

LINCOLN, NEBRASKA: LOCAL GOVERNMENT R&D AGENDA WORKSHOP

A MetroLab Network Report Out
November 21, 2024



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Introduction: “Be Actionable to be Applicable”

As key government decision makers continue to be faced with difficult social issues and complex policy matters while being constrained by budgetary and political realities, MetroLab hosted a workshop at the University of Nebraska-Lincoln, to identify priority research areas and improve the dynamic between those decision makers and the local academic & research community in Lincoln, Nebraska. This report is a summary of the discussion and input from the City of Lincoln at the November 7, 2024 workshop.

In Lincoln, Nebraska, Local Government decision makers have a clear passion for making a difference in their community. They do not want to muddle through or preserve the status quo, but rather build a city for their resident’s future. They want to ensure that the difference they are making is measurable and meaningful, and are craving the proper tools to do so. Policy & decision makers seek clear metrics to know if their interventions are working; and if not, they want to know what adjustments to make. This includes qualitative data on the residents they serve, to inform evidence based policy approaches.

MetroLab, a nonprofit that aims to equip cities with science, was grateful to see such a robust turnout at this workshop. Below, we have captured priority research needs in Lincoln, barriers to partnership (and potential solutions), and suggested next steps.

Lincoln's Research Needs

The City of Lincoln, NE identified numerous research opportunities. A summary of these research priority needs includes:

Government Services & Community Engagement

- What are best practices in receiving community input and feedback from various community stakeholders in a proactive and equitable manner?
- What are innovative ways to measure the financial value (cost/benefit) of non-direct service departments in city government (i.e. internal services such as Law, IT, etc.)?
- What tools can City departments use to become more efficient, achieving priority goals at scale while maintaining resources at the current level?

Economy & Finance

- How can the City of Lincoln better measure the economic mobility and progression of immigrant communities, to understand how long support needs to be provided?
 - How can variations in support slow or hasten their economic mobility?
- What is the impact of housing on residents' ability to access economic mobility and security, especially on the most vulnerable populations (ie: immigrant communities, the elderly)?
- What are specific AI use cases and tools that the City of Lincoln can utilize to become more efficient across departments?

Climate

- How can the City develop a decision support tool that would help city leaders understand the climate impact of their decisions?
 - Would it be possible for a model to show a complete story, for example how climate is expected to change in X ways over a given period of time, and how this would be impacted by, for example, heat islands or transportation?
- How can the City utilize AI and other new technologies to monitor and regulate the presence of PFAS?
- What resources are necessary to ensure that Lincoln residents have the ability to keep living in their community despite a changing climate?
 - What are prevention and mitigation interventions that the City can undertake to prevent environmental migration, especially for vulnerable populations?
- How can the City of Lincoln better utilize public parks and green infrastructure to combat and reverse the negative effect of a changing climate?
- What are evaluation methods that would better allow for the City to infuse its 2050 decarbonisation goals into their long range transportation plan, ensuring policy alignment and not sacrificing one goal for the sake of the other?

Lincoln's Research Needs (cont.)

Planning, Transportation & Infrastructure

- How can the City couple AI, along with existing and needed new data sets to prioritize infrastructure projects and promote best practices across the mobility system in Lincoln?
- How can the City capture and utilize data related to all modes of personal mobility (streets, bus, ebikes, TNCs, borrowing vehicles) to inform upcoming upgrades to the City's comprehensive plan and long range transportation plan.
 - E.g. more data and understanding of personal mobility in a broad sense. Where does Lincoln want to be on the mobility front moving forward?

Human Services & Housing

- What is the prevalence of food insecurity amongst the senior population?
- What are new ways the City can support cost burdened residents and their access to housing? What are other specific barriers to achieving housing goals?
- How can the City track housing affordability at the granular level, especially for vulnerable populations?
 - For example, if the City deploys a policy or process which reduces the percentage of income required for housing, but that individual still qualifies as cost burdened (i.e. moving from 50% of income to 45% of income needed for housing), how can the City capture that data?
- What is needed to ensure that a range of housing, from affordable to market rate, is provided to meet the demands of community growth?

Structure/Format of Research:

We asked workshop attendees about ways in which research (or the output deliverable) can be formatted in a way that is most useful to the City of Lincoln. Here are ways in which university partners can align research with the processes of the City:

- Research should be written with a “lay audience” in mind.
- Research should include a straightforward executive summary, accompanied by talking points for the public.
- Research outputs must be actionable and applicable for the City of Lincoln.
- It would be helpful if researchers could provide technical assistance regarding implementation of their findings/recommendations.
- Research metrics should measure not simply with a “pass/fail,” but with a fine gradient.
- Research, including data collection, should be ongoing and continuous.
- Research reports should not be one-time occurrences. Regular reports (preferably in the form of quarterly reports) should be made available to government partners.

- Cities value data that is broken down across demographics: income cohorts, geography, age cohorts, etc.
- The clearer the recommendation for specific actions, the better (including timelines).
- Data visualizations are effective. Add infographics to help illustrate key takeaways.
- Prototypes are helpful.
- Be mindful of the regulatory environment at the local, state, and federal levels.

Keys to Collaborative Support:

We asked workshop attendees about ways in which universities can support policy development and the programmatic needs of the City of Lincoln, and how the City can support University innovation and economic growth. The responses from both local government and university participants were numerous, focused on strategically aligning the City and the University so that the City of Lincoln serves as a living laboratory focused on practical research and actionable outcomes. Their desire can be summarized in one word: engagement.

To achieve an elevated level of engagement, the following is recommended for the University of Nebraska-Lincoln:

- Collaborate with the City starting at the beginning of a research project rather than the end
- Get civically engaged by attending meetings of the city council or a department open-house
- Volunteer for a city board or commission
- Partner with a community non-profit organization
- Market potential collaborative opportunities to city departments and officials
- Provide assistance with technological advancements and resource training

To achieve an elevated level of engagement, so that academic researchers would be able to treat the City similar to how a consultant treats a client, the following is recommended for the City of Lincoln:

- Convene regular cross-sector workshop meetings
- Share resources and data
- Apply for grants as a University partner
- Develop specific research questions for academic researchers

Moving Forward:

As a result of the workshop, MetroLab has identified several next steps to work together, equipping the City of Lincoln with actionable research in partnership with UNL and other university institutions:

- The City can identify a single point of contact that can serve as the liaison to the University of Nebraska-Lincoln.

- Working more with UNL’s Office of Research Engagement Zone Coordinator and Research Impact Coordinator, who are responsible for supporting faculty as they think through the broader impact of their work.
- Model the extension office partnership with counties across the state to the partnership that can take place with the City.
- Consider putting in place a MOU agreement between the institutions. You can view template language on MetroLab’s website [here](#).

Conclusion

Ultimately, MetroLab aims to change the dynamic between local governments and the research community – empowering cities and counties to procure and prioritize research, while working with the university community to ensure research outputs work harmoniously with local government processes. We look to do this by developing a national Local Government R&D agenda to address the most pressing needs of local governments across the United States.

Cities like Lincoln are often on the front lines of solving difficult and complex social issues such as affordable housing, mental health, and digital equity. Universities can serve as a key partner, producing cutting-edge research, ideas, and technology that could help cities solve some of these complex issues.

At the conclusion of the city-hosted workshops, MetroLab will work with federal agencies and congressional stakeholders to fund projects that would directly support and address the Local Government R&D Agenda. We hope to bring those projects back to cities, with MetroLab serving as a matchmaker of research and programmatic outcomes back to the local communities we partner with.

We are energized by the workshop in Lincoln. There is an enthusiasm in this community to work together in finding innovative solutions that will bring impact to the Lincoln Community. If you have any questions or ideas for next steps in Lincoln, please reach out to us at info@metrolabnetwork.org.

Appendix: Notes Captured from the Workshop

Workshop Question responses:

During the workshop, several interactive questions were asked of the participants. Those answers informed the summary above, and are listed in full below.

“In five words or less how do you know who to work with from the other institution?”

Answers from local government (or local government adjacent) respondents:

- *Ask a coworker*
- *Previous work*
- *Call Mike Zeleny*
- *Call Mike Zeleny*
- *Haven't yet*
- *Start with internet*
- *Call public policy center*
- *Start with my local networks*
- *Look it up*
- *Internet searches*
- *Phone a friend*
- *Ask a colleague - word of mouth*
- *Previous experience*
- *Look at the department name*
- *Call someone I know in UNL system*
- *I don't know*
- *I ask my boss*
- *Start with faculty I know*
- *Decide what department to contact*
- *Google them*
- *Ask someone that works there*
- *Word of mouth*
- *I do not know*
- *Through others at university*
- *Prior connections or professor*
- *Shared interests*

Answers from University respondents:

- Identify audiences and stakeholders most likely to benefit from particular research areas
- Online search
- ASIL VJ NELSON

Answers from University respondents (continued):

- Who are the external connections at UNL
- Webpage contact
- Network event
- Publications
- Tap into existing relationships
- There is mutual benefit
- Search online
- Organize opportunities for UNL faculty to engage with/hear from community members
- Already know/can ask someone
- I don't
- Through relationships
- I know a guy who knows a guy
- We already work with them
- Call connection people on campus
- Network and word of mouth

“What myth do you want to bust to the other side?”

Answers from local government (or local government adjacent) respondents:

- Your question/problem/issue isn't addressed/thought about/considered
- We aren't ever looking for ways to improve
- These are easy jobs with very unlimited resources
- Government can't be innovative or adaptive
- City employees are apathetic and not as competent as private sector
- We have a lot of \$
- We aren't able to quickly get projects done
- That cities don't need cutting edge technology
- That we still use triplicate forms and don't use technology now
- Non-Profit organizations can't be sophisticated and do data driven decision making (we're more than warm and fuzzy)
- We don't base decision on generating revenue
- Cities engage in robust planning not just subject to the whims of political expediency
- We are hard to partner with
- Local government is uninformed and inefficient
- City staff can't be really efficient and productive
- City folks/employees only work 8-5
- Politics drives decisions instead of positive community outcomes
- We are not hard to work with.... on purpose
- Not apathetic
- City has lots of extra resources

Answers from University respondents:

- Scientists are smarter than other people (myth busted)
- That academics do not care about reducing unnecessary human suffering
- That researchers only care about theories
- UNL can't actually help the city
- We are only interested in ourselves
- That we're not interested in long term reciprocal partnerships
- That we don't put use inspired resources first
- Prof's work only happens in lab and too scientific to be useful in real world
- We don't want to impact the state

“If you could get research on [blank], what would you want?”

Answers from local government (or local government adjacent) respondents:

- Local climate vulnerability assessment
- True need for a quality early childhood and sustainable models to support
- Playground research - what apparatus(es) get kids the most activity/spend the most time?
- City wide data on housing conditions
- Impact of housing conditions on life-span, how is the success of children impacted?
- Qualitative impacts of our housing programs and affordable housing policies
- How to solve the vacant storefront issues in downtown and neighborhood business districts
- Housing quality
- Housing affordability
- What is the economic mobility of refugees/immigrants in Lincoln after 1,3,5 and 10 years?
- Where and how are the tsunami of older adults going to live and remain financially secure?
- What level of nutritional insecurity exists for 60+ of asset inventory and how to address it?
- Research on how climate change may impact migration to Lincoln and the timing of this and magnitude?
- How to grow a local clean energy workforce
- Workforce:
- Development of career ladders
- Help focusing projects to fund - built ROI
- Tools to use AI for career planning-connecting people with jobs that match their skills and interests
- Using AI to combine data on infrastructure, streets,-utilities to prioritize projects
- Determining holistic funding mechanisms for transpiration, utilities, flood mitigation, water quality
- How can the city provide/support various forms of mobility options to its people in the most energy efficient and effective way?
- Curbside management technology & best practices/on-street EV charging
- Native peoples and land - how landback could/should work here

Answers from local government (or local government adjacent) respondents (cont.)

- Demand response - optimal program design to increase participation and reliability of demand reduction
- Traffic flow
- E-bikes and trails safety - Data on safety
- How to expand our transit systems given resource limitations
- How to reduce transportation emissions in our context
- Green finance endowment fund? Banking?
- Modeling tools / prototypes/pilots
- Modes of communication / procurement of university services
- What changes could we make to the city's subdivision ordinances & design standards to reduce development costs & improve affordability, while still meeting the city's goals of livability, efficiency, climate resilience, etc
- How to leverage green financing tools to advance sustainability and resilience projects
- How to significantly increase energy efficiency in buildings to achieve Lincoln's climate goals
- turf/grass care with less input for parkland
- What is the best way to set up a stormwater utility for Lincoln
- Determine the best method of eliminating PFAS particularly in Water-Wastewater-Landfills-environment
- Create a climate vulnerability assessment & adaptation plan
- Climate decision support tool
- Climate emissions
- Climate models
- Mitigation measures integrated into one easy to use tool
- How to understand the climate impacts of potential projects
- Distribution system planning - increase adoption of distributed solar with no coast transfer to non-solar customers
- Decarbonization application of CCS to natural gas turbines
- 0 emissions in supply chains
- Clean procurement practices
- Workforce strategy - green jobs
- Prairie grass and carbon sequestration
- How can the city better involve community members in government decision making to improve the services we offer and improve our community
- Green financing - Capital funds? Banks?
- Support with evidence based policy making
- Easiest low impact
- Easiest high impact
- Hardest low impact
- Hardest high impact

Answers from local government (or local government adjacent) respondents (cont.)

- Metrics to demonstrate effectiveness of local government to the community (in an informative & persuasive way)
- How to sustain neighborhood associations OR - how to get or keep people involved in neighborhood associations
- Cost-benefit analysis of a quickly growing non-profit sector (NPO)
- Actual \$ impact of changing regulatory decisions
- Recruitment/retention techniques
- How AI can replace lawyers and/or lawyer tasks
- How AI can replace paralegals and/or paralegal tasks
- Work load analysis
- How to establish cross departmental data dashboard auto populated from multiple software systems
- The most effective, least obtrusive way to obtain priority setting from the general public

“What research do you think local government needs?”

Answers from University respondents:

- Assessment of property values
- Water resources management
- Carbon soil health
- Support and workforce development
- Micro Mobility in local communities - scooters, bike routes , walkabilities
- Data driven decision support on EV, affordable housing, renewable energy, considering socio economic and environmental benefits
- Energy efficiency of buildings
- Studies on effectiveness of early childhood development programs
- How to create belonging
- How to help kids succeed in schools and feel like they belong
- What works for the people who need the most
- Poverty
- Actionable research that is responsive to local community needs
- On addressing housing issues
- Systems and operations research
- Community flow investigation eg. hazmat that go through communities for preparing EMS routes
- Help developing meaningful metrics for success
- Needs assessment - engage with city and key community members
- New tech for GHG emissions reduction

Answers from University respondents (cont.)

- Predictive data science on
- Effects of public policy
- Infrastructure changes
- Housing programs
- Land use
- personnel/training
- Innovative finance for funding continuity
- Risk mitigation
- Emerging needs
- E.g. public private partnership
- Fire Dept rescue needs a AI solution for 911 calls to sort truly urgent from NOT OR city needs an alternative # for everyday needs
- In addition to physical infrastructure plan for social infrastructure that facilitates positive social connection
- Design rollout of changes with data to identify mechanisms that provide desired, unintentional or no outcomes (similar to city owned housing)
- City wide measures of youth STEM interest and identifies to find out “what works for STEM centric community members”

“How can universities support policy development and programmatic needs?”

Answers from local government (or local government adjacent) respondents:

- Support with evidence based policy making
- Assist in program design and evaluation
- Assist with technological advancement and resource training
- Use the city’s needs to proof-test academic research
- Coordinate research projects and student projects with the city’s priority policies and needs
- Have university leaders serve on local government boards and commissions
- Sharing more publicly information about your research topics
- Provide evidence that supports decision making and grant approval
- Market potential opportunities and capabilities to common roles of city departments
- Provide interns, data, guidance
- Partner on policy/program research needs we identify and help find funding
- Communicating opportunity
- Provide innovative methodology on data use
- Participate in community engagement session hosted by the city
- Attend board or commission council meetings to understand issues and research needs

Develop relationship with staff and stay abreast of projects/challenges the city is facing

Answers from local government (or local government adjacent) respondents (cont.):

- Get involved in local government, come to public hearings, open houses, to learn about how government works. Good consultants do this because they view us as clients but it helps them better support the government
- Reach out to city staff to build connections. We are busy and time is limited to search out connections
- Provide data analysis to aid in decision making
- read/watch local news to stay abreast of issues
- Decrease indirect costs on grants so we can afford collaboration
- Become fully engage in community data
- Engage with nonprofits in community connected with your research area
- Provide research and results that support city regulation/investments.
- Workshops like this and/or open lines of communication about what UNL is already researching and developing
- By providing access to a wider angle lens than just our community
- By providing new information/research/data on how to solve problems and by providing workforce to carry out work/solutions.
- Include positive outcomes for the entire city and community when developing budget, curriculum, and other programs

“How can local government support university innovation and economic growth?”

Answers from University respondents:

- Asking questions
- We are strategic alignment
- Help convene cross-sector convenings (like this one) to explore shared needs and interests
- By providing the resources to help with common goals set by both local governments and universities
- Have a position dedicated to coordinating partnership with UNL and other higher ed institutions
- Shared resources
- Tell us what you need
- Make finding available/transparent
- Support partnership on federal grants
- Share data and form partnerships
- Facilitate data collection
- Offer testbed
- Team up for funding
- I always like research questions that come from real world needs. If there is a way I could know the needs I will be so happy to work on developing in to a practical research
- Universities can help by treating the city as a living lab and aligning research questions with city needs when possible

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