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TRAVEL BEHAVIOR AND DEMAND

Final Project Report

Future Travel Foresight Catalyst

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| 16. Abstract The Future Travel Foresight Catalyst project has developed and tested a novel approach to catalyzing creative thinking around future travel behavior and demand through parasocial relationship-building and media engagement. Over two years (2024-2025), the project (in collaboration with the Arizona State University Future of Being Human initiative) established multiple communication platforms including the <i>Future of Being Human</i> Substack/newsletter (5,000+ subscribers, 35,000 monthly views across 120+ countries) and the <i>Modem Futura</i> podcast (10,500+ downloads across 88 countries), complemented by university courses. The methodology deliberately diverged from traditional research dissemination by employing three core strategies: transdisciplinary boundary-blurring between expert and public domains, parasocial relationship cultivation to build trust at scale, and futures thinking frameworks to expand imaginative capacity. Results indicate successful establishment of engaged communities and trusted communication channels, with evidence of influence among key stakeholders and thought leaders, though impact remains primarily qualitative and long-term in nature. The project has demonstrated that relationship-based engagement can effectively bridge research, public understanding, and policy conversations about transportation futures. Key lessons learned include the value of prioritizing trust over metrics, the effectiveness of authentic voices in expert communication, and the necessity of treating audience engagement as infrastructure requiring sustained investment. The approach offers a replicable model for agencies and institutions seeking to engage diverse stakeholders in complex sociotechnical challenges, particularly where traditional outreach methods have proven insufficient for navigating rapidly evolving technological and social landscapes. | | | |
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EXECUTIVE SUMMARY

Creative thinking that spans disciplines and actively engages broad communities is essential to exploring and anticipating the future of travel behavior and demand. Over the past two years, the Future Travel Foresight Catalyst project—part of the U.S. Department of Transportation (USDOT) National Center for Understanding Future Travel Behavior and Demand (TBD) —has taken a novel and radical approach to spark such thinking at scale. Rather than traditional top-down outreach, the project has invested in building parasocial relationships through online media—cultivating connections with an audience that feels personally connected and curious, and that foster a community of engagement. This strategy is grounded in thinking and practice around engaging diverse communities to think differently about the future and their part in it. By engaging people as partners in exploration rather than passive recipients of information, we are seeding new insights and questions about the future of transportation across diverse sectors.

Critically, establishing the platforms, communities, and trust needed for this work represents a long-term investment—far longer than the duration of this project. However, over the past two years, we have built a foundation—including launching and leveraging a key Substack publication and launching a professionally produced podcast, among other initiatives—that invites broad audiences into futures thinking. The impact of this foundation is still unfolding and is not directly amenable to conventional short-term metrics. Yet early signals, from audience feedback to engagement with leading thinkers, affirm that our trust-first approach is accruing “relational capital” that will fuel transformative foresight in the years ahead. To date the project has invested the time to cultivate communities, credibility, and curiosity in ways which will further enable USDOT, TBD, and the wider transportation ecosystem to imagine—and shape—new futures of travel behavior and demand.

1. Introduction & Project Rationale

How do we prepare for a future of travel that is being continuously rewritten by emerging technologies and social shifts? This question lies at the heart of the Future Travel Foresight Catalyst project. In an era when self-driving cars are already navigating the streets in several U.S. cities and AI systems are rapidly being deployed in vehicles and infrastructure, traditional research approaches alone are not enough to grasp what's coming next. The pace of innovation has accelerated beyond the reach of our usual tools for studying and understanding emerging landscapes. Within these landscapes, regulatory frameworks and institutions often find themselves struggling to catch up with technological advances.¹ At the same time, public trust in expert guidance has been shaken in recent years. In the U.S. for instance, the share of Americans expressing little or no confidence in scientists doubled from 12% to 27% between 2020 and 2023 (Pew Research)². These trends point to a landscape where new methods of engagement and sense-making are urgently needed if we are to navigate the future of transportation wisely.

It was against this backdrop that the Foresight Catalyst model was conceived. The project's core premise is that we must complement rigorous research with imaginative cross-sector and cross-stakeholder conversations. The USDOT's TBD National Center provided the perfect incubator for this. Its mission to develop novel insights into travel behavior and demand, inform decision-making, and educate the next generation of transportation professionals with innovative and interdisciplinary approaches, recognizes that breakthroughs will not come solely from number-crunching, but from *visioning* new possibilities. Working collaboratively with Arizona State University's Future of Being Human initiative (<https://futureofbeinghuman.asu.edu>), we set out to create a catalyst for futures thinking that blurs conventional boundaries between research, public engagement, and education. The partnership with the Future of Being Human initiative was deeply instrumental here—it meant we could leverage an existing ecosystem dedicated to exploring how emerging technologies shape society and extend it to transportation questions. This shared aim has allowed us to hit the ground running with established and emerging platforms and audiences, while aligning with ASU's broader efforts to engage communities in thinking about our collective futures.

From the start, our “North Star” has been that foresight work must reach far beyond academia's walls. The future of travel behavior isn't the purview of researchers alone; it needs to be ideated and co-created by travelers, technologists, policymakers, companies, and everyday people. Because of this, a “catalyst” for new thinking and insights needs to engage multiple stakeholders in imaginative dialogue about the future. Conventional outreach methods—workshops with industry for instance, or public hearings—tend to attract the “usual suspects” and often frame issues in present-day terms. We sought a different path: going to where people are already seeking insight (online, on social media, in popular media) and offering accessible yet thought-provoking content that sparks them to think about, and even envision, future travel scenarios. And we did this though building a broad foundation of engagement and trust within which we could introduce transportation-related explorations.

This approach draws deeply on ideas grounded in transdisciplinarity—integrating knowledge across domains. The project's genesis was informed by emerging ideas in fields that include responsible innovation (RI)³ and participatory technology assessment (pTA)⁴, as well as foresight more broadly^{5, 6}. These approaches all critique siloed thinking and emphasize that tackling complex sociotechnical challenges requires weaving together diverse perspectives. In transportation, this extends to understanding that the future of travel demand isn't just a task for traffic modelers or behavioral scientists; it involves ethicists, technologists, urban planners, psychologists, futurists, and everyday people. We needed a format where such boundary-crossing could happen organically. By intentionally blurring the lines between research, public communication, and creative exploration, we aimed to surface insights that wouldn't emerge in a standard research setting. And as we noted at the outset of the project, there is an urgent need for initiatives that intentionally blur the lines between research, development, and knowledge mobilization to reveal novel

pathways forward in a fast-changing landscape.

But why a “foresight catalyst?” We adopted the term to signal that the project is not a traditional research study, but an engine of facilitation—one designed to *catalyze* thinking in others. Rather than produce a singular set of findings, the goal is to stimulate a cascade of new questions, creative concepts, and even critique, within a broad range of communities. This is inspired by insights from futures studies, where often the value of looking ahead is less about predicting accurately and more about expanding the imagination of those who plan and make decisions⁷. For example, scenario planning exercises by agencies have shown that simply considering “*What if...?*” can help challenge status quo assumptions and encourage more resilient planning.⁸ And methodologies like back casting and future casting have demonstrated the power of creative narrative in exploring novel pathways forward⁹. Within this context, this project sought to enact a type of perpetual, public scenario exercise—using stories, discussions, media, and parasocial relationships, to invite people to envision different transportation futures—from autonomous vehicle norms to drone-based delivery or climate-resilient travel systems. By doing so, we have begun to catalyze thinking around anticipating challenges and opportunities before they fully arrive.

The partnership with ASU’s Future of Being Human initiative here provides both philosophical and practical alignment. Philosophically, both efforts recognize that emerging technologies (whether AI, automation, robotics, or others) are reshaping what it means to be human and how we live—including how we travel (and how behavior and travel are intertwined). Practically, the Future of Being Human initiative had already built audiences interested in these big-picture questions. By embedding our transportation-focused content within that broader context, we have been able to signal that the future of travel is part of a larger human story. This approach also gave us a head start with media channels, as we describe below.

In this way, the Foresight Catalyst model has emerged from a clear rationale: In a world of rapid tech-driven change and eroding traditional trust, USDOT and its partners need new, relational ways to explore futures. We’ve treated this project as an experiment in “knowledge mobilization” —mobilizing ideas not just within academia but throughout society. Over the last two years, we have been laying the groundwork (social, intellectual, and technological) for sustained, cross-cutting conversations about where travel behavior and demand are headed. The following sections describe how we are implementing this approach, what platforms and audiences we have cultivated, and why we believe this long-term investment will pay off in more informed transportation futures for all.

2. Methodology: The Foresight-Catalyst Approach

Our methodology deliberately diverges from the usual playbook of research and dissemination. Instead of focusing on the one-way transmission of findings (e.g. publishing papers or reports, hoping that people read them), the Foresight Catalyst approach emphasizes engagement and relationship-building as both the means and the end. Our approach can be described through three pillars: (1) transdisciplinarity and blurred boundaries, (2) parasocial relationship-building, and (3) futures thinking frameworks. These pillars work together to catalyze new thinking across diverse audience and communities.

2.1 1. Transdisciplinarity & blurred boundaries

The project operates on the conviction that innovative insights emerge when conventional silos are broken down. Transdisciplinarity goes beyond interdisciplinary work by actively integrating understanding across disciplines and involving voices from outside academia, while merging practical and theoretical knowledge. In practice, this has meant that our content and conversations draw from an eclectic range of expertise: a discussion about self-driving cars, for instance, might weave perspectives from psychology, history, climate science, and sustainability. By blurring boundaries between “expert” and “public,” and “research” and “storytelling,” we are creating spaces where new and often serendipitous connections can be formed. This approach is informed by contemporary models of public engagement and responsible innovation^{10,11}.

Traditional research outreach often keeps a safe distance from public communities, and experts present results and hope the public “absorbs” them. In our approach we effectively flipped that script, treating the public as collaborators in sense-making. In doing so, we also intentionally blurred the line between *producing knowledge* and *mobilizing knowledge*. A conversational podcast on vehicle automation, for example, isn’t just outreach—it’s a way to reveal new ideas and discover new research questions via unstructured public discussion. The catalyst thus acts as a bridge: channeling ideas from research circles out to the public sphere, but also carrying public perspectives and imaginative ideas back into research and policy circles.

2.2.2. Parasocial relationship-building

Perhaps our most novel methodological move was embracing parasocial communication and relationship-building as a core strategy. Parasocial relationships are those one-sided bonds people develop with media personalities or public figures—for instance, how a loyal podcast listener feels they “know” the hosts intimately, despite never meeting them. Rather than see this as a quirk of media, we recognized it as a powerful tool for learning, and for catalyzing thinking and ideas at scale. Research and experience show that people are far more open to new ideas when they feel a personal connection with the communicator.¹² We set out to cultivate such connections through a combination of consistency, authenticity, accessibility, and voice. For instance, the *Modem Futura* podcast—a flagship product of the project—often begins with a few minutes of personal banter between the hosts about their week, tech tidbits, or playful asides. This isn’t filler—it’s intentional relationship-building. It conveys to listeners that we’re not just here to lecture; we’re fellow humans who are thinking things through, sometimes with curiosity, sometimes with humor, and always with honesty. Over time, listeners come to feel they *trust* us and are even part of our journey. That trust “gives us permission to talk about what we know”¹³—meaning we can explore complex or speculative territory and listeners will come along because the relationship foundation is there.

It’s important to note that this approach draws on distinctions in communication theory between *transactional* and *relational* communication.¹⁴ Traditional expert outreach is typically transactional: the expert delivers information (transaction completed). We aimed for relational communication, where the focus is on building an ongoing connection with the audience. Parasocial techniques allow this relational approach to scale. In the past, relationship-based science communication was limited to small group interactions. But parasocial methods—via podcasts, blogs, videos, and more—can potentially reach tens of thousands while still fostering a feeling of intimacy. In the science communication literature, scholars have noted that parasocial engagement can combine the *reach* of broadcast media with the *impact* of interpersonal interaction.¹⁵ We have explicitly experimented with this concept. For example, the *Future of Being Human* Substack, written by PI Andrew Maynard, is intentionally written in a warm, first-person voice, often sharing reflections or even uncertainties, rather than just pronouncing conclusions. Readers have responded in kind, with lengthy comments and feedback that suggest they feel seen and heard. This two-way engagement, even if asymmetrical, is a departure from how experts usually communicate. We believe it opens people up to imagining futures with us, rather than feeling like futures are something decided for them by distant authorities.

A vivid illustration of the power of parasocial engagement comes from outside our project: during the COVID-19 pandemic, a German virologist’s podcast became a national touchstone, amassing over 40 million downloads in two months as people hung on his every word.¹⁶ Listeners felt they knew this scientist and thus trusted his complex explanations. While our context is different, the lesson is similar—trust and intimacy can unlock public appetite for complex, forward-looking ideas. We saw early hints of this in our own work. Some readers began addressing us as if we were longtime colleagues; podcast listeners reflected personally on their experiences with episodes, indicating real attentiveness. These are proxies for a relationship that, while one-sided in form, has genuine depth. It’s within that relational depth that catalytic thinking and ideation happens—a reader might (hypothetically) say, “You got me thinking about how AI in

cars relates to privacy, and I discussed it with my family,” or a listener might engage with us on social media, feeling comfortable to speculate wildly about future transport scenarios. In effect, our methodology treats audience relationships as the primary outcome, under the theory that those relationships will generate and spread new ideas in ways no white paper or webinar ever could.

Developing this parasocial approach required some behind-the-scenes methodology as well. We invested heavily in consistent voice and quality. This meant bringing in a project member who has deep expertise in foresight methodologies, media, and communication (Dr. Sean Leahy). Sean’s multi-dimensional role as podcast co-host, “meta-designer” of our engagement strategy, and accomplished futurist and expert on emerging technologies, was pivotal. He helped ensure our content was professional and polished (for instance through high quality audio/video, engaging editing, and expert hosting) *while* staying deeply substantive. The reasoning was that to build a loyal audience, especially in a crowded online landscape, we needed to respect their time and attention while signaling our commitment to them through high production values. At the same time, we worked to maintain an approachable and informal style. We often reminded ourselves that we’re aiming for the feel of inviting the audience into our living room for a fascinating and insightful chat about the future—not a formal lecture from a podium. Maintaining that balance (approachability with authority) is a craft and an art, and part of our methodology was continuously refining it through listener feedback and our own reflections.

2.3 3. Futures thinking frameworks

The content we create is scaffolded around futures studies methodologies. Our aim wasn’t to explicitly teach futures methodologies to the audience (although we do at times lean this way), but to embed those techniques in how we discussed topics—especially in the podcast. For example, we frequently employ scenario thinking: rather than ask “Will technology X be adopted?” we’d explore possible scenarios, reflecting the podcast’s tag line of “exploring possible, probable, and preferable futures.” This approach invites the audience to consider multiple plausible futures, a hallmark of strategic foresight.¹⁷ We are also inspired by techniques such as back casting in discussions and prompt creative imagination through them. These might seem whimsical, but they are grounded in futures practice as a way to break out of present thinking traps.

Additionally, we draw on trends analysis and horizon scanning to inform content. Many podcast episodes start with a “signal” —perhaps a news item about autonomous vehicles, or the release of a new AI model—and then we riff on the larger story that this signal might be telling about the future. A good example here is our work around the World Economic Forum annual list of Top Ten Emerging Technologies, which PI Andrew Maynard is involved in, and which feature in podcast episodes and Substack posts. By doing so, we connect the dots for our audience between everyday developments and the big-picture trajectory of emerging areas—including travel behavior and demand. Importantly, we do this by asking questions, not predicting. Our stance is that of co-explorers: for instance, taking the approach of “Here’s something intriguing happening now; what could it mean for how we move in 20 years? Let’s think it through together.” This invites the audience into a futures mindset without requiring any formal training in foresight methods. To tie these pillars together, it’s worth considering a concrete example of our approach at work: early in the project we produced a podcast episode titled “Waymo, We Go!”¹⁸ Rather than present just the facts on AV testing, we explored the scenario of a parent in 2035 putting their child alone into a self-driving car for a ride to school—a scenario designed to resonate emotionally and raise questions. We then walked through the social and ethical puzzles such a scenario raises (trust in technology, insurance, child autonomy) and linked it back to what was happening in 2024 (Waymo’s real pilots and the public reactions). The podcast continued that conversation in a relaxed, story-rich dialogue, even bringing in Sean’s personal account of taking his first driverless taxi ride. It’s an example of an approach designed to help listeners envision the future more concretely. This is, in essence, a core part of our methodology: using rich, relatable narratives and dialogic exploration to engage hearts and minds, underpinned by solid futures thinking and cross-

disciplinary insights.

Finally, it's worth adding a note on the comparison between what we are doing and traditional outreach: In a typical research project, "dissemination" might mean publishing a paper, presenting at a conference, or maybe holding a webinar or writing a policy brief. Metrics of success would be citations, attendance, or downloads. The Foresight Catalyst flips this to focus on engagement quality over quantity. We are less interested in how many people read a given piece than *who* and *how* they engage—in part because, while numbers are easy to report, they often do not correlate well with effective reach and impact. As an example, our early transportation-related Substack posts and podcast episodes didn't get huge numbers, but we know they were privately read, listened to and shared by influential individuals and within key organizations. That kind of second-order impact is exactly what we are looking for—and it's only possible when content resonates on a human level (no executive gets excited by a dry academic paper, but a vivid scenario, provocative question, or authentic encounter, can light a spark). This is where our approach is catalytic: we put out ideas in ways that can spread through networks and mutate into new insights. It's more like seeding a forest (which can take generations to mature) than building a machine.

In the following section we cover the specific platforms we have built around this methodology and the reach we have achieved so far. But it's worth emphasizing first that the Foresight Catalyst approach is a long-term, relational model. In two years, we have begun to establish the trust, voice, and community that are preconditions for transformational conversations. This is slow, patient work—an intentional contrast to the "publish and move on" model. Yet, as we are already seeing, it has the potential to unleash creativity and foresight in places and amongst people that conventional research efforts rarely touch.

3. Platforms & Reach

From the outset, we recognized that our engagement approach would only be as effective as the platforms carrying it. We needed communication channels that could reach diverse audiences—academics, policymakers, industry, students, and the general public—and do so in an inviting, relationship-centric way. Over the last two years, we have leveraged a suite of integrated platforms that have been developed as part of the ASU Future of Being Human initiative: a Substack newsletter, a podcast (with video content), a project website/hub, a unique discussion-based class, and traditional media interactions. Below, each platform's role is described, along with what we've achieved in terms of reach—while cautioning that these numbers are merely signals of potential reach, not definitive metrics of impact. Our philosophy has been to view metrics such as subscriber counts, downloads, or views, as indications of a growing community, with the true value lying in the connections and dialogues that emerge from that community.

3.1.1 Future of Being Human Substack

Our primary written vehicle has been the *Future of Being Human* newsletter on Substack. This was established in 2023 by PI Andrew Maynard as the next phase in his work as a widely known communicator and commentator on emerging technologies and their intersection with society and the future. This platform has become a cornerstone for the ASU Future of Being Human initiative and for Foresight Catalyst content, covering an eclectic range of topics that build audience, reach, and reputation. The Substack platform combines the feel of a blog or online magazine, with the direct impact of an email newsletter. Over the past two years, the Substack has increased to over 5,000 followers and continues to grow, with monthly views now averaging around 35,000. More importantly, these represent a rich mix of tech enthusiasts, academics, students, public sector professionals, and curious citizens from across more than 120 countries. While not quantifiable, there are a number of readers and subscribers who hold considerable sway and influence.

Content on the Substack covers a wide range of topics, reflecting our transdisciplinary ethos. Some posts directly address transportation futures—often amplifying podcast episodes as is the case with the January 14, 2025 article "Are your car's autonomous features dangerously out of calibration?"¹⁹ Other posts address

adjacent themes—such AI, technology and education, bioengineering, and storytelling and the future (to name a few). While these are not about travel on the surface, they are part of exploring the broader social, technological and geopolitical landscape within which transportation behavior and demand resides—as well as being directly aligned with the Future of Being Human initiative’s goals. This breadth is deliberate. By not siloing “transportation” as a standalone topic, we attracted readers who might not initially think they care about travel behavior, only to find themselves connecting the dots. For example, a Substack article on the 2025 Top Ten Emerging Technologies as identified by the World Economic Forum does not directly address transportation, but does help establish expertise and authority while still being associated with transportation futures (in this case, through the topic of structural composite batteries).²⁰ These cross-pollinations are gold from a foresight catalyst perspective.

Stylistically, the Substack is approachable and conversational. Posts are intentionally inclusive and inviting while often exploring complex topics—always with the aim of engaging rather than alienating readers. In this way, the Substack has been creating fertile ground for engagement at scale, and planting seeds for further exploration—in other words, catalyzing thinking and ideas.

3.1.2 Modem Futura Podcast

If the Substack is where our ideas take written form, the *Modem Futura* podcast is where they come alive in voices and stories. We launched *Modem Futura* in October 2024 through the ASU Future of Being Human initiative, and with the intent to leverage it through the Foresight Catalyst project. It’s a weekly podcast that explores the complex and intertwined intersection between technology, society, and the future, including transportation futures. The podcast has been a very significant undertaking, reflecting the commitment and investment that is needed to produce high quality episodes once a week. After an extensive planning and development phase we built a small production studio from scratch, complete with professional grade audio equipment—and later, equipment for video recording—to ensure a professional workflow and polished products. This was important for establishing the credibility of the podcast; listeners are accustomed to high production values, and meeting that bar signals that we respect their time. Sean Leahy took the lead in producing and co-hosting the show with Andrew Maynard as co-host.

The format of *Modem Futura* is long-form informal, unscripted, founded on engaging conversations (typically 60–90 minutes) and frequently featuring guests. We’ve had a number of episodes with transportation-focused guests—for example, an expert on autonomous vehicle safety,²¹ and a scholar on technology in society discussing electric vehicles.²² We’ve also had episodes on broader technology topics (AI, VR, energy systems) that inevitably touch on mobility as part of the discussion. And many of the episodes explore broad ways of thinking about and approaching the future that are directly applicable to transportation behavior and demand.

What sets the podcast apart—and is intentionally part of our strategy for developing parasocial relationships—is its tone. Listeners indicate that it feels like eavesdropping on an intriguing coffee shop chat, rather than a formal interview. We and our guests laugh together, tell personal stories, and candidly explore what excites, puzzles, or concerns us. This fosters that parasocial bond we are aiming for—listeners feel like we’re all friends by the end of an episode.

In terms of reach, *Modem Futura*’s audio RSS feed has approximately 10.5K unique downloads and is listened to in 88 countries around the globe, averaging approximately 215 unique downloads per week, with individual episodes currently reaching more than 100 reported downloads in its first week of release. While this is an underestimate of actual reach due to how analytics are reported as well as challenges with platform fragmentation (and there are no reliable benchmarks for measuring podcast reach) this does put *Modem Futura* in the top 25% of podcasts based on benchmark statistics published by the platform Buzzsprout.²³ As of mid-2025, we estimate a core listenership of roughly 1,000 regular listeners—a number that may

seem modest compared to viral podcasts, but it's solid for a niche intellectual show less than a year old. The podcast has multi-platform distribution which, as well as being good practice, also extends its reach. It's available on Apple Podcasts, Spotify, YouTube, and other platforms. In fact, our decision to put full video episodes on YouTube and to carve out short clips has expanded reach significantly. Some YouTube Shorts (under 60-second highlights of key insights or key moments) have garnered thousands of views, far beyond our subscriber base.

Yet despite reporting these figures, we are consciously refraining from playing the pure numbers game. We remind our stakeholders (and ourselves) that a podcast with 100 deeply engaged listeners can be more influential than one with 10,000 half-listening multitaskers. We have evidence of the former: listeners have told us how much they value the content we cover, and that they've recommended episodes to friends and colleagues.

3.1.3 Partnerships

Beyond our own channels, the project has benefited from strategic partnerships and serendipitous opportunities. We have already collaborated on the podcast with Professor Jamey Wetmore, a professor and expert in technology and society and author of the Tech Skeptic Goes Electric Substack—an example of leveraging a parallel audience—and will be extending this collaboration in the future. Wetmore, a colleague at ASU, writes about his experiences and reflections as an electric vehicle owner with a healthy dose of skepticism about hype around the technology. Recognizing the synergy, we invited Jamey on the Modem Futura podcast. One outcome was “The Secret Lives of Electric Vehicle Owners,” a Substack post and podcast episode²⁴ where Jamey, Andrew and Sean discuss EV challenges. That post drew in some of Jamey's subscribers to our newsletter and podcast (and vice versa) and enriched the conversation by adding his on-the-ground perspective. It's a model we intend to use more. Each collaboration like this taps into a new circle of readers/listeners, expanding our reach in a relational way (people come to us via someone they already trust, which makes them more likely to trust us).

3.1.4 Earned Media

An important and strategic aspect of the project's reach has been earned media. By ensuring the visibility of our work around transportation-related topics and drawing on decades of experience working with the media, the project's work has been featured externally in a number of ways. Andrew Maynard, as PI, has been regularly sought out by media for commentary on transportation technology issues. For example, local TV news in Phoenix interviewed him about an incident of a Waymo car turning into oncoming traffic.²⁵ His explanation on air, emphasizing both the technology's promise and the need for public patience, not only helped educate viewers but reinforced the project's presence as a go-to source for forward-looking insight. In another case, a CBS 5 News segment (Jan 2025) covered how a Waymo robotaxi thwarted a theft.²⁶ Andrew was quoted explaining the vehicle's safety protocols and why such tech-enabled responsiveness might make autonomous vehicles “the cars of the future.” Such engagement in mainstream channels amplifies awareness and lends credibility—and they signal that USDOT and ASU are investing in truly innovative engagement efforts.

3.1.5 “Pizza and a Slice of Future” class

One extension of our platform ecosystem has been an innovative discussion series/class at ASU: Pizza and a Slice of Future.²⁷ Launched as a casual meet-up for undergraduate students at ASU and later offered for credit, Pizza and a Slice of Future brings together undergraduates and guests from an ASU-affiliated retirement community for wide-ranging conversations on future topics—all fueled by pizza. Transportation has often been a focus these discussions. We've explicitly hosted sessions around questions that include “Will we ever have cars that safely drive themselves without any human intervention?”, “Could airships revolutionize transportation in the future?” and “Why do people travel?” And even when the theme is not transport-specific, mobility issues often come into the conversation. The class has proven to be a powerful

intergenerational engagement environment where faculty, students, and retirees mix, and occasionally external speakers join. It was even *featured in ASU News* as a hot new offering that breaks the mold of traditional classes.²⁸ For the project, this platform serves a dual role. First, it's a testbed for ideas. Second, it's a form of community outreach; while a class, it's open enough that we've had people from outside the university drop in. And third, it serves to compliment and amplify efforts on other platforms—and so participants also engage with the podcast and the Substack.

3.1.6 Project Web Hub

To centralize information about project outputs, we created a dedicated section on the Future of Being Human website that links to relevant Substack posts, podcast episodes, media coverage, and other products.²⁹ While not heavily trafficked on its own, this hub serves as a one-stop portfolio that we can point stakeholders to, while highlighting the project's support and alignment with TBD. Having this central, public repository is part of building trust and transparency, allowing anyone to see the breadth of what we've produced.

4. Catalytic Momentum

Having outlined the various platforms that the project is engaging through, it's worth reflecting on our approach to trust vs. clicks—and how we are assessing what we might consider as “catalytic momentum.” In this project we have chosen to prioritize *trust*, which grows slowly, over *visibility*, which can spike and vanish. Two years in, we're seeing strong signs of trust: increasing subscriptions and open rates on the newsletter (people stick with it), listeners who have been with the podcast since episode 1 and who actively engage, and external partners (like media or other initiatives) proactively reaching out to work with us. These are intangible but powerful measures of success. By carefully tending these platforms—with patience, responsiveness, and integrity—we've cultivated an engaged community that not only views us and the project as a source of research, but as conveners of ongoing conversations about the future. That shift in perception is invaluable and sets the stage for the next phase of more direct catalysis and co-creation.

Beyond trust, measuring the impact of a “foresight catalyst” initiative is a bit like measuring the ripples in a pond after you've tossed in a pebble: some are visible immediately, others propagate quietly and surface later in unexpected places. In designing the project, we anticipated that hard quantitative KPIs would be both difficult and inadequate to capture what we're really looking for. The true goal—seeding new thinking, growing awareness, and cross-pollinating ideas—unfolds in complex and often opaque ways. That said, as we reach the two-year mark, we are seeing early qualitative signals, anecdotal evidence of ripple effects, and the growing “second-order” impacts of our work. Over the past two years, we've been playing a long game (the “slow burn” approach), fully expecting that the most significant impacts may only become evident years down the line. However, the smoke signals of progress are definitely rising.

First and foremost, the absence of traditional KPIs is in itself notable. In standard research projects, one might be tallying number of papers published at this point, together with citations, students trained, etc. Our outputs look very different: conversations sparked, minds opened, networks formed. While we've shared some reach metrics above, we treat those as context to a bigger picture. For instance, being in the top 25% of podcasts as assessed by first week downloads was encouraging—not because ranking matters *per se*, but because it means we are finding an audience against the odds. Similarly, steadily growing subscriber and read-rate numbers on Substack has been gratifying—not as a sign of good of marketing, but as evidence that content about the future (including the future of travel) is resonating. The traditional yardsticks don't fully apply, but their alternatives are emerging in narrative form.

For example, it's worth considering the willingness of expert guests to appear on the *Modem Futura* podcast. In the early days, we worried about whether leading experts and thought leaders would take the time to join a new podcast. That concern quickly dissipated. We found that invitations were met with enthusiasm. And

with the Substack we have received confidential feedback from influential readers that shows the catalyst effect in action. We can't trace all such ripples (and some are confidential), but knowing they exist bolsters our confidence in the catalyst model. It also underscores why we haven't rushed to produce the equivalent of a glossy "impact report" full of vanity stats—the real impact is often in quiet shifts of perspective among key people.

Beyond individuals, we see awareness building in broader expert circles and communities. Andrew's involvement in communities like the World Economic Forum, and Sean's engagement within futurist circles have both fed into the project. In turn, being part of networks like these has raised our project's profile.

5. Lessons Learned

Over two years of experimenting at the intersection of futures thinking, media engagement, and transportation, we have learned a lot. Some outcomes surprised us, some challenges slowed us, and some strategies evolved as we went. In this section, we synthesize our key lessons under four themes: Successes and Surprises, Challenges, Strategic Adjustments, and Advice to Peers. These reflections are candid and, we hope, useful not only for our own continuous improvement but for others who might attempt similar catalyst projects.

5.1 Successes & Surprises

In the win column, a standout success was the growth and influence of the *Future of Being Human* Substack/newsletter. We anticipated perhaps a few hundred subscribers—maybe a thousand—in the first years of its launch. Instead, we crossed a few thousand within that time (and continue to see an upward trajectory). The surprise wasn't just the numbers—it was who showed up. The traction on Substack validated that there is a hunger for accessible yet deep discussions on technology and the future. Interestingly our most rapid subscriber growth came when we weren't explicitly talking about transport. When we published essays on AI or technology and education, we attracted readers who stayed on for topics outside their immediate areas of interest—including transportation. This confirmed that casting a wider thematic net can strengthen the core audience rather than dilute it, as long as the underlying approaches—and the parasocial relationships that are built—remain consistent. A concrete win stemming from Substack is that we've been quietly influencing thought leaders—again something that can neither be quantified or ratified publicly, but an impact that we expect to become apparent over time.

Another big win was the impact of the *Modem Futura* podcast's production quality and format. We started from scratch, building a workflow and studio, investing in equipment, and experimenting with format. It was a heavy lift—hours spent on "non-academic" tasks like editing, and post-production. But the outcome has paid off: a polished, studio-grade podcast. This has been invaluable in giving us the credibility that will lead to long term success. Guests we approached could see (or hear) that we took this seriously, and this made them say "yes" more readily. Also, achieving high production values has created a consistent listening experience that fosters loyalty—subscribers know they can count on clear audio, thoughtful music cues, and a professional vibe, which indirectly reflects well on TBD and USDOT as forward-thinking and competent.

One surprise with the podcast was how effective the YouTube-based video Shorts have been. Initially, we intended to focus on posting full episodes on YouTube, but as we began clipping highlights—a witty exchange here, or a profound quote there—and posting them as YouTube Shorts, our engagement increased dramatically with over 85.5k views (as of August 1, 2025). The lesson? Repurposing content smartly can dramatically extend reach without much extra cost.

A more intellectual insight was the validation of the value of parasocial engagement. We started out with an intuition that parasocial relationships could amplify foresight conversations, but it was still a hypothesis.

As the project has progressed though, this has become a more solidified part of our guiding framework. In discussions within the team, we began to explicitly use the language of “relational versus transactional” communication, and realized we were articulating something that resonated well beyond this project. This conceptual clarity was a win: it unified our strategy and also turned into a shareable insight. This even translated into a Substack article that synthesized and further extended our thinking.³⁰ The surprise was the realization that we had begun to explore a broader paradigm that could apply to science communication and public engagement generally. And recognizing parasocial relationship-building as part of our “secret sauce” gave us the confidence to double down on it.

We also count as a win the various pieces of serendipitous validation that came our way. For instance, unsolicited comments and conversations about podcast episodes, or Substack posts, signaled that peers see value in our model and what we are achieving. The lesson: people are watching, and sometimes the impact you have is simply inspiring others by doing something different within a traditional space.

Finally, a subtle but significant win was building a sense of community around the platforms we are developing and the approaches we are taking. It has become increasingly clear that we are not just broadcasting; we’re convening. That feels like a success in itself—a new micro-community of future-engaged individuals who didn’t exist as a network before. Nurturing that into a sustained community is both an opportunity and a challenge looking ahead.

5.2 Challenges

Despite considerable progress, the project has faced several interrelated obstacles. We outline the most significant below, together with the implications for future work.

5.2.1 Gradual audience growth

Building a podcast audience is inherently slow and nonlinear. After an initial surge of interest, listenership increases continued in smaller, incremental steps. This is consistent with industry “power-law” patterns, where expanding beyond a devoted core typically requires sustained consistency plus either a fortuitous viral moment or a major external boost. The psychological impact of producing high-quality episodes for a smaller community of listeners—our own version of the “empty-room syndrome”—should not be underestimated. Nevertheless, we remain committed to a depth-over-breadth strategy and will continue to invest steadily rather than chase short-lived spikes.

5.2.2 Heterogenous audience needs

Our community of listeners range from enthusiasts to domain experts. Striking the right balance—avoiding jargon overload while still offering intellectual rigor—remains an art. We now embed multiple entry points (brief explanations, links to deeper resources) and solicit feedback each cycle, yet occasional comments still flag content as either too technical or too simplified. Continuous iteration and audience segmentation analytics will guide future adjustments as we continue to lean into the key “selling points” of this podcast with listeners.

5.2.3 Limited academic recognition

Within many academic circles, media-based outreach is still viewed as ancillary to peer-reviewed publications and citation counts. Some colleagues misinterpret our work as “just media” or even self-promotion, rather than scholarship in practice. Bridging this perception gap requires ongoing dialogue, clear articulation of qualitative impact, and demonstration of how practitioner-facing products complement traditional research outputs. Institutional enthusiasm for relational outcomes continues to lag behind enthusiasm for journal articles, but we regard this advocacy as integral to our mission and believe there is a responsibility for scholars, academics and researchers to actively engage with stakeholders across a wide range of sectors and domains.

5.2.4 Resource intensity

Professional high-quality audio and multimedia production demands time, specialized skills, and non-trivial funding. Professional production hours, equipment purchases, hosting fees, and studio rentals collectively stretch available resources, even with significant in-kind support from the Future of Being Human initiative. Future planning will explore additional efficiencies—e.g., shared production pipelines, student production labs, or sponsorships—to control costs without compromising quality.

5.2.5 Measuring short-term impact.

The value of relationship-building and idea diffusion often materializes over years, but stakeholders sometimes request immediate, quantifiable returns. Conventional metrics rarely capture shifts in mindset, network formation, or long-tail influence. We mitigate this tension by combining qualitative evidence (case anecdotes, testimonials) with proxy indicators (limited platform statistics and audience data) while reminding partners that meaningful cultural impact is inherently long-term. Convincing skeptics though is an ongoing effort, and one that can sap energy. We consider it a drag factor that we need to continually articulate why this approach matters; we can't assume everyone sees it. However, this is also part of our mission and our responsibility, both as part of this project and more widely as part of our work around empowering people through parasocial engagement.

5.3 Strategic Adjustments

From the outset, the project was intentionally designed as an iterative exploration of emerging methods for provoking new ideas about the future of transportation and travel. This meant continuously testing, evaluating, and refining both our activities and the theoretical frameworks that guide them. While our overarching vision and mission have remained constant, the specific platforms we employ—most visibly the *Modem Futura* podcast—have evolved in response to ongoing reflection and evidence.

A key insight that crystallized during this process is the value of parasocial engagement as we describe above—the one-to-many relationships that form between content creators and audiences. Treating these relationships as catalysts for deeper dialogue, and not simply as by-products of dissemination, has reshaped how we design episodes, structure events, and measure impact. In practice, this has created a productive feedback loop: practice informs research; research refines practice; and both advance our understanding of effective public-facing scholarship.

We have also amplified our reach by integrating closely with the Future of Being Human initiative. An early strategic move—jointly appointing a Foresight Catalyst (Dr. Sean M. Leahy) across both efforts—embedded our project within the initiative's existing infrastructure. Cross-posting content, co-hosting events, and syndicating material via the initiative's Substack, have all multiplied our audience and resources without duplicating effort.

Throughout, we have held our strategic compass steady while making deliberate course corrections when data or experience warranted. This disciplined reflexivity—test, learn, adjust—mirrors the very (anti-fragile) futures mindset we seek to cultivate in others. The results are tangible: rising engagement metrics, consistently high-quality outputs, and sustained alignment with our mission, and a growing audience. These refinements now position us to enter the next phase with a clearer roadmap and a proven model for driving even greater impact.

5.4 Advice to Peers

Looking back on our journey so far, we find ourselves in a position to offer some advice to others in academia, government, or the nonprofit sector who might be considering similar “catalyst” endeavors. If a colleague at another research center or a program officer at an agency asked for our guidance, here's what we'd tell them:

5.4.1 Play the long game and trust the process

Innovative engagement work is not a quick win, and it shouldn't be measured on the same timeline as a typical research project. We learned to measure success in trust and relationships, not in clicks or citations. This is perhaps the hardest mindset shift. Your institution might be anxious for demonstrable impact in a year; you need to communicate that real cultural or mindset shifts are incremental but cumulative. Our advice is to set expectations up front—with your team, sponsors, and yourself—that this is about laying groundwork. It's like planting an orchard, not growing annual crops. It's also important to keep informal tabs on those anecdotes and proxies that indicate progress, so you can tell a compelling story of growth over time.

5.4.2 Prioritize relational indicators of success

In practical terms, this means celebrating things like engaged feedback, repeat audience engagement, partnerships formed, qualitative comments—and communicating those as accomplishments. Such indicators, while soft, can be persuasive when you narrate why they matter. Encourage peers to collect stories: one person's changed perspective can sometimes illustrate impact more vividly than any graph of web traffic. Don't be shy to use narrative in evaluation—it's not all about numbers.

5.4.3 Leverage partnerships and existing platforms

A huge boon for us was the cost-share with the ASU Future of Being Human initiative. For peers, our advice is to avoid going it alone when trying something new like this. Look for symbiotic collaborations—maybe a popular science outreach program on campus, or a library speaker series, or a local community group—and piggyback. It lends credibility and infrastructure. Also, consider co-creating content with partners (as we are doing with *Tech Skeptic Goes Electric*)—it spreads the work and multiplies the audience. Essentially, share the sandbox. We found generosity with content (letting others use it, featuring others on our platform) comes back around. It's an ecosystem, not a competition. For those in academia, we'd emphasize using the institutional megaphone: press releases, alumni newsletters, etc., to promote your catalyst activities, framing them as cutting-edge public engagement.

5.4.4 Embrace the “infrastructure” mindset

One lesson we'd impart is to treat foresight catalyst work as building infrastructure for the long haul. Just as you'd invest in a lab or a data center, invest in your communication platforms and relationships. That means, early on, get quality equipment, good web design, the required skillset, stable hosting—the unsexy stuff that ensures your platform is reliable and professional. It also means documenting processes and creating playbooks. Similarly, building an audience is like building a network infrastructure; it has value beyond any single project. We'd advise peers to treat their audience as partners in the endeavor. For example, involve them in shaping future content (we occasionally ask our readers and listeners what they'd like to hear about next—that not only gave us ideas but made them feel ownership). Think of your initiative as a platform others can plug into—we have had colleagues ask if they could contribute guest posts or suggest topics. That's infrastructure in a social sense: it's there for the community to use, not just for your project outputs.

5.4.5 Maintain authenticity and humanity

A more intangible piece of advice, drawn from our parasocial success, is to keep the tone human. We'd tell others embarking on similar work that you can't fake genuine engagement. For example, if starting a podcast, don't script it to death. Let personality show. If writing a blog, occasionally share a personal anecdote or a reflective aside. People can tell if you're being performative versus real. Our approach of being quietly hopeful, occasionally wry and amusing, and candid about uncertainties, built credibility. In a space where trust in experts is shaky, being relatable is powerful. So, our advice is to drop the veneer of

unassailability that experts often wear. Show your curiosity, even your doubts. Audiences respond to that with trust, which is exactly what you need for long-term influence.

5.4.6 Cross traditional reward structures—but educate your institution

We might caution peers that doing this kind of work will sometimes feel like swimming upstream in academia or government agencies that don't quite know how to value it. It's important to advocate for recognition of these efforts. We have made sure to highlight media engagement in annual academic reviews, and to propose that these count as scholarly contributions as well as service. Bit by bit, we see attitudes shifting. So, our advice is to be your own champion internally; bring your leadership along by sharing positive feedback and early impacts. Perhaps even suggest new evaluation metrics (some universities now consider "knowledge mobilization" in tenure reviews—a trend we wholeheartedly encourage).

Finally, patience and adaptability are key. We'd remind people that not every experiment will work. We had posts flop and podcasts with low listen rate; we took those in our stride and learned, rather than giving up. Having a supportive team helps—Sean and Andrew often buoyed each other when one felt something wasn't working. If you're advising peers, emphasize building a small team or at least a sounding board group; it's hard to do this solo. And allow the project to evolve. What you start out doing may morph as you find what resonates (our project certainly did). That's a feature, not a bug, of a catalyst approach.

In essence, our advice condenses down to this: be in it for the long haul, center relationships, collaborate widely, build for the future, and stay genuine. If you can do this, you'll be able to create something far more enduring and impactful than any single research paper or report. You'll cultivate a living network of ideas and people who can together navigate whatever the future throws our way – and that, at the end of the day, is the most important outcome.

6. Next-Phase Roadmap (2026–27)

With two years of foundational work behind us, the *Future Travel Foresight Catalyst* is poised to enter a new phase. We have cultivated an engaged community, fine-tuned our approach, and identified where the most fertile ground lies for deeper impact. The next period will be about further leveraging this groundwork—ramping up targeted content, forging new partnerships, and introducing innovative formats to amplify foresight outcomes. Below, we briefly outline our roadmap for the next two years, including concrete milestones and new initiatives.

6.1 Groundwork and Guiding Vision

First, we would reaffirm our guiding vision: to catalyze broad, creative, inclusive thinking about future travel behavior and demand, in support of more informed understanding and decision-making today. The groundwork—the platforms, trust, and audience—is now in place to push this vision forward. One key theme will be integration: integrating our work more closely with TBD's research projects and USDOT's strategic foresight efforts, and integrating transportation futures into the wider societal futures conversation. Here, we plan to serve as a relay, connecting what-if insights from the public and creative spheres back into the formal planning and research arenas.

6.2 Additions and Initiatives

Two new elements will be part of this next phase, in addition to continuing to expand the reach of the Substack and podcast, and to engage with students and others through the *Pizza and a Slice of Future* class:

- **Collaboration with “Tech Skeptic Goes Electric”:** We are formalizing a partnership with Professor Jamey Wetmore's *Tech Skeptic Goes Electric* Substack. This means co-producing content specifically around electrification of transport—a prominent issue in travel behavior. We are aiming for at least 10 cross-posted pieces over the next year. These will reside on his Substack but be

affiliated with and amplified through the project, effectively reaching two audiences. By partnering, we get more content with less strain on each individual, and we model the kind of cross-sector conversation (academic + public + personal perspective) that we champion.

- **Foresight Briefs with AI-Augmentation:** Building on an idea seeded in 2025, we will launch a new series of “Tech Futures Briefs” —concise foresight briefing papers generated through an advanced AI-assisted methodology. This novel approach leverages large language models, external research, and expert guidance/prompting and editing, to help explore and address emerging questions related to travel behavior and demand. The aim is to produce roughly 10 foresight briefs on specific subtopics of future travel. These briefs will be co-created using a methodology being developed through the Future of Being Human initiative. The process itself is innovative and will be a learning experiment—if successful, it could set a precedent for how to rapidly generate foresight insights.

6.3 Milestone Commitments

- We have specific output goals to ensure steady activity and coverage of key topics:
- **Substack Posts:** We are aiming for at least 4 transportation-focused long-form posts on the *Future of Being Human* Substack. The general posts surrounding these will keep our broad audience engaged, while the transport-focused ones will directly serve the project’s mission.
- **Tech Skeptic Goes Electric Pieces:** We are aiming for around 10 articles to be published in collaboration with Jamey Wetmore’s *Tech Skeptic Goes Electric Substack*, focusing on the intersection between electric vehicles, society, and the future. We expect these to be popular given the current high interest in EVs and also to serve as a model for civil discourse about tech – something that is sorely needed.
- **Podcast Episodes:** We are aiming to produce at least 4 dedicated transportation-themed podcast episodes on the *Modem Futura* podcast. Additionally, we’ll compliment these with the broader *Modem Futura* schedule.
- **Foresight Briefs:** We are looking to generate at least ten foresight briefs over the coming year.

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