



Framing the North San Joaquin Valley as a

# Translation Destination

February 13, 2026

# Introduction

**The North San Joaquin Valley (NSJV)** is positioned to play a more strategic role in California's next phase of growth. Located at the center of the Northern California Megaregion and anchored in manufacturing, logistics, and resource management, the region can support high-quality jobs, strengthen supply chains, and help move inventions into commercialization and sustained production.

Recent disruptions have sharpened this opportunity. The COVID-19 pandemic, geopolitical uncertainty, and rapid technological change exposed vulnerabilities in global supply chains while increasing the value of domestic production, nearshoring, and execution capacity. For a region long oriented toward making, moving, and scaling, these shifts create an opportunity to convert disruption into durable economic advantage by upgrading existing strengths, rather than departing from them.

This briefing introduces the *Translation Destination*, which is a place-based approach to aligning policy, institutions, workforce systems, infrastructure, and industry around execution, learning, and sustained production. Rather than emphasizing isolated projects or one-time investments, it focuses on building durable regional capabilities that compound over time. The approach builds directly on North Valley THRIVE's Strategic Plan,<sup>1</sup> which identified advanced manufacturing, clean energy, and the circular bioeconomy as priority sectors based on their alignment with regional assets, their potential for high-quality job creation, and their capacity to buffer future economic shocks.

This document is pragmatic in intent. It does not prescribe a single blueprint or assume automatic alignment. Instead, it clarifies the opportunity facing the NSJV, outlines the core elements of a translation-oriented development strategy, and highlights the governance and institutional conditions that will shape outcomes. Its purpose is to inform dialogue among public, private, academic, and civic leaders about how regional capabilities can be strengthened and sustained.

Ultimately, the question is not whether the NSJV should aspire to greater competitiveness, but how. The *Translation Destination* Framework advances a place-based approach that treats execution, coordination, and learning as strategic assets, thereby positioning the NSJV as a contributor to California's long-term economic resilience and growth.

The remainder of this briefing is organized as follows. Section Two defines the core dimensions of the *Translation Destination* Framework. Section Three reviews existing translational assets in the region. Section Four examines comparable place-based strategies in other regions, highlighting both successes and risks. The final section outlines a path for applying the Framework in the NSJV, including enabling conditions and near- and long-term actions.



## Defining Translation

Translation refers to the process of moving new knowledge and technologies into real-world use through iterative cycles of development, deployment, and learning. Originating in medical research as the transition from laboratory discovery to clinical practice (“bench to bedside”), the concept is often applied in innovation-focused economic development to describe the recurring coordination challenges labeled the “innovation chasm” or “valley of death”, where promising ideas stall as production capacity, workforce skills, capital, regulation, and markets fall out of alignment. A *Translation Destination* treats these challenges not as firm-level hurdles in a linear pipeline, but as a shared regional function, organizing institutions, infrastructure, and governance around execution, feedback, and scale.



## Who the Translation Destination Framework Speaks to?

The Framework speaks to three primary audiences:

- **Growing firms and employers** considering the NSJV as a place to expand, where production and growth can move forward with fewer coordination challenges;
- **Regional leaders and institutions** working to better align workforce, infrastructure, and land-use planning around shared economic priorities;
- **State and megaregional leaders** looking for a complementary production and deployment partner that strengthens supply chains and builds on existing research investments rather than duplicating them.



## Learning from early Silicon Valley: **Reintegrating Invention and Production**

Silicon Valley's early success depended on the tight integration of research, engineering, prototyping, and manufacturing within a single regional ecosystem. This proximity enabled rapid iteration between invention and production, reinforcing learning and accelerating improvement.

Over time, however, production and supply chains were increasingly separated from research and design, weakening those feedback loops. As technologies grow more complex and production capabilities regain strategic importance, regions that can reconnect innovation with manufacturing and workforce systems are positioned to play a stronger role.

For the NSJV, this moment presents an opportunity to build on its strengths as a production and logistics hub by more deliberately linking research, workforce preparation, and industrial deployment. The *Translation Destination* approach supports this reconnection—aligning capabilities across regions to strengthen competitiveness and resilience without replicating existing innovation centers.



## What Differentiates a Translation Destination **—and Why It Matters for the NSJV?**

For the NSJV, the *Translation Destination* Framework shifts the focus on ensuring that new technologies are put to work locally. It emphasizes moving ideas into real production and use by aligning the region's industrial land, energy and water systems, logistics networks, research capacity, and workforce skills, especially in advanced manufacturing, clean energy, and the circular bioeconomy.

This approach also calls for making deliberate choices. Rather than trying to support every emerging technology, a *Translation Destination* concentrates effort where the region has clear strengths and can build lasting advantages. For the NSJV, that means closer coordination among universities, workforce partners, utilities, economic development organizations, and local governments around a shared set of priorities, while remaining open to new ideas, firms, and investment from outside the region.

# What is the Translation Destination Framework?

The *Translation Destination* Framework is a place-based approach to economic development centered on moving ideas and technologies into real-world use. It rejects the linear model of innovation, research to commercialization, in favor of an iterative process shaped by feedback from production, deployment, and regulation, and requiring coordinated action across policy, institutions, and markets.

The Framework's central function is reducing friction across stages of a technology's development, that is lowering the risk that promising ideas stall before reaching commercial viability. It does this not by creating a new program or institution, but by providing a shared operating logic that guides how regional actors align and sequence policy, infrastructure, workforce, and industry decisions over time. This alignment is dynamic: as technologies mature and markets evolve, lessons from implementation feed back into subsequent investment, workforce, and policy choices, continuously reinforcing the region's execution advantage.

The Framework also recognizes that innovation does not flow only from outside the region. Local firms, workers, and entrepreneurs generate ideas rooted in practical experience, while universities, research institutes, and corporate R&D contribute complementary capabilities. By supporting a distributed, multi-anchor ecosystem, the *Translation Destination* Framework aims to retain talent, investment, and learning locally, thereby ensuring that the gains from innovation are broadly shared and that the NSJV strengthens, rather than merely serves the wider Northern California Megaregion.

While the Framework shares features with innovation clusters and technology hubs, it is best understood as complementary – centered on production and deployment at scale rather than discovery or firm attraction alone. It is not a real-estate strategy, a single institutional platform, or a cluster initiative. Instead, it places manufacturing readiness, pilot-to-scale production, supply-chain integration, and workforce alignment as the central drivers of regional competitiveness, underscoring the need for durable regional governance capable of maintaining that alignment over time.

Taken together, the Framework shifts the focus from proximity alone to purposeful coordination—organizing production capacity, infrastructure, workforce systems, and governance across regional and megaregional networks. In doing so, it reframes translation as a sustained industrial function that anchors research and design to execution, scale-up, and continuous upgrading over time.



## The North San Joaquin Valley's existing translation assets

The North Valley THRIVE Baseline Assessment identified a set of foundational capabilities that uniquely positions the NSJV to apply the *Translation Destination* Framework in practice.<sup>2</sup> These capabilities informed the North Valley THRIVE Strategic Plan and constitute the asset base through which a place-based approach to translation can be implemented. Taken together, they indicate that the NSJV is not only capable of supporting translation, but of doing so in ways that complement the broader Northern California Megaregion by linking innovation, production, and deployment at scale.

This section examines four interrelated dimensions of these foundations, each corresponding to core components of the *Translation Destination* Framework and providing a basis for assessing regional readiness. These are:

- 1) **locational advantages**, reflecting the NSJV's position within the megaregion and its ability to connect innovation, production, and markets;
- 2) **industry assets**, encompassing established sectors and production capabilities that support manufacturing, execution, and scale;
- 3) **emerging opportunities**, or "seeds," where higher-value production and translational upgrading are already underway; and
- 4) **governance and coordination**, including regional efforts that enable alignment, sequencing, and institutional learning.

The discussion begins with locational advantages, which establish the geographic and inter-regional conditions that make the NSJV a viable platform for translation and underpin the remaining asset dimensions.

## Locational advantages:

# The connective glue in the center of the Northern California Megaregion

The NSJV's viability as a *Translation Destination* is fundamentally anchored in its role as a critical inter-regional connector within the Northern California Megaregion. Located at the geographic center of the state's primary economic corridors, the NSJV links the San Francisco Bay Area, the Sacramento region, the Sierra Nevada, and the Southern San Joaquin Valley, positioning it as a natural platform for translating innovation, while leveraging the movement of goods, labor, and capital across and between regions.

The NSJV functions as one of California's most significant inter-regional workforce gateways, with substantial commuter flows connecting residents to major employment centers in the Bay Area and Sacramento while supporting reverse flows of firms, suppliers, and institutions seeking cost-effective locations for expansion and scale. This labor mobility reinforces the region's role as a bridge between innovation hubs and production-oriented economies.

The region also has significant multimodal connectivity, including four west-east highway corridors crossing the Sierra Nevada and three of the four major routes traversing the Diablo Range, creating direct and redundant connections between coastal markets, inland manufacturing centers, and mountain regions. Anchored by Interstate 5 and Highway 99, the NSJV also sits on California's most important north-south freight corridor, channeling a significant share of interstate commerce between Mexico, the Pacific Northwest, and Canada.

These highway assets are complemented by freight rail, including both Union Pacific and BNSF rail service, which further integrate the NSJV into national and international supply chains, connecting the region to the Pacific Northwest, Texas and the Gulf Coast, the Midwest, and the Eastern United States.

Together, the highway and rail network provide important connectivity to major seaports, including Oakland, Richmond, San Francisco, and West Sacramento. Within the region, the Port of Stockton is one of the nation's largest inland deep-water ports and the largest on the U.S. West Coast and is located in the heart of Stockton and adjacent to highway and rail infrastructure. The NSJV also has good access to multiple international airports, such as San Francisco, Oakland, San Jose, and Sacramento, along with the region's principal air-cargo gateways, further enables rapid intermodal logistics within a one- to two-hour radius.

Beyond economic connectivity, the NSJV's access to nationally significant natural, recreational, and cultural assets, from Yosemite and Lake Tahoe to the Delta, Monterey Bay, and multiple national and state parks, strengthens its ability to attract and retain workforce talent while supporting quality-of-life advantages essential to long-term regional competitiveness.

Collectively, these inter-regional connections position the NSJV as an important enabling node within the Northern California Megaregion, with the capacity to support the translation of ideas, technologies, and investments, originating both within and beyond the megaregion, into scalable production, infrastructure, and broadly shared economic value.

## Industry Assets:

### Legacy sectors set up translational opportunity<sup>3</sup>

Given the NSJV's locational advantages, the prominence of export-oriented traded sectors as engines of regional economic dynamism is unsurprising. From its earliest development, the region was structured to serve external markets, first through large-scale grain exports and later through higher-value specialty crops, food processing, beverage manufacturing, and agricultural equipment manufacturing. Early investments in transportation, processing, and logistics embedded the NSJV within national and global value chains. As a result, the region's economic model has long been oriented toward consumers beyond its borders.

While operating in different historical contexts, agriculture, manufacturing, and logistics have consistently anchored the region's traded-sector economy. The NSJV demonstrated repeated capacity to adapt its export base, from extensive grain production to intensive specialty crops, and later to mechanized food processing and equipment manufacturing, preserving competitiveness by combining industrial scale with operational flexibility. These transitions were supported by the co-location of production, processing, and applied innovation, allowing the region to internalize learning and continuously reconfigure how it translated market demand into reliable output.

This export competitiveness was underwritten by diverse immigrant and diasporic communities who supplied the skilled labor needed to reclaim land, build irrigation systems, manage time-sensitive crops, and operate increasingly complex production systems. Despite facing exclusion and periodic displacement, these communities enabled the NSJV to function as a translation zone within global value chains, a place where ideas, designs, and demand originating elsewhere were converted into large-scale, dependable production through workforce capability, infrastructure, and execution capacity. Over time, these dynamics created durable institutional capabilities in industrial production systems, logistics coordination, and process innovation that persist today.

The region's more recent shift toward warehousing and goods movement reflects path dependence on these strengths, rather than a strategic move into higher value activities. In other words, the region has stronger assets to leverage than it has effectively done in recent decades. The growth of warehousing and logistics specifically has weaker local value capture than earlier ag-industrial export regimes. Unlike other logistics-dominated regions in California, however, the NSJV retains a deeper base of industrial activity and a manufacturing workforce, particularly in food processing and emerging advanced manufacturing. These assets position the region to evolve into a place not only for moving goods, but for innovation, production, and ongoing iteration.

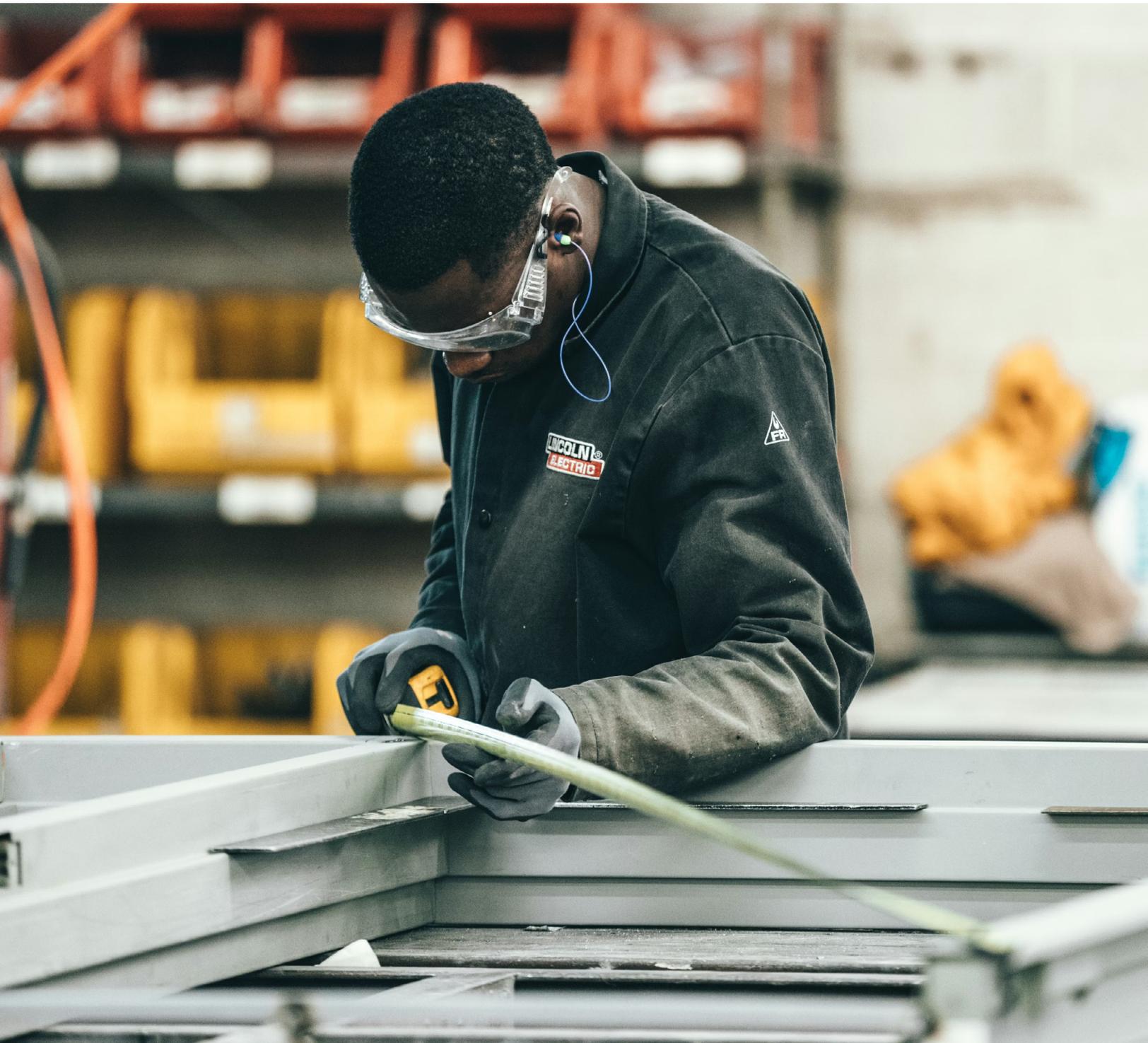
Historically, the NSJV has been most resilient when it retained processing, innovation, and ownership functions locally, and most vulnerable when it functioned primarily as a low-margin, land- and labor-absorbing node within broader economic systems.

The *Translation Destination* Framework builds directly on this experience by providing a place-based approach for strengthening local production capacity, moving into higher value activities and improving regional resilience. Rather than attempting to replicate innovation hubs that worked elsewhere, this Framework focuses on formalizing and extending the NSJV's existing advantages in industrial scale, execution capacity, logistics, and workforce capability, while more deliberately integrating applied innovation, pilot-scale testing, and higher-value manufacturing. In this way, the *Translation Destination* Framework aligns regional economic development with broader state and federal objectives around supporting supply-chain reliability, workforce advancement, and inclusive growth, while evolving the

NSJV's historic role in traded-sector production into a more connected, innovation-enabled model of competitiveness.

Compared to coastal innovation centers, the NSJV offers zoned, accessible industrial land at a more competitive cost structure to support early production and scaling. While similar assets exist in other states that have successfully attracted growing California firms, the NSJV's advantage is proximity: it is immediately adjacent to major innovation centers and emerging firms, not a plane flight away.

Relative to other inland regions, the NSJV uniquely combines this proximity with a workforce experienced in production and operations, along with a transportation network tightly integrated with statewide distribution systems and global supply chains. Together, these assets make the region particularly well suited for translation activities, enabling firms to move quickly from prototype to production, scale within the region, and iteratively adapt designs based on real-world manufacturing feedback.



## Opportunities:

### New Areas for value creation across industry initiatives and firms<sup>4</sup>

The good news is that across the NSJV, higher-value translational activity is already occurring. This section describes some of these activities and how to leverage them. While these opportunities demonstrate elements of the *Translation Destination*, they as yet do not have the full complement of attributes as they remain today either located within existing firms or sectors and not yet operating as part of a coordinated ecosystem.

BEAM Circular stands out as one of the clearest and most comprehensive examples of the NSJV taking advantage of its assets and applying a place-based strategy to create a translation ecosystem. BEAM Circular operationalizes the NSJV's historic role as a place where translation capabilities reside by deliberately linking applied research, workforce development, and industrial-scale deployment within the circular bioeconomy. BEAM Circular's strategic vision is to connect upstream innovation originating across the Northern California Megaregion and beyond through universities, national labs, and firms with downstream execution by regional manufacturers, growers, and processors. In doing so, BEAM seeks to enable technologies and practices to be piloted, de-risked, and scaled locally, while retaining higher-value functions such as prototyping, process innovation, and systems integration within the region. Rather than treating circularity as a standalone environmental objective, BEAM embeds it within traded-sector competitiveness, demonstrating how the NSJV can translate external ideas and market demand into durable, export-oriented economic activity that is both innovation-driven and inclusive.

Parasol Elite Power and West Coast Magnetics are firm-led examples of higher-value translation already occurring across clean energy and advanced manufacturing in the NSJV. These activities share a common pattern, they anchor locally while remaining deeply connected to external innovation systems, supply chains, and markets. Parasol Elite Power's emerging clean energy manufacturing operation in Merced integrates regional workforce and research partners with a global energy-storage supply chain, localizing production while retaining access to advanced technologies and markets. West Coast Magnetics similarly translates Silicon Valley-driven innovation into mid-scale production in Stockton, combining advanced modeling, prototyping, and manufacturing at lower cost while serving high-tech end markets.

Cepheid and Flory Industries highlight the NSJV's capacity for dynamic adaptation and continuous upgrading. Cepheid has expanded high-value precision manufacturing in Lodi, leveraging proximity to Bay Area innovation alongside cost advantages, reliable infrastructure, and supportive state policy. Flory Industries demonstrates how frontier technologies, such as robotics, artificial intelligence, and electrification, developed elsewhere can be piloted and commercialized at industrial scale in the NSJV, reinforcing the region's role as a production platform for next-generation equipment.

Finally, firms such as West-Mark and Mid Valley Prototfab illustrate the region's underrecognized strength in speed to market. Their ability to move rapidly from design to prototyping, fabrication, and deployment—and subsequently support their customers in the rapid development of their own products—reflects manufacturing readiness, workforce depth, and logistics capacity that allow the NSJV to serve California's broader innovation economy with short lead times and high reliability.

Taken together, these examples make clear that higher-value translation is already occurring in the NSJV, but largely in isolated pockets, driven by individual firms or initiatives rather than a coordinated regional system. The *Translation Destination* Framework herein builds directly on these foundations and seeks to amplify its proven success. Its purpose is to formalize, connect, and scale what is already working, so that higher-value translation becomes not episodic or firm-specific, but a defining and durable feature of the **11**

NSJV's economic model.

## Governance:

### Our Institutional Assets

Historically, the NSJV's ability to fully leverage its assets for translation has been constrained by governance fragmentation. The region's three counties and constituent cities have had limited experience coordinating economic development at a sustained, multi-county scale, and until recently there was no mechanism operating consistently at that regional level. As a result, translational activity has tended to occur in isolated pockets, driven by individual firms or initiatives rather than reinforced through a coordinated regional system.

North Valley THRIVE now serves as the primary vehicle through which the NSJV is beginning to overcome this fragmentation and align assets at a true regional scale. Through its Strategic Plan, North Valley THRIVE establishes many of the enabling conditions required to apply the *Translation Destination* Framework, advancing a coherent set of cross-cutting strategies that span regional innovation ecosystems, skills and talent pipelines, small business and entrepreneurship support, climate-smart infrastructure, placemaking, generational well-being, and regional coordination and alignment. Together, these strategies strengthen the connective tissue of the regional economy—shared governance practices, trust-based collaboration, data and learning systems, and institutional capacity for coordination across counties and sectors.

At the same time, the Plan's region-wide focus on technology deployment (translation and production), and cluster formation provides a common operating context within which the priority sectors: advanced manufacturing, clean energy, and the circular bioeconomy, can test, adapt, and refine pathways for transformation at scale. This sectoral focus enables coordination to move beyond planning toward execution, while allowing learning from early efforts to inform subsequent investment and policy decisions.

In this way, North Valley THRIVE is already performing a critical orchestration role by aligning workforce development, innovation systems, infrastructure planning, policy design, and community priorities around a shared regional logic. While additional regional capacity for sustained coordination, governance, and adaptive learning will be required over time, the NSJV is not starting from zero. Through North Valley THRIVE, the region has established a durable institutional foundation through which the *Translation Destination* Framework can be applied, assessed, and refined over time.

Looking ahead, North Valley THRIVE has the potential to evolve into the durable governance platform required to realize the full ambitions of the *Translation Destination* Framework. Such a platform would coordinate decisions across institutions and over time, supporting not only strategy and planning, but also execution, delivery, and accountability. Equally important, it would provide a consistent interface with state agencies and policymakers, enabling the region to engage effectively around funding, regulatory alignment, and implementation.

To advance the Framework, the NSJV must be able to present itself as a region capable of delivering a coherent industrial vision for California and of deploying public and private investment effectively in support of that vision. An ongoing regional entity that supports both internal coordination and external positioning is therefore essential, not only to pursue funding opportunities, but to attract and retain growing firms. The core objective is to establish a sustained locus of coordination through which translation functions as a regional capability, rather than as a series of disconnected initiatives.



# Lessons from other regions

Experiences from other regions that have pursued place-based economic development strategies provide valuable insight into both the opportunities and the risks associated with applying a *Translation Destination* Framework. Drawing on eight case studies from across the United States and internationally (Pittsburgh, Pennsylvania; Hampton Roads, Virginia; Racine County, Wisconsin; Kansas City Metro, Kansas-Missouri; Eindhoven, The Netherlands; Hambantota, Sri Lanka; Querétaro, Mexico; and Shenzhen, China), this section distills the lessons they offer.<sup>5</sup> Although these regions differ widely in history, governance, and scale, they share a common challenge: translating innovation, investment, and institutional capacity into durable, scalable, and broadly shared economic growth. Taken together, the cases show that success depends less on adopting a particular model than on how effectively regions use place-based Frameworks to align research, production, workforce systems, infrastructure, and governance over time.

Several of the cases of regional economic transformation illustrate how durable growth emerges when regions position themselves as execution and scaling platforms, rather than relying on isolated projects or research excellence alone.

Pittsburgh, Pennsylvania's transition from a legacy manufacturing economy to a global center for robotics and artificial intelligence reflects its ability to translate innovation into deployment at scale. While research leadership at Carnegie Mellon University was an important input, long-term success depended on aligning commercialization pathways, production capacity, talent pipelines, and public investment so that emerging technologies could move reliably from proof of concept into firms, operations, and markets. Regional leadership deliberately built the connective tissue needed to support scaling, entrepreneurial finance, applied testing environments, workforce systems, and infrastructure, allowing innovation generated locally but then historically commercialized elsewhere to instead be executed in place. At the same time, Pittsburgh's experience shows that even effective execution platforms can produce uneven outcomes if complementary systems lag, as evidenced by persistent neighborhood disparities, rising energy costs, and infrastructure constraints.

Hampton Roads (Virginia Beach and Norfolk region) offers a complementary example of translation anchored in execution, deployment, and systems integration rather than standalone innovation activity. Long shaped by naval and maritime operations, the region leveraged sustained federal investment, deeply embedded workforce pipelines, and coordinated regional leadership to extend its capabilities into advanced manufacturing, energy, aerospace, and logistics. Rather than treating defense activity as an end in itself, Hampton Roads increasingly used it as a platform for scaling applied technologies by aligning procurement, testing environments, workforce development, and firm growth across adjacent sectors. At the same time, the case highlights structural risks relevant to any place-based strategy, including reliance on a dominant funding source, uneven spatial distribution of benefits, and housing supply constraints that can limit long-term scalability if complementary regional systems do not evolve in parallel.

Querétaro, Mexico illustrates how production-anchored translation can be institutionalized through sustained industrial policy, infrastructure readiness, and tight alignment between universities and industry. Unlike research-led development models that prioritize discovery and early-stage innovation, Querétaro's strategy, similar in orientation to that of the NSJV, focused on positioning the region as a reliable execution and scaling platform capable of meeting global production standards in aerospace and automotive manufacturing. Leveraging its strategic location and trade integration, regional leadership invested in industrial parks, sector-specific workforce institutions, and supplier development, enabling firms not only to locate production locally but also to upgrade processes, deepen local supply chains, and capture higher-value functions over time. Shared labor pools, specialized training systems, and overlapping supplier networks reduced scaling risk and strengthened regional learning. At the same time, the case underscores that sustained translation depends on complementary social and institutional conditions, as limited access to higher education and security risks along major logistics corridors continue to constrain long-term resilience.

Eindhoven, The Netherlands demonstrates how translation capacity can be rebuilt and sustained through institutional coordination, continuous upgrading, and shared execution platforms rather than research intensity alone. Following industrial decline, the region focused on reopening and integrating innovation, production, and workforce systems that had previously been vertically contained within a single anchor firm. Deliberate investments in shared platforms, applied research institutes, and regional governance enabled firms to scale complex manufacturing, upgrade capabilities, and retain higher-value systems integration, design, and process innovation locally. Over time, this coordination supported diversification into semiconductors, photonics, and medical technologies while strengthening local ownership of value creation. At the same time, Eindhoven's experience highlights familiar potential constraints: growth-driven housing shortages and congestion underscore the need to align execution capacity with land use, housing, and infrastructure systems.

Shenzhen, China represents a large-scale example of translation driven by adaptive governance, rapid execution, and sustained upgrading. Initially positioned as a manufacturing and export platform, the city's trajectory depended on its ability to continuously move up the value chain by co-locating design, prototyping, engineering, and production within specialized districts. Flexible labor policies, proximity to Hong Kong and its financial ecosystem, as well as district-level specialization enabled firms to iterate quickly, scale efficiently, and internalize higher-value functions, transforming Shenzhen into a global center for electronics, telecommunications, electric vehicles, and advanced manufacturing. This emphasis on execution and upgrading allowed the city to capture increasing shares of value locally, though it remains exposed to geopolitical risk, trade tensions, and persistent inequality, particularly among migrant workers.

The mini case studies also provide clear cautionary lessons about what undermines place-based strategies when alignment is weak or incomplete. Wisconsin's Foxconn deal illustrates the risks of relying on a single "transformational" anchor employer without enforceable commitments, shared investment, or parallel ecosystem development, leaving the region with stranded

assets when the firm pivoted. The Kansas City Metro experience shows how fragmented regional governance and competing incentives within a shared labor market can devolve into zero-sum outcomes that relocate activity without generating net growth. Hambantota's port investment further demonstrates that infrastructure-led strategies can fail when optimistic demand assumptions, rigid financing structures, and limited adaptive capacity undermine early performance, regardless of engineering quality.

Across these diverse cases, several consistent lessons emerge that directly inform the application of a NSJV *Translation Destination* Framework in the NSJV. The evidence underscores that place-based development is not automatic but depends on the presence of institutionalized coordination: durable success requires the capacity to align decisions and investments across sectors and over time. Production and deployment generate lasting advantage only when paired with continuous learning, workforce advancement, and supplier upgrading. Overreliance on singular projects or anchor investments increases risk, while diversified, capability-based systems improve resilience. Effective governance alignment across jurisdictions is essential to avoid fragmentation and negative-sum competition, and inclusion and diffusion are not secondary considerations but core economic requirements for sustaining long-term competitiveness.

These regions are not models to be replicated wholesale. Each reflects distinct historical, institutional, and political contexts and involves trade-offs that limit simple transferability. For the NSJV, their value lies in clarifying what translation-oriented, place-based frameworks can realistically enable, and where constraints must be addressed. The *Translation Destination* Framework draws selectively from this evidence to advance an approach tailored to the NSJV's specific assets and challenges, emphasizing coordination, readiness, execution, and learning as the foundations of durable regional growth within the broader Northern California Megaregion.



# Applying the Framework

Applying the *Translation Destination* Framework in the NSJV requires treating translation not as a collection of discrete initiatives, but as a coordinated regional function that aligns decisions across research, production, workforce systems, infrastructure, land use, and markets over time. The central challenge is not generating ideas or attracting isolated investments, but reducing execution risk as technologies move from experimentation to deployment and scale. In this context, the Framework provides a shared operating logic for sequencing and aligning regional actions so that promising opportunities are neither stalled by misalignment nor undermined by premature or fragmented investment.

## **Near-term application: improving coordination and execution**

In the near term, progress in applying the Framework will be reflected in measurable improvements in coordination, timing, and delivery across regional systems. These improvements reduce key sources of risk faced by firms and public partners, including uncertainty around permitting, infrastructure availability, workforce readiness, and market access. Rather than attempting to advance all elements simultaneously, the Framework emphasizes sequencing: aligning workforce preparation, infrastructure commitments, and land-use decisions with credible production timelines and firm demand.

Practical indicators of early application include firms selecting the NSJV for pilot-scale manufacturing, first-of-kind deployments, or early production; workforce and training programs shaped directly by committed employer needs rather than speculative projections; infrastructure and utility investments timed to support emerging clusters rather than built far in advance of demand; and regional institutions coordinating investments to avoid duplication or zero-sum competition. At this stage, the Framework functions as an enabling guide, improving speed to market, lowering coordination costs, and increasing confidence among firms, workers, and public agencies.

## **Longer-term application: institutionalizing translation as a regional capability**

Over the longer term, the effectiveness of the *Translation Destination* Framework depends on whether translation becomes institutionalized as a durable regional capability, rather than remaining dependent on individual programs, funding cycles, or champions. This requires governance and operating capacity capable of sensing emerging technological, market, and regulatory shifts; coordinating policy, infrastructure, and workforce responses; and adapting strategies as conditions evolve. In this phase, the Framework operates less as a diagnostic tool and more as a shared operating logic embedded within regional institutions.

Success at this stage is reflected in persistent outcomes rather than one-off wins: sustained growth in higher-value employment; deeper local ownership of production, process innovation, and systems integration; stronger feedback loops between production experience and training, infrastructure, and policy decisions; and the NSJV's emergence as a preferred location for translating innovation into scalable, export-oriented activity. Importantly, these outcomes depend not only on attracting firms, but on retaining learning and upgrading capabilities locally over time.

## Risks and the importance of sequencing

Several risks arise if the Framework is applied without sufficient discipline. One risk is that the NSJV becomes primarily a site for pilots and demonstrations without capturing the higher-value activities that follow, allowing large-scale production and decision-making to locate elsewhere. A second risk is that the region captures production only in the form of branch plants, becoming a low-margin node in broader supply chains with limited local control over profits, innovation, and long-term investment. A third risk is mis-sequencing workforce investments, particularly training programs that outpace actual production timelines and committed employer demand, leading to credential inflation or worker displacement rather than opportunity. Finally, there is a risk of overbuilding physical infrastructure ahead of demand, straining public resources and limiting flexibility if markets or technologies shift.

## Governance, feedback, and adaptive learning

Mitigating these risks requires effective regional leadership and a durable institutional platform that connects real-time market insight with workforce development, infrastructure delivery, and policy design. Such civic capacity reduces fragmentation, supports coordinated decision-making, and helps ensure that the region captures and retains growing industries rather than competing against itself through misaligned investments or incentives. Crucially, it also sustains structured feedback loops, a defining feature of the *Translation Destination* Framework at all stages of application.

Experience gained through commercialization, deployment, and production must continuously inform research agendas, training curricula, infrastructure planning, and regulatory approaches. As these feedback mechanisms mature, they reinforce institutional learning and adaptive capacity, reducing reliance on one-off interventions and enabling continuous improvement in regional economic performance. In this way, translation functions not as a one-time intervention, but as a defining regional capability that anchors opportunity, resilience, and shared prosperity in the NSJV while strengthening the Northern California Megaregion.

## From Framework to Roadmap

The North Valley THRIVE Strategic Plan establishes the conditions necessary to support this evolution. Its cross-cutting enabling strategies strengthen the institutional, physical, human, and environmental foundations required for translation, while its priority sectors serve as practical testing grounds for identifying which combinations of policy, infrastructure, workforce, and market alignment are sufficient to achieve transformation at scale. Together, these elements move the NSJV away from a development model defined by disconnected projects toward a more integrated regional system capable of delivering scalable production, durable competitiveness, and inclusive prosperity.

The next step is to develop a clear roadmap for implementing and applying the *Translation Destination* Framework. This roadmap should identify the enabling conditions that must be strengthened, the transformative opportunities that warrant coordinated action, and the sequence in which policy, infrastructure, workforce, and industry investments should occur. It should also define an initial set of near-term actions to demonstrate progress and reduce

friction, alongside longer-term initiatives required to institutionalize translation as a sustained regional capability.

This briefing has outlined both the opportunity and the discipline required to apply the *Translation Destination* Framework effectively. Advancing the Roadmap envisioned here cannot occur on paper alone. It will require shared understanding, deliberate choices, and coordinated commitment across public, private, academic, and civic leadership. Ultimately, translation capacity in the NSJV will not be built by any single institution or investment. It will emerge through aligned decisions, shared accountability, and a sustained commitment to pragmatic capability-building coupled with ambitious, transformative change.



## From Framework to Application: **The Translation Destination Roadmap**

This briefing establishes the *Translation Destination* as a place-based economic development framework for the NSJV. Advancing from concept to implementation requires a regional roadmap that operationalizes the Framework through coordinated decisions, investments, and learning across institutions and scales.

The *Translation Destination* Roadmap serves this function by guiding priority setting, action sequencing, and capability-building over time, without creating a new standalone program or institution. The Roadmap Appendix provides additional detail on the Roadmap's purpose, scope, core components, phasing, and governance considerations.<sup>6</sup>

**Prepared for: North Valley THRIVE Program**

**Prepared by: North Valley THRIVE Strategy Team**

This briefing report has been prepared by the North Valley THRIVE Strategy Team. The statements, findings, conclusions, recommendations, and other data in this report are solely those of the authors and do not necessarily reflect the views of the North Valley THRIVE Program nor California Jobs First.

© North Valley THRIVE, 2026.

Licensed under the Creative Commons Deed “Attribution– 4.0”



<sup>1</sup>The NVT Strategic Plan is available at: <https://bit.ly/4cgCNFx>

<sup>2</sup>The NVT Baseline Assessment is available at: <https://bit.ly/3Mi98k0>

<sup>3</sup>This subsection draws on NVT Historical Research, for further details see: <https://bit.ly/300wv2R>

<sup>4</sup>For additional details on the NSVJ examples this subsection describes see: <https://bit.ly/302z7xi>

<sup>5</sup>For additional details on the regional cases this section describes see: <https://bit.ly/4aDcQ1G>

<sup>6</sup>Please see the Roadmap Appendix, available at: <https://bit.ly/46zSbJm>