

AI Blueprint for the Future

A large, light gray background graphic. On the left is a stylized, swirling line shape. On the right is a circuit board pattern with lines and dots.

Coalition for Innovation, supported by LG NOVA

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The views and opinions expressed in the chapters and case studies that follow are those of the authors and do not necessarily reflect the views or positions of any entities they represent.

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Preamble

The Coalition for Innovation is an initiative hosted by LG NOVA that creates the opportunity for innovators, entrepreneurs, and business leaders across sectors to come together to collaborate on important topics in technology to drive impact. The end goal: together we can leverage our collective knowledge to advance important work that drives positive impact in our communities and the world. The simple vision is that we can be stronger together and increase our individual and collective impact on the world through collaboration.

This “Blueprint for the Future” document (henceforth: “Blueprint”) defines a vision for the future through which technology innovation can improve the lives of people, their communities, and the planet. The goal is to lay out a vision and potentially provide the framework to start taking action in the areas of interest for the members of the Coalition. The chapters in this Blueprint are intended to be a “Big Tent” in which many diverse perspectives and interests and different approaches to impact can come together. Hence, the structure of the Blueprint is intended to be as inclusive as possible in which different chapters of the Blueprint focus on different topic areas, written by different authors with individual perspectives that may be less widely supported by the group.

Participation in the Coalition at large and authorship of the overall Blueprint document does not imply endorsement of the ideas of any specific chapter but rather acknowledges a contribution to the discussion and general engagement in the Coalition process that led to the publication of this Blueprint.

All contributors will be listed as “Authors” of the Blueprint in alphabetical order. The Co-Chairs for each Coalition will be listed as “Editors” also in alphabetical order. Authorship will include each individual author’s name along with optional title and optional organization at the author’s discretion.

Each chapter will list only the subset of participants that meaningfully contributed to that chapter. Authorship for chapters will be in rank order based on contribution: the first author(s) will have contributed the most, second author(s) second most, and so on. Equal contributions at each level will be listed as “Co-Authors”; if two or more authors contributed the most and contributed equally, they will be noted with an asterisk as “Co-First Authors”. If two authors contributed second-most and equally, they will be listed as “Co-Second Authors” and so on.

The Blueprint document itself, as the work of the group, is licensed under the Creative Commons Attribution 4.0 (aka “BY”) International License: <https://creativecommons.org/licenses/by/4.0/>. Because of our commitment to openness, you are free to share and adapt the Blueprint with attribution (as more fully described in the CC BY 4.0 license).

The Coalition is intended to be a community-driven activity and where possible governance will be by majority vote of each domain group. Specifically, each Coalition will decide which topics are included as chapters by majority vote of the group. The approach is intended to be inclusive so we will ask that topics be included unless they are considered by the majority to be significantly out of scope.

We intend for the document to reach a broad, international audience, including:

- People involved in the three technology domains: CleanTech, AI, and HealthTech
- Researchers from academic and private institutions
- Investors
- Students
- Policy creators at the corporate level and all levels of government



Appendix C:

An AI Framework for Community-Centered Problem Solving

Author: John Barton

Context

In local communities, individuals often see problems firsthand — housing insecurity, healthcare gaps, food access, workforce barriers, or civic challenges — but they feel that they are tackling these issues alone. Without connection, well-meaning individuals may duplicate efforts, waste scarce resources, fragment advocacy, or weaken collective bargaining power. Over time, these missed opportunities leave motivated leaders frustrated or burned out.

- **Maria**, a single mother in a rural town, notices her neighbors struggling with housing insecurity but doesn't know about the nonprofit that quietly offers rental assistance.
- **James**, a retired miner, sees food access issues in his community but lacks the tools to connect with regional policy efforts that are already underway.
- **Lisa**, a community college nursing student, recognizes that her peers struggle to find affordable mental health resources on campus but is not aware of existing regional services or advocacy networks.

For under-resourced and marginalized communities, these barriers are heightened by structural inequities such as limited broadband access, transportation challenges, or language barriers. Problems linger, funding is misdirected, and community energy is lost. Yet the motivation is there; people want to act, and their resilience shows in repeated attempts to improve their communities.

As one resident put it, “I wanted to help, but I didn't know where to start.” This voice captures the central gap: motivated individuals and groups want to act, but they “don't know what they don't know” and can't easily bridge from recognition to collective action. Highlighting this gap shows not only wasted effort but also missed potential for innovation, resilience, and sustainable local solutions. This reality sets the stage for the community-centered framework, which is designed to bridge divides and transform motivation into coordinated, equitable action.

Design Objectives (Our Approach)

The goal of this project is to create an AI-supported framework that empowers individuals and communities to move from isolation to connected action. The design objectives are:

Close knowledge gaps: Help individuals surface the vocabulary and framing they need while also providing access to best practices, models, theories, current research, thought leaders, and local experts. This ensures that both global and community knowledge inform solutions.

Provide tools, data, and measurements: Equip individuals with supports such as community needs assessments, participatory surveys, and local data analysis. Tie these tools to key performance indicators (KPIs) and other measures of success so progress can be tracked, compared, and refined over time.

Facilitate connections: Use AI-driven mapping to highlight local actors, resources, and initiatives so



individuals quickly see who else is engaged on the same issues. This strengthens collaboration, reduces duplication, and aligns with safeguards against fragmentation (as noted below in the Risks & Mitigations section).

Support strategic planning: Combine questioning funnels and reflective prompts with data-driven insights to help communities anticipate risks, surface opportunities, and align actions with long-term goals. This integrates vocabulary and framing from knowledge gaps with evidence and measurement tools.

Promote equity and inclusion: Ensure marginalized voices are not only represented but also shape design, decision-making, and outcomes. Conduct equity audits of data and AI tools, apply accessibility standards, and embed participatory feedback loops so that power imbalances are actively addressed.

Enable structured iteration and continuous learning: Provide mechanisms to test ideas, capture feedback, and refine approaches. Feed these learnings back into future knowledge gaps, growth opportunities, and leadership development, supported by AI-driven tracking and transparent logs of what has been tried, adapted, and achieved.

Together, these objectives ensure that the community-centered framework is not just a process map, but a living system tied to the Framework and reinforced by Risks & Mitigations. They commit to transforming the experience of community members from isolated problem-bearers into connected co-creators of solutions, with AI serving as a guide, amplifier, and connector.

The Framework

The community-centered framework translates these objectives into a phased roadmap that guides individuals and communities from first recognition of a problem to co-created solutions. It is modular, transparent, and adaptable to different local contexts, with clear deliverables, explicit AI roles, and safeguards for governance. Each phase

builds on the one before it, ensuring continuity, equity integration, and resilience against identified risks. It starts with the core functions of a minimally viable product (MVP) and carries right through to provisions that support scaling the resulting solution.

Phase 1: Core Functions (MVP)

- Guided intake process supported by AI natural language tools that help users articulate problems in their own words
- Question-first funnels that surface knowledge gaps and build shared vocabulary before suggesting resources
- Access to curated knowledge libraries with best practices, models, theories, and current research relevant to the issue
- Equity safeguards embedded early: inclusive intake design and attention to marginalized voices from the outset

Deliverables: Prototype intake tool, initial questioning funnel, curated resource library, equity-inclusive intake protocol, and early success user journey

Phase 2: Connection & Iteration

- AI-driven mapping of local actors, organizations, and initiatives to reveal who is already engaged and where overlaps exist
- Tools for community needs assessments and participatory surveys to generate shared data, with AI analytics highlighting inequities, gaps, and duplication
- Iteration tracking that logs solutions tried, revised, and refined, including AI-supported summaries of what worked, why, and how risks were mitigated
- Built-in equity checkpoints and alignment audits to ensure marginalized groups are shaping solutions, and not just represented in them

Deliverables: Community survey templates, annotated iteration logs, reframing prompt library, pilot use case scenarios (e.g., food bank vs. co-op decision), and interim alignment audit report



Phase 3: Scaling & Governance

- Infrastructure for cross-community knowledge sharing, creating a collective knowledge base of problems, ideas, and solutions while preserving local nuance
- Governance safeguards including rotating leadership, alignment audits, stress tests, and escalation protocols to ensure inclusion, prevent power capture, and sustain accountability
- Scenario modeling tools for AI-assisted exploration of trade-offs, cascading impacts, and long-term risks, with multimodal accessibility for diverse users
- Transparency mechanisms such as dashboards, feedback logs, and public validation modules to maintain trust

Deliverables: Oversight and escalation playbook to aid with knowledge transfer, governance dashboard, scenario modeler, visualization kit, public validation module, and annual equity audit

The community-centered framework positions AI as a guide and connector — a tool to surface blind spots, clarify opportunities, provide tradeoff analysis, and amplify community voices — while leaving judgment and ownership firmly with people and communities. Built-in feedback loops ensure learning flows across all phases, feeding back into new knowledge gaps, growth, and leadership development. This alignment with Design Objectives and Risks & Mitigations ensures a resilient, equitable, and scalable approach to community problem-solving.

Illustrative Example(s)

To show how the community-centered framework could operate in practice, consider the following scenarios.

Housing Stability

Maria identifies housing insecurity in her neighborhood. The AI guides her through a survey tool to capture local data, then maps organizations addressing rental assistance and highlights

regional best practices in land trusts. With reframing prompts and tradeoff analysis, Maria and her neighbors clarify options between short-term rental assistance and longer-term land trust models.

Outputs: Local housing survey, reframed options, and advocacy toolkit

Outcomes: More evidence-based advocacy, reduced duplication of effort, and strengthened collaboration with regional nonprofits

Benefits: Improved housing stability, increased leverage for community voices, and clearer pathways for funders and policymakers

Food Security

James uses the intake process to clarify his concern about food access. The AI surfaces mobile food pantries and community-supported agriculture, as well as highlights a nonprofit piloting a food co-op. Using scenario modeling, James and local partners compare tradeoffs between expanding food bank access and piloting a co-op.

Outputs: Food access map, scenario model comparing options, and resource directory

Outcomes: Improved coordination among community groups, increased visibility of marginalized voices in food policy, and fewer duplicated initiatives

Benefits: Stronger collaboration networks, better alignment with policy decisions, and scalable models for funders

Campus Mental Health

Lisa, a community college nursing student, notices that her peers struggle to find affordable mental health resources on campus. The questioning funnel helps her focus on this issue, while AI-supported mapping reveals underused regional clinics and highlights peer mentoring programs in other communities. With support from visualization tools, Lisa and her peers develop a



student-led mentoring program linked to local providers.

Outputs: Peer mentoring program design, clinic connection map, and communication materials

Outcomes: Elevated student voices, stronger collaboration between campus and community health partners, and measurable indicators of improved access to care

Benefits: Reduced strain on existing health providers, more equitable access to mental health resources, and replicable models for other campuses

Civic Engagement

A local neighborhood association wants to improve voter participation. The AI provides access to best practices from other communities, highlights local experts, and uses equity audits to surface barriers faced by marginalized residents. Through participatory survey tools, the group identifies transportation and information gaps.

Outputs: Community survey results, equity audit findings, and multilingual outreach plan

Outcomes: Partnerships with civic organizations, creation of ride-share programs, and multilingual voter education

Benefits: Measurable increases in voter turnout, strengthened democratic participation, and models for inclusive civic engagement

These vignettes show how people move from uncertainty to action, supported by AI tools that provide vocabulary, data, tradeoff analysis, and connections. Each illustrates how outputs lead to outcomes and benefits, reinforcing the community-centered framework's commitment to equity, collaboration, and sustainable change across domains.

Outputs, Outcomes, & Benefits

The community-centered framework is designed to deliver tangible products, measurable changes, and clear value for stakeholders. Outputs are the tools produced, outcomes are the changes created, and benefits are the value distributed. Together, they mirror the deliverables noted in the Framework section and reinforce the safeguards in Risks & Mitigations.

Outputs (What is produced):

- Intake tools and questioning funnels
- Curated knowledge libraries with best practices, models, theories, and current research
- Community needs assessment templates and participatory survey tools
- Iteration logs capturing solution trials, revisions, and feedback
- Dashboards mapping local actors, initiatives, and resources
- AI-enabled reframing prompt libraries, iteration analytics, and tradeoff modeling tools
- Visualization kits and governance dashboards for oversight and transparency
- Equity audit reports and participatory governance charters to embed fairness and accountability

Outcomes (What changes):

- Increased collaboration between individuals, groups, and organizations
- Reduced duplication of effort and wasted resources (e.g., 20% reduction in overlapping initiatives within pilot regions)
- Improved visibility of marginalized voices in problem-solving (measured by representation in decision-making bodies)
- More inclusive and evidence-informed decision-making, backed by both quantitative and qualitative data



- Stronger local capacity for iterative learning and adaptation
- Reduced inequities in access to resources and opportunities (e.g., increased participation of marginalized groups in 75% of projects)
- Greater alignment between grassroots needs and policy decisions
- Enhanced sustainability of community-driven solutions, with feedback loops ensuring long-term adaptation

Benefits (Who gains what value):

Community members: Access to guidance, partnerships, advocacy tools, stronger leverage in negotiations, and tangible improvements in housing, food, and healthcare stability

Nonprofits and local groups: Stronger collaboration networks, efficient use of resources, clearer alignment with funders, and reduced burnout from duplication

Policymakers: Better data, clearer needs assessments, tested solution models, scalable insights for governance, and early detection of risks or inequities

Funders: Stronger ROI through evidence-based initiatives, reduced risk, and clearer impact metrics tied to KPIs and outcomes

Developers and operators of AI tools: Legitimacy through equity-centered design, opportunities for refinement in real-world contexts, and continuous improvement validated by community use

Educators and researchers: Access to case data, models, participatory design lessons, and longitudinal insights that can inform future innovation

This separation ensures clarity; outputs lay the foundation for outcomes, which generate broad, shared benefits. In turn, the community-centered framework becomes actionable, measurable, and equitable.

Risks & Mitigations

Implementing a community-centered, AI-supported framework raises both technical and social risks. Anticipating and addressing them is essential to building trust, ensuring equity, and sustaining momentum. Each risk is paired with its consequence, mitigation, and deliverables.

1. Risk: Over-reliance on AI guidance, leading to diminished human judgment or community ownership

Consequence: Communities may lose decision-making power, resulting in dependency on technology and erosion of local leadership capacity.

Mitigation: Design AI to prompt reflection and questioning, not just provide answers. Measure success by tracking the proportion of decisions made through community-led processes, ensuring ownership remains local.

Deliverables: Community-led decision logs, reflection prompts integrated into AI interface, and evaluation reports on local ownership

2. Risk: Bias in knowledge libraries, data inputs, or model outputs that could reinforce inequities

Consequence: Marginalized groups may be further excluded, reinforcing systemic inequities in problem-solving and outcomes.

Mitigation: Apply equity audits, alignment audits, and drift detection to knowledge libraries, data inputs, and outputs.

Deliverables: Regular equity audit reports, alignment review summaries, and independent third-party audit certifications



3. Risk: Model drift or misalignment between local data realities and global models

Consequence: AI recommendations may become irrelevant or harmful if they no longer reflect local conditions.

Mitigation: Conduct continuous monitoring, drift detection, and scenario stress testing to identify and correct misalignment early.

Deliverables: Alignment audit dashboards, monitoring tools, and scenario stress test reports

4. Risk: Fragmented governance or lack of accountability in managing shared tools

Consequence: Without accountability, governance may become inconsistent, leading to misuse of tools and loss of community trust.

Mitigation: Establish transparent governance with rotating leadership, clear accountability, and escalation authority when disputes or inequities arise.

Deliverables: Participatory governance charter, rotation schedule documentation, and escalation protocols

5. Risk: Power imbalances where stronger organizations dominate weaker voices

Consequence: Smaller or marginalized groups may lose influence, perpetuating inequities and reducing diversity of solutions.

Mitigation: Build governance safeguards with equity checks, independent third-party reviews, and participatory processes to ensure marginalized voices are included. Measure inclusion by representation metrics in decision-making bodies.

Deliverables: Equity check reports, representation metrics, and independent review findings

6. Risk: Accessibility gaps, such as limited broadband or device access in rural or under-resourced communities

Consequence: Communities may be unable to access or benefit from the framework, widening the digital divide.

Mitigation: Provide plain-language explanations of how the AI works, design for low-resource settings, and ensure outputs are accessible in multiple formats (per [Web Content Accessibility Guidelines](#) – WCAG).

Deliverables: Accessibility compliance reports, plain-language guides, and low-bandwidth interface designs

7. Risk: Privacy concerns about sharing local problems, resources, and solutions

Consequence: Sensitive community information could be exposed or misused, leading to harm or mistrust.

Mitigation: Build in [General Data Protection Regulation](#) (GDPR)-style consent checkpoints so communities control what is shared, how it is used, and when information flows across networks.

Deliverables: Community consent protocols, privacy compliance reviews, and consent audit logs

8. Risk: Resistance from stakeholders skeptical of AI in community problem-solving

Consequence: Stakeholders may disengage, block adoption, or undermine the legitimacy of the framework.



Mitigation: Ensure transparency with oversight dashboards, plain-language communication, and participatory validation.

Deliverables: Public-facing dashboards, plain-language communication materials, and validation session reports

9. Risk: Data security breaches or malicious misuse of community data

Consequence: Breaches could cause material harm, erode trust, and expose communities to external exploitation.

Mitigation: Implement strong encryption, role-based access controls, and independent security audits.

Deliverables: Annual security compliance certification, encryption audit reports, and access control logs

10. Risk: Sustainability gaps if funding or support lapses after pilots

Consequence: Programs may collapse once pilots end, wasting resources and leaving communities worse off.

Mitigation: Tie deliverables to long-term KPIs, require funder commitments to ongoing equity audits, and establish reinvestment mechanisms.

Deliverables: Sustainability and reinvestment plan, KPI tracking reports, and funder commitment agreements

11. Risk: Legitimacy risks if AI outputs conflict with community knowledge or norms

Consequence: Communities may reject AI tools altogether, undermining adoption and collaboration.

Mitigation: Create participatory review boards to validate outputs against local expertise.

Deliverables: Validation reports, review board meeting records, and community alignment summaries

By naming risks, identifying consequences, embedding mitigations, and tying them to deliverables, the community-centered framework strengthens resilience, fairness, transparency, and trust among stakeholders while reinforcing that AI is a tool under community ownership.

Next Steps (Scaling Pathway)

Moving from design into implementation, the community-centered framework follows a staged pathway that balances small-scale testing with long-term vision. Each stage includes concrete deliverables, explicit AI auditing, and stakeholder engagement to ensure accountability. Time markers, metrics, and safeguards ensure the pathway is measurable, resilient, and tied to risks and mitigations.

Immediate Next Steps (0–6 months)

Develop and release a prototype intake and questioning tool

Deliverable: Prototype report with annotated user journey and initial feedback

Metric: At least two successful prototype tests with diverse users

Partner with one to two communities to co-design and validate the process

Deliverable: Pilot co-design agreements and community validation notes

Metric: Representation of marginalized groups in pilot design teams



Conduct AI equity, accessibility, and usability audits during pilots

Deliverable: Equity audit report, usability test findings, and accessibility compliance checklist

Metric: 100% of pilots reviewed against Risks & Mitigations safeguards

Gather feedback from participants, organizations, and external reviewers

Deliverable: Consolidated feedback log with recommendations for iteration

Metric: Documented changes made based on participant input

Near-Term Scaling (6–18 months)

Expand pilots regionally with diverse communities, ensuring variation in demographics and contexts

Deliverable: Regional pilot summary with comparative analysis

Metric: At least five regional pilots completed with equity audits

Build a library of use cases and refine tools based on lessons learned

Deliverable: Public-facing use case library and tool refinement roadmap

Metric: Library includes a minimum of 10 validated use cases

Formalize governance with rotating leadership and community representation

Deliverable: Draft governance charter and stakeholder engagement plan

Metric: Governance boards include at least 40% representation from marginalized groups

Long-Term Pathway (18–36 months and beyond)

Establish infrastructure for cross-community knowledge sharing, preserving local nuance while scaling insights

Deliverable: Knowledge-sharing platform prototype and participatory feedback integration plan

Metric: 80% of participating communities report preserved local adaptation

Partner with funders, policymakers, and national organizations to align community-driven solutions with broader systems

Deliverable: Partnership agreements and policy alignment brief

Metric: At least three formalized partnerships with funders and policy bodies

Ensure scalability without losing local adaptation through continuous participatory feedback loops

Deliverable: Annual feedback report and adaptation log

Metric: Demonstrated adjustments made annually in response to community feedback

The pathway emphasizes co-design, transparency, feedback-driven iteration, and equity at every stage. By embedding metrics, safeguards, and stakeholder roles, the community-centered framework ensures growth that is sustainable, accountable, and community-owned.



Lessons Learned (Design Process)

Even at the design stage, important lessons have emerged. These lessons are expressed as commitments that directly inform outputs, safeguards, and the community-centered framework.

AI must remain a guide. We will ensure AI supports reflection and surfacing options rather than prescribing answers, keeping communities in control of decision-making.

Equity requires design. We will embed safeguards such as audits, consent checkpoints, and inclusion-focused stress tests as core outputs to avoid reinforcing inequities.

Community ownership is essential. We will keep leadership with communities, positioning AI as a support tool that strengthens their capacity without replacing their judgment.

Iteration builds trust. We will implement feedback loops and visible adaptation, so communities see responsiveness to their needs, strengthening legitimacy and engagement.

Transparency requires tools. We will deliver dashboards, feedback logs, and equity audits as non-negotiable mechanisms for accountability and confidence among stakeholders.

Data must be trustworthy, accurate, and contextualized. We will ensure that data is collected ethically, validated against local knowledge, and interpreted with care. Measurements will be tied to KPIs and safeguards to provide clarity and accountability without distortion, ensuring that community priorities are informed by evidence rather than reshaped by it.

Keep tools accessible. We will design for low-resource settings and apply accessibility standards to ensure participation across digital divides.

Scalability requires nuance. We will preserve local context and adapt solutions without diluting

grassroots voices, even as platforms scale across communities.

Stakeholder engagement matters. We will provide tailored communication and shared governance structures, so funders, policymakers, and community members remain aligned and benefit mutually.

These lessons, grounded in early exploration and prior community experience, directly inform the community-centered framework's outputs and safeguards. They underscore the need for transparency, adaptability, accountability, and positive engagement across both technical and social dimensions.

Conclusion

An AI-supported, community-centered framework can empower communities to move from isolation to connection, and from uncertainty to action. By closing knowledge gaps, facilitating connections, embedding equity, and integrating safeguards, the community-centered framework ensures that individuals like Maria, James, and Lisa are not left to navigate challenges alone. Instead, they become part of a collective process that values judgment, ownership, and learning while producing tangible outputs, measurable outcomes, and shared benefits.

The journey ahead requires careful pilots, strong governance, transparent auditing, and ongoing reflection. Success depends on collaboration among communities, nonprofits, funders, policymakers, developers, educators, and researchers: each sharing responsibility for equity-centered outcomes. By uniting technical safeguards such as dashboards, audits, and scenario modeling with community-driven ownership, the community-centered framework demonstrates not only a practical system for problem-solving but also a new model for inclusive, accountable AI.

The foundation is clear: communities already have the will to act. With the right support, tools, and partnerships, that will can drive sustainable, equitable change that benefits everyone, setting a



standard for trustworthy, equity-centered AI systems that foster resilience, innovation, and long-term trust.

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John Barton, Founder & Executive Director of the Spectrum Gaming Project, is an AI strategist and governance architect focused on building ethical systems for underserved markets. With a Master's in Counseling and decades in community education, he has delivered over 10,000 trainings in neurodiversity, education, and innovation. Based in Appalachia, his work has been recognized and adopted by the American Bar Association, the ACLU of West Virginia, Americorps VISTA Leaders, and the WV Community Development Hub.





For more information about the Coalition for Innovation, including how you can get involved, please visit coalitionforinnovation.com.

