent makes decision and issues permit → Citizen notified. Record updated across systems.

PHYSICAL / EMBODIED AI → AUTONOMOUS OPERATIONS

AI embedded in robots, drones, and physical systems that act in the real world.

WHAT IT MEANS

AI embedded in robots, drones, and physical systems that act in the real world.

THE SHIFT

- From digital intelligence → physical execution
- From monitoring systems → acting systems

IMPLICATIONS FOR A CITY

- Automation of inspections, maintenance, logistics, public safety
- Faster response times (real-time or near real-time operations)
- Structural shift in cost: less labor-intensive, more AI-augmented operations

IMPACT ON CITIES

FASTER RESPONSE TIMES

Real-time or near real-time operations save lives and improve services.

SAFER, RESILIENT COMMUNITIES

Continuous monitoring and rapid intervention reduce risks.

LOWER COSTS, HIGHER IMPACT

Less labor-intensive operations with greater accuracy and scale.

SUSTAINABLE OPERATIONS

Optimized resource use, less waste, lower emissions.

AUTONOMOUS SYSTEMS IN ACTION ACROSS THE CITY

INSPECTIONS

Drones and robots inspect bridges, buildings, and utilities.

MAINTENANCE

AI detects issues early and robots/drones carry out maintenance.

LOGISTICS

Autonomous vehicles deliver goods, collect waste, and manage assets.

PUBLIC SAFETY

AI-powered robots assist in patrols, monitoring, and alerts.

EMERGENCY RESPONSE

Drones and robots reach high-risk areas and support first responders.

AI-NATIVE VIRTUAL WORLDS → LIVING CIVIC ENVIRONMENTS

Immersive. Intelligent. Inclusive. The next evolution of how cities engage, serve, and collaborate.

WHAT IT MEANS

Persistent, AI-driven virtual environments where citizens, services, and systems interact.

THE SHIFT

- From static portals/websites → immersive, interactive experiences
- From transaction-based interaction → continuous engagement

IMPLICATIONS FOR A CITY

- Government becomes always-on, conversational, and experiential
- New models of participatory governance (planning, consultation, co-creation)
- Increased citizen trust, engagement, and accessibility

PERSONALIZED EXPERIENCES
Tailored to needs and preferences

CONVERSATIONAL INTERFACES
Natural language for all interactions

REAL-TIME INFORMATION
Live data, updates, and insights

ACCESSIBLE FOR ALL
Inclusive by design, anytime, anywhere

SECURE & TRUSTED
Privacy-first, citizen-centric

BUILDING TRUST. STRENGTHENING COMMUNITIES. SHAPING THE FUTURE—TOGETHER.

AI-native virtual worlds transform how cities listen, involve, and deliver for every citizen.

DIGITAL TWINS + IMMERSIVE COLLABORATION → REAL-TIME CONTROL SYSTEMS

Live digital replicas of city systems integrating IoT data, AI predictions, and simulations.

WHAT IT MEANS

Live digital replicas of city systems integrating IoT data, AI predictions, and simulations.

THE SHIFT

- From visual dashboards → decision and control systems
- From periodic planning → continuous optimization

IMPLICATIONS FOR A CITY

- Real-time optimization of traffic, energy, utilities, infrastructure
- Enables city-wide coordination across agencies
- Moves the city toward self-optimizing systems

IMPACT ON THE CITY

REAL-TIME OPTIMIZATION

Continuously optimizes traffic, energy, utilities, and infrastructure for better outcomes.

CITY-WIDE COORDINATION

Breaks down silos and enables seamless collaboration across agencies and systems.

SELF-OPTIMIZING SYSTEMS

Learns, adapts, and improves automatically—creating a more resilient, efficient, and sustainable city.

FROM DATA TO ACTION: CONTINUOUS OPTIMIZATION CYCLE

1. INGEST
Real-time data from across the city

→

2. ANALYZE
AI models analyze, predict, and simulate

→

3. DECIDE
Recommendations and automated actions

→

4. ACT
Systems execute changes in real time

→

5. LEARN
Outcomes feed back for continuous learning

POWERING THE AI-ENABLED CITIVERSE: ECOSYSTEM ENGINE

FROM POLE VAULT TO EASY HURDLE – AI LOWERS THE BARRIER.

Cities focus on ideas and innovation, not software development or infrastructure.

THE OLD WAY:
HIGH BARRIER

Complex to build.
Hard to scale.

- Long development cycles
- High cost
- Specialized expertise required
- Siloed systems
- Slow to innovate

SOFTWARE INFRASTRUCTURE COMPLEXITY

RESULT: Innovation slows down.
Potential stays behind the barrier.

THE NEW WAY:
AI-POWERED LOWER BARRIER

Easy to build. Infinite to scale.
Focus on impact.

- Writes the code
- Debugs automatically
- Suggests solutions

AI

- Generates documentation
- Integrates systems
- Ensures quality and security

AI LOWERS THE BARRIER

RESULT: Innovation accelerates.
Ideas turn into impact—faster.

AI DOESN'T REPLACE DEVELOPERS.
IT EMPOWERS EVERYONE TO BUILD.

Developers | Analysts | Policy Makers | Entrepreneurs | Citizens

CAN WE BUILD ACCELERATED ECOSYSTEMS IN CITIES TO CAPTURE THE AI-ENABLED CITIVERSE OPPORTUNITY?

THANK YOU