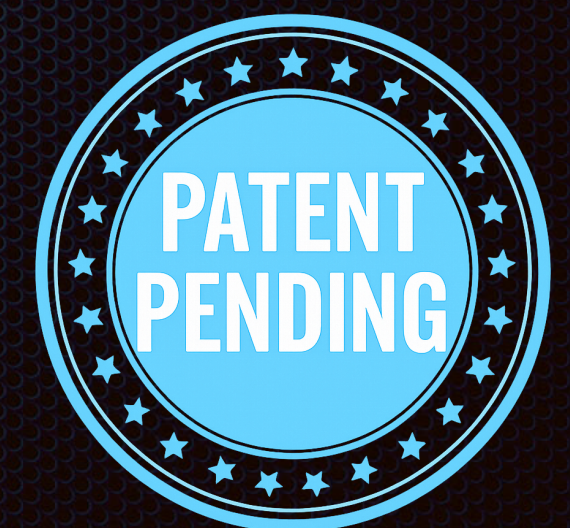


National Job Demand Database (NJD²)

An AI-Powered Workforce Intelligence Platform for the Future of Work

Proposed by: Joseph D Collins, Jr



The Problem

- ✦ U.S. labor data systems are outdated, fragmented, and slow.
- ✦ Workers and educators lack real-time job market visibility.
- ✦ Policymakers cannot anticipate automation and regional shifts.
- ✦ Economic and educational planning are disconnected from emerging needs.

The Solution

- ✦ National Job Demand Database (NJD²) which integrates public and private labor data into one AI-powered system.
- ✦ Provides real-time job demand and predictive forecasts.
- ✦ Visual dashboards and AI modeling to inform decisions of the workforce, educator, researcher, and policy maker.

Core Features

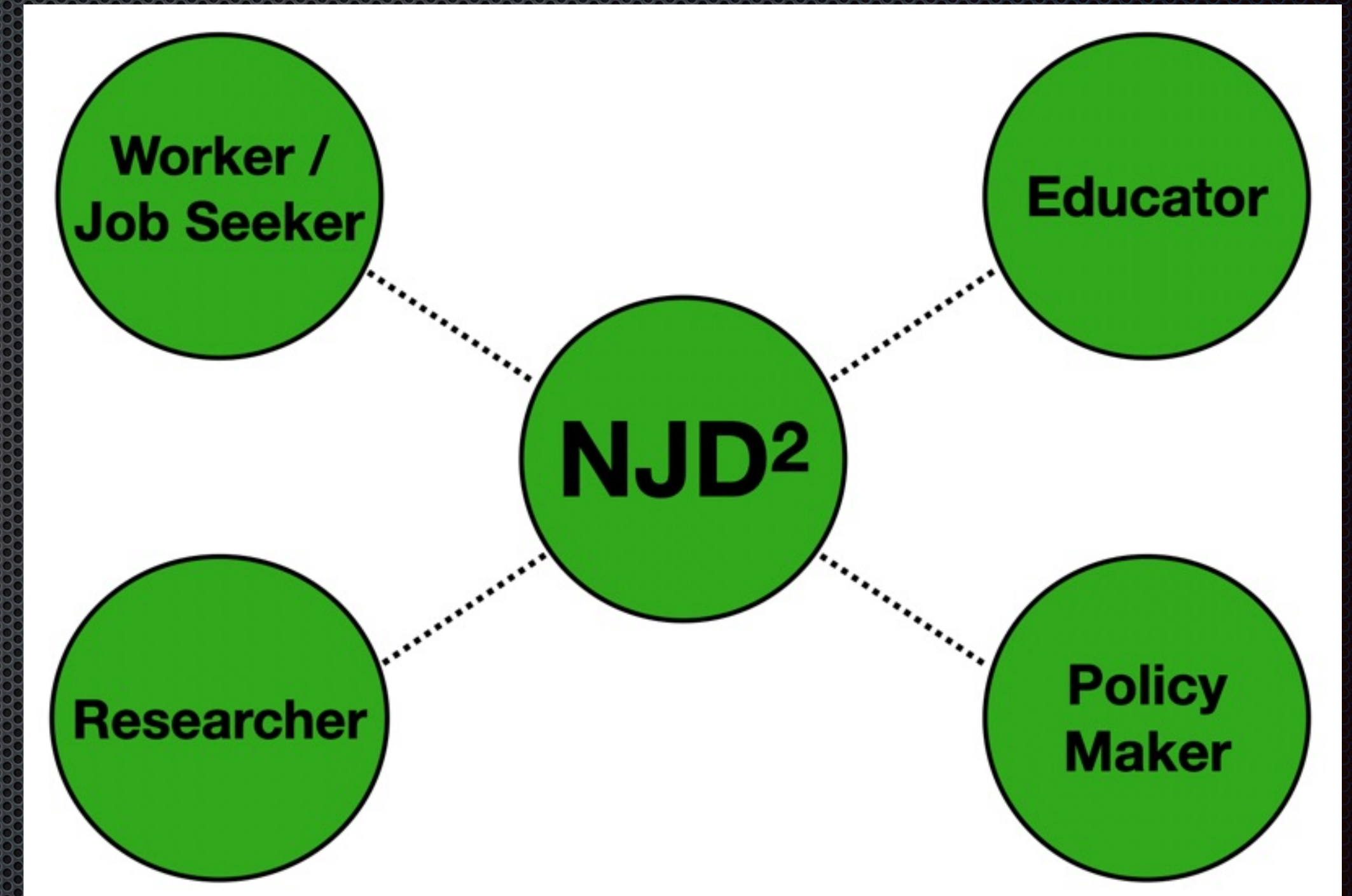
- ✦ AI-driven labor market analysis
- ✦ Predictive modeling (1-, 5-, 10-year outlooks)
- ✦ Skill-matching and retraining tools
- ✦ Automation risk index
- ✦ County/state/regional visualization dashboards

System Architecture

1. Data Sources: Government, education, and labor-market data
2. AI Models: Analyze patterns in skills, jobs, and automation trends
3. Data Infrastructure: Secure, scalable, and geospatially aware
4. Access Tools: Dashboards and APIs for transparency
5. Governance: Ethical AI, privacy, and data integrity

Real-World Use Cases

- Four Perspectives, One Mission — Empowering America's Workforce Through Data
- Each group — Job Seekers, Educators, Policy Makers, and Researchers — interacts with NJD² in unique, impactful ways.
- These stories show how NJD² transforms data into action — guiding decisions, shaping policy, and unlocking opportunity.
- Together, they demonstrate NJD²'s core purpose: connecting insight to impact at every level of the economy.



The National Job Demand Database (NJD²) serves diverse users across the workforce ecosystem.

Empowering Workers to Find Their Future

How NJD² guides individuals toward growing career paths

- Meet Tanya, a mid-career worker facing automation in her logistics job.
- NJD²'s dashboard shows real-time data on emerging roles in her region.
- She discovers that supply chain analytics and fleet technology jobs are on the rise.
- With one click, NJD² connects her to nearby training programs and employers.
- Six months later, she's re-employed — in a field she never thought was possible.



Training Tomorrow's Workforce, Today

How NJD² helps colleges and workforce boards align with demand

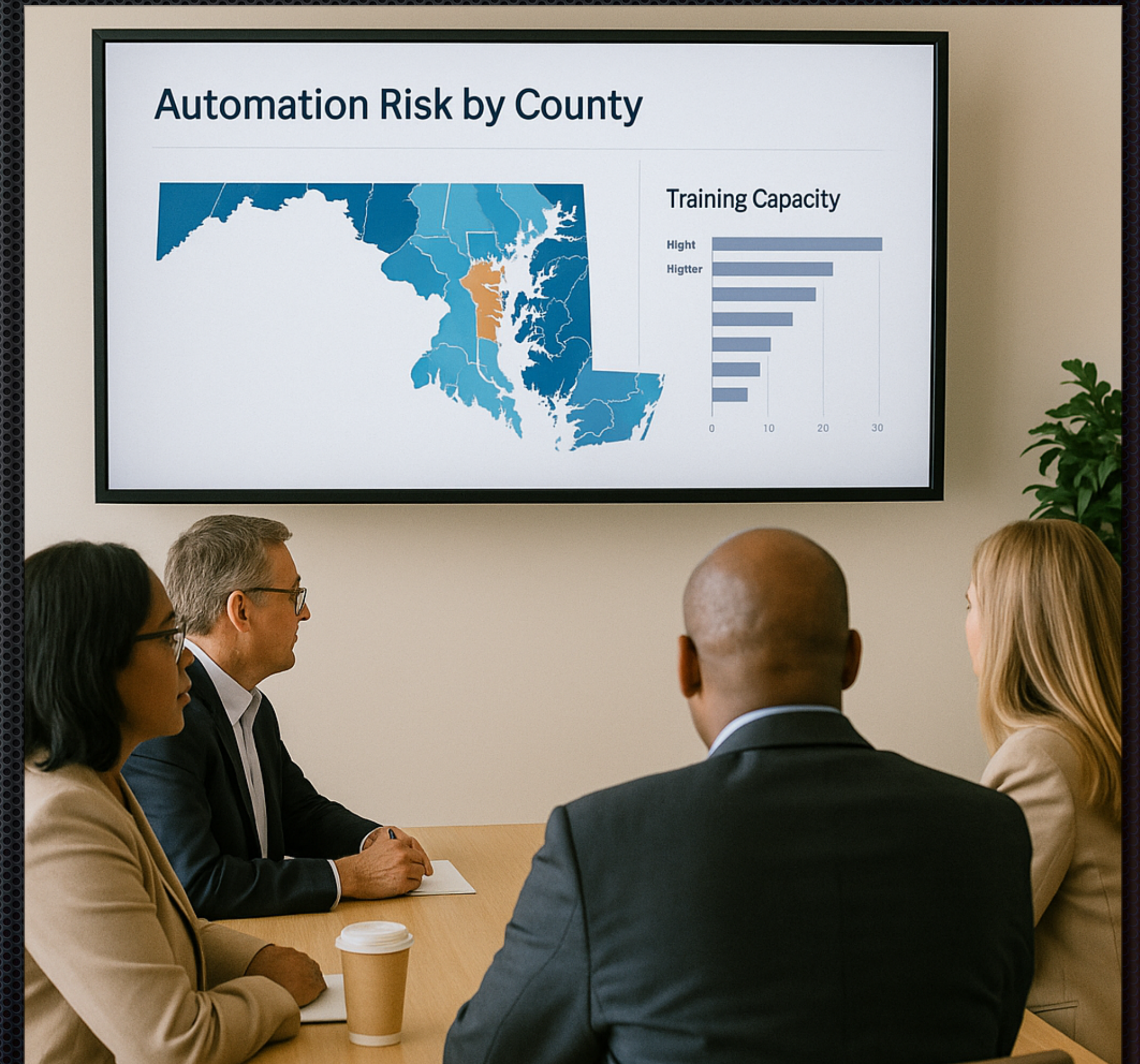
- ✦ A community college dean uses NJD² to analyze five-year projections for her region.
- ✦ The data reveals a surge in clean energy technician and AI maintenance jobs.
- ✦ She adjusts the school's curriculum and certification programs accordingly.
- ✦ NJD² helps the college secure federal training grants for these high-demand fields.
- ✦ Local students graduate into guaranteed job pipelines.



Smarter Policies for a Changing Economy

Using NJD² to shape equitable, data-driven workforce policy

- ✦ A state workforce council uses NJD² to identify counties at risk of automation loss.
- ✦ The AI system maps displacement risk and correlates it with training capacity.
- ✦ Policymakers redirect resources to under-served regions before jobs disappear.
- ✦ NJD²'s predictive data supports evidence-based legislation for workforce mobility.
- ✦ Result: unemployment prevention, not just reaction.



Turning Data into Discovery

How NJD² accelerates workforce and economic research

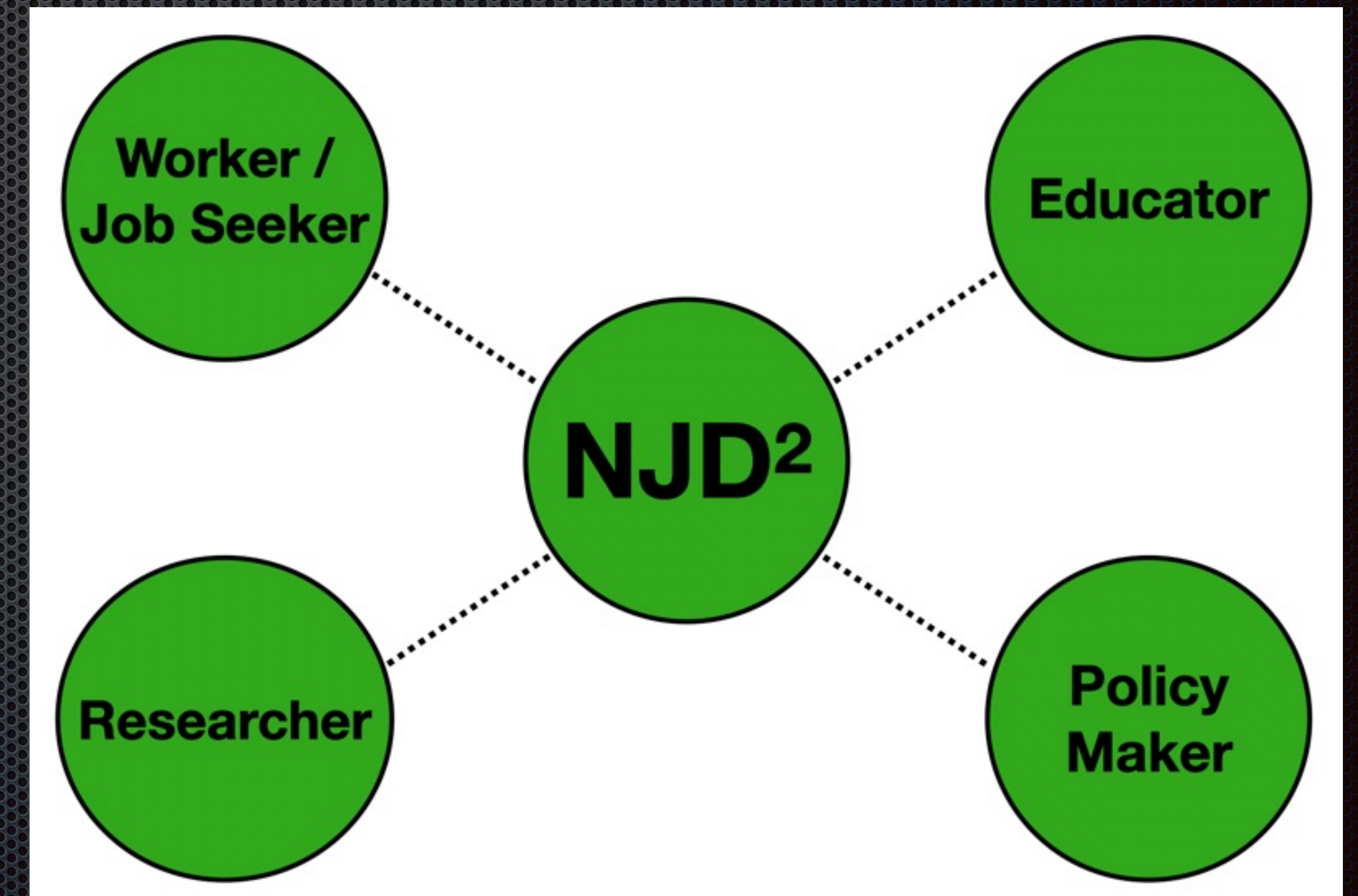
- A university research team uses NJD² to study skill gaps in renewable energy.
- They pull API data to compare education outputs vs. employer demand.
- The findings lead to a published policy paper influencing state funding decisions.
- Analysts cite NJD² as a national reference point for workforce forecasting.
- The database becomes both a research engine and a public trust resource.



Four Perspectives, One Platform

How NJD2 empowers every corner of America's workforce ecosystem

- Job Seekers – Discover new opportunities, plan retraining, and find pathways to stable, high-demand careers.
- Educators & Workforce Boards – Align curriculum and certification programs with verified, real-time employer demand.
- Policy Makers – Anticipate automation risks, target regional investment, and craft equitable workforce policy.
- Researchers & Analysts – Unlock data-driven insights into labor trends, skill gaps, and economic transformation.



Together, these four user groups represent the connected network that NJD2 serves — enabling data-driven action from classrooms to Congress.

Existing Landscape: Who's Addressing Workforce Data Today

- Lightcast – Rich job-posting and skills analytics; strong for employers and educators, but proprietary and not a national public utility.
- JobsEQ (Chmura) – Solid regional workforce trends and gap analysis; subscription-based and fragmented by regions.
- LinkedIn Talent Insights – Real-time skills and hiring trends; focuses on LinkedIn's user base, not national workforce planning.
- Indeed Hiring Lab – High-frequency job posting data; valuable but limited to Indeed's platform.
- BLS & State Labor Market Systems – Authoritative but slow refresh cycles, and fragmented across states.
- Research Institutes – High-quality insights, but limited if at all user-facing operational tools for workers or local agencies.

Today's tools provide important snapshots — but no unified, national, AI-powered system exists.

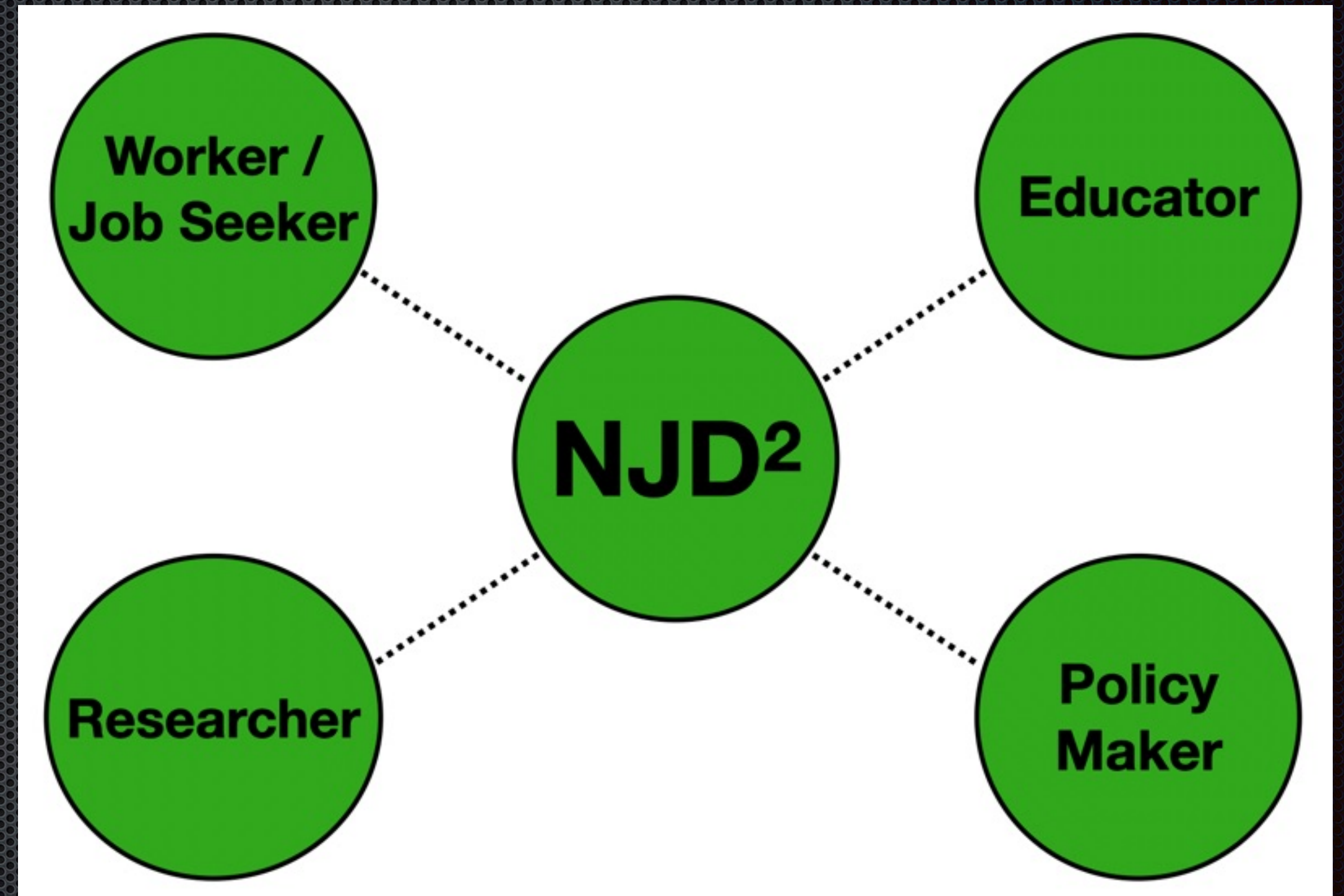
The NJD2 Gap: What's Missing Today

- ✦ No single national platform with standardized metrics across all states, counties, and regions.
- ✦ Fragmented datasets, many locked in private systems without integration or shared governance.
- ✦ Most tools describe the present — few forecast future job demand, skill evolution, or automation risk.
- ✦ Limited access for public institutions, especially community colleges, workforce boards, and local governments.
- ✦ No public-good architecture that blends transparency, ethics, privacy, and long-term sustainability.
- ✦ Workers, educators, and policymakers lack one shared source of truth to coordinate decisions.

NJD2 fills the gap: a unified, AI-driven, public-good workforce intelligence platform for the entire nation.

Conclusion

- ✦ The National Job Demand Database (NJD²) is a next-generation public data infrastructure.
- ✦ It unites AI, open data, and public trust to prepare America's workforce for the future.
- ✦ No worker or community should be left behind in the age of automation.



Let's Shape the Future of Work — Together

If you'd like to:

- ✦ Learn more about NJD²
- ✦ Discuss collaboration or funding
- ✦ Share ideas or feedback

Contact and/or Connect:

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