Project Governance

The question of governance—organizational structures, agency relationships and responsibilities, and external coordination with the public—is of particular importance to any large-scale infrastructure undertaking. Regarding a third crossing, assembling the diverse set of local, regional, state, and private actors necessary to conceptualize, design, finance, construct, operate, and maintain such a critical piece of infrastructure is the first step on a decades-long journey towards implementation. Beyond these duties, a project sponsor also must be responsible for land development around station areas, regional transit planning, fare setting, parking provision and pricing, and negotiating contracts with technology providers and labor unions, coordination with connecting transit services and potentially collaboration with private freight rail.

Additionally, governance must endure shifting political realities, public support, and economic conditions, as well as rise to meet any technical challenges prevalent in large projects. Currently, no agency in the Bay Area and larger megaregion possesses enough dedicated staff to both continue existing operations and manage a new megaproject, and thus a logical championing agency does not yet exist. The Bay Area holds no shortage of transportation operators and stakeholders, and any choice of governance structure will by default benefit or disadvantage some of these groups. A governing board will need to develop its own guiding principles in alignment with the key consideration discussed earlier, to aid in decision-making; additionally, a specific community advisory board structure to complement a traditional project board is detailed below in Equity and Governance.

The approach to governance in project management literature considered here is developed by Aloha et. al, wherein the concept of governance is inherent to a project[1]. Because projects can be immense, and exist only at a particular place in a particular time, each requires its own unique set of procedures and relationships to succeed, and thus, a standard recipe for governance cannot be drawn from a set of common principles. Regarding megaprojects, the project itself in a sense becomes a stakeholder and influences decision-making processes[2]; for example, Bay Area residents need only to recall the long process to replace the San Francisco-Oakland Bay Bridge (SFOBB), where the bridge took on a life of its own, representing more than a piece of infrastructure, but a statement about the Bay Area[3].

Understanding projects in this way limits the transferability of concepts and approaches from one to another and can potentially reduce repeated mistakes in estimation that often plague megaprojects[4]— cost, schedule, ridership, and others—by avoiding the duplication of potentially flawed examples. Internal project governance requires that any exercises in governance take any policy or strategy transfer from previous projects, identify strengths and weaknesses, eventually base a new approach upon the specific context of its place and time.

An extensive literature review from project management, corporate governance, megaproject, risk management, and infrastructure planning discourses, paired with semi-structured stakeholder interviews as well as other stakeholder discussions served as the basis for identifying and analyzing alternative forms of governance structures. Translating these findings into the environment of the Bay Area revealed strengths and weaknesses of each approach; keeping in mind the inherent risks of megaprojects, we present the most appropriate structures for the third crossing; these balance drawbacks with significant potential benefits. As mentioned, this project necessitates a long planning

horizon and a solution able to retain a sense of continuity in the face of changing circumstances. Further, external independent project oversight and peer review as well as a comprehensive risk management program should be integrated fully into a project's governance structure from the onset of project planning and development (see Risk Management and Independent Project Oversight section).

Consideration of Project Circumstances

For the purposes of governance, only a distinction between the transportation mode of the third crossing is necessary to develop different governance alternatives. A governance structure will need to be in place long before any specific decisions regarding alignment and station placement are made. Thus remaining agnostic regarding route alignment, four operational circumstances consistent with alternatives pursued in further detail in other sections of the report are considered:

1) BART operation only
2) Standard rail operation only
3) BART and standard rail two-tunnel operation
4) Performance Pricing (no third crossing)

The fourth operational circumstance considers that, in lieu of the infrastructure undertaking, a suite of policies and programs designed to benefit the Bay Area are implemented. This is discussed in further detail in the alternatives section of the report.

A constrained and ideal scenario have been considered regarding project governance (similar to the analysis in the Funding & Finance section). The constrained scenario takes into account the economic, political, and public realities of the Bay Area, particularly regarding large-scale infrastructure projects. The ideal scenario seeks to leverage the maximum potential benefits that could be brought about by a third crossing and incorporates ideas that may be more politically challenging to implement. For each operational circumstance listed above, recommendations are made for governance structure under a constrained and ideal scenario.

Governance Structure Alternatives

To account for unique factors stemming from geographies, political climates, and the nature of megaprojects, multiple different strategies for project delivery exist. This section details those most relevant to the third crossing, with each alternative illuminated by case studies listed in Table 2 below.

Table 2: Alternative governance structures and case studies

Structure	Case	Ideal/Constrained?
Private Involvement	Texas Central Railway	C
Management by an Existing Agency	Gateway Tunnel Project (New York/ New Jersey)	C
Joint Powers Authority	Los Angeles-San Diego-San Luis Obispo (LASSON) Rail Corridor	N.A.

Private Involvement: From Public-Private Partnerships to Private Provision

To leverage the expertise of the private industry, many public entities have begun entering into public-private partnerships (P3s) for the execution of projects ranging in size from a few million to a few billion dollars. P3s range in scope and complexity, the simplest being a contract to one entity for both the design and construction of a particular project; this is known as a design-build contract or agreement[5]. A design-build contract differs from a traditional design-bid-build contracting structure, wherein an owner lets one contract for design, and a subsequent contract for construction; design-build can capitalize on the value of shared knowledge between individuals familiar with the design and construction processes. Design-build approaches hold the potential to deliver projects more quickly, both due to fewer bid processes and the overlapping of design and construction activities possible when one entity is responsible for both, and can also cut down on cost escalations during construction that can arise from change orders and schedule delays[6]. These savings have been examined projects with costs below $100 million, but for megaprojects these cost and schedule savings may be outweighed by the inaccuracies prevalent in projections during planning processes. The stakes increase non-linearly as project cost does, so any benefits or drawbacks of pursuing a P3 structure are potentially magnified. Further, consolidating tasks also includes putting more risk into the hands of a single entity, and can limit the ability for a project owner to replace an underperforming design-builder. Design-build also necessitates a project owner or sponsor that is knowledgeable of the specific tasks related to the project, as only one round of bidding exists and bidders can disguise costs in different ways than in design-bid-build contracts. While design-build agreements have drawbacks, they may be worth considering for certain elements of a third crossing, such as smaller construction packages.

More complex types of P3s exist, and can include additional provisions for operation of a facility or transit network, maintenance, and project financing and ownership; some agreements stipulate a transfer of ownership back to the public sector after an agreed upon amount of time. These agreements can be used to transfer ownership of large pieces of infrastructure in need of repair or replacement beyond the financial and/or technical capability of a public entity to a private one able to perform the work. The private concessionaire most commonly seeks revenue in the form of user fees for facilities over the duration of the agreement. A significant transfer of risk occurs when the majority of rights over large facilities are ceded, with the private entity taking on almost all of the future uncertainty of operations and maintenance in addition to traditional construction risk; the public entity in turn loses the ability to incorporate ceded facilities into long-term planning efforts. Many P3s include non-compete clauses regarding operation, and can lead to disputes in the future. Additionally, P3s can suffer from limited public engagement and outreach, which is of key importance to the success of the third crossing[7].

Private Provision

While more complex P3s may not be appropriate for the third crossing due to the existence of operating agencies across the Bay already with nearly the capability to execute a large project, the example of fully private provision of high speed rail in Texas provides some insight of use to the third crossing. The Texas Central High-Speed Railway (TCR), begun in 2012, is a venture led by TCR, and an independent

developer, Texas Central Partners, with the goal of providing high-speed rail service between Dallas/Fort Worth and Houston by 2022, using only private funding sources[8]. Although smaller in scale—at roughly 250 miles in length with yet to be disclosed costs on the order of $10 - $20 billion—than the California High-Speed Rail (CAHSR) project at about 800 miles in length at a cost of roughly $70 billion, TCR is following a more aggressive timeline even than the initial CAHSR phases, intending to construct the project in roughly five years[8]. By avoiding internal bureaucratic and political processes that can delay project implementation, TCR argues it will meet this schedule, and hopes to become the first high-speed rail operator in the United States. TCR raised $75 million dollars last year in its first round of fundraising, and is currently using these funds to move through the federal environmental review process, with the Federal Rail Administration leading the preparation of a draft Environmental Impact Statement (EIS)[9],[10]. TCR is seeking legal status under Texas Statutes to be considered a private entity capable of exercising eminent domain rights over private property, although the only ruling thus far regarding this issue went in the favor of landowners[11]. However, a piece of the Texas Transportation Code regarding the legal definition of a railroad as an entity incorporated before 2007, or any other legal entity *operating* a railroad[12],[13] is delaying TCR. Due to the language's vague nature, it remains unclear as to what constitutes the operation of a railroad, and thus TCR remains in limbo regarding its legal status. Regardless, project sponsors are continuing with the environmental process, with the goal of beginning construction in 2017.

Considering other aspects of project governance, the project appears to be suffering from a lack of public communication and coordination: the project website hosts minimal information regarding public outreach processes and includes many sections intended to defend the project against perceived myths regarding project costs, timelines, funding, technology, and others, present in media coverage and speculation about the project. A dissenting organization, Texans Against High-Speed Rail has formed to represent landowners and legally combat the project, representing any landowners wishing to take legal action against TCR, including the property owner in the court case earlier this year. Furthermore, while TCR claims that no public dollars will be used for the project, two types of federal loans are specified as possible avenues for funding: Railroad Rehabilitation and Improvement Financing (RRIF)[14] and funds through the Transportation Infrastructure Finance and Innovation Act (TIFIA)[15]. These are both federal programs that TCR claims are structured similarly to private loans, with full repayment, and thus do not represent public capital risk[16]. Although the term structures do require full repayment of principal and interest, the federal government, if it issued these loans, would become an investor in the project, and could stand to lose money if the project were unsuccessful. While this has not yet become an issue because no grant proposals have been submitted, requests for federal funding support could add to the opposition against the project.

In addition, the issue of foreign influence in megaprojects is highlighted by the TCR case, with opponents questioning the involvement of Central Japan Railway as technical advisor and train supplier. Strong objections have been made about decisions to opt out of Buy America programs, for example in the use of Chinese pre-fabricated bridge decks on the recently completed SFOBB[17], and although the conversation to date does not focus on construction materials, changing political tides at the federal level could result in more scrutiny of foreign involvement in major infrastructure projects in the future.

Thus, the example of TCR demonstrates the need for clear channels of communication between project sponsors and outside stakeholders, even prior to conceptualization. The private governing structure

may have curtailed some of the more time-consuming public processes required to scope and plan a megaproject, but TCR's unclear legal status poses hurdles that can erase any time savings, especially with large amounts of right-of-way acquisition necessary as the project moves forward. While TCR is an entirely new system, and the third crossing would be an extension of an existing network, the lessons learned as TCR continues could be of particular interest to third crossing stakeholders, especially if there is any private involvement in the financing, construction, or management.

Management by an Existing Agency

The Bay Area is host to no shortage of transportation agencies, as discussed in the Current Conditions section of the report. While none of these agencies currently has the staff capacity to both carry out its current operations and oversee the construction of a third crossing, the example of the Gateway Tunnel Project between New York and New Jersey provides lessons for an existing agency attempting to manage a megaproject. Further, the Gateway Tunnel Project provides an alternative view of a publicly managed project at a similar stage in the process as TCR.

The Gateway Tunnel Project, or Hudson Tunnel Project, is a planned additional tunnel underneath the Hudson River for use by Amtrak's Northeast Corridor and New Jersey Transit. The 2-mile tunnel will provide much needed system redundancy, double capacity, and allow for extensive repairs to be made on the existing tunnel, which is over 100 years old and was damaged during Hurricane Sandy[18]. This project, with projected costs on the order of $10 to 20 billion, is in turn part of the larger Gateway Program, which is a bundle of strategic rail infrastructure improvements along the New York-New Jersey corridor, including significant expansions at New York Pennsylvania Station[19]. To deliver the Gateway Tunnel Project, the Port Authority of New York and New Jersey (PANYNJ) created a special purpose entity, the Gateway Development Corporation, which will oversee the construction and assume ownership of all new infrastructure, granting use rights to Amtrak and New Jersey Transit in the future[20]. The four-person board of the Gateway Development Corporation consists members from PANYNJ representing each state, as well as one member each from Amtrak and the US Department of Transportation. Unanimous approval is required for any project decisions, meaning consensus must be reached among the major stakeholders for the project to move forward[20]. Interestingly, New Jersey Transit is not represented on the project board, but is still heavily involved in the preliminary engineering work[21]. Final project cost estimates will be released with the draft EIS in the summer of 2017, with the federal government having committed to providing half of the funding and the two states the other half[20].

While matters appear to be proceeding smoothly on the Gateway Tunnel Project, this entire undertaking is actually a revitalization of the shelved Access to the Region's Core (ARC) project. New Jersey Governor Chris Christie cancelled ARC in October of 2010, around four years after its initial conception because of cited cost projection increases and a weak fiscal climate in New Jersey. This cancellation came after New Jersey Transit, the project sponsor, had already received $601 million from the Federal Transit Administration's (FTA) New Starts Program and was finishing final design[22]; New Jersey Transit then had to forfeit the funds. A report by the Government Accountability Office found that some of the 2008 FTA cost estimates stated a range of $8.4 - $12 billion and remained consistent throughout, signaling that escalations may have been expected. New Jersey Transit's initial estimate in the 2006 draft EIS was $7.4 billion, which then increased to $7.6 billion in the final EIS in 2008, and to $8.7 billion in the grant request to FTA. Outside sources indicated that the governor's intention in

cancelling the project was to free up its earmarked funds for injection into the diminishing state transportation trust fund; Christie may also have used the cancellation to add to his image of fiscal hawk[23]. Regardless of intentions regarding the cancellation, roughly $300 million was sunk into on engineering, design, insurance, and environmental review work, and the results of the environmental process were unusable for the purposes of the Gateway Tunnel Project due to data expiration three years after the completion of an EIS[24]. Additionally, regarding inter-agency cooperation, the MTA originally viewed the ARC project as potential competition for available funding, and subsequently did not want to be involved[25]. Because the MTA had their own standard rail projects in the pipeline, leading to tensions between Long Island Railroad and Metro North—both agencies under the MTA—backing a project meant without direct benefit to the authority stretched available staff too thinly and shrunken the pot of matching funds. Understanding the lack of cross-Hudson buy-in lends a bit of credibility to Christie's claims that the project was more than just New Jersey could afford. In light of the failed ARC, the Gateway Tunnel Project carries a higher price tag and longer timeline and many New Jersey residents may still remain skeptical as the project moves forward, which could hurt public buy-in.

With a second chance at the tunnel project, the knowledge gained from the previous experience can hopefully benefit the overall effort. Moving control into the hands of a development corporation as part of PANYNJ, the largest entity involved, and one that comprises members from both states, opens up more institutional knowledge to leverage moving forward. The project also has managed to survive harsh political climates, potentially because of its critical economic importance. Further, Amtrak, a player with a tremendous amount at stake, spent roughly $250 million in 2013—in the absence of any apparent project—to preserve rail right of way in a rapidly developing part of Manhattan without which the Gateway Tunnel Project would never have been possible; this kind of foresight in the face of adverse conditions is strikingly important for projects with long planning horizons. There are some striking similarities between this project and a potential third crossing: the need for system redundancy and maintenance, alleviating congestion on both transit and on roads, increasing economic competitiveness and allowing for future growth. Furthermore, as a third crossing potentially benefits counties beyond the current BART districts, seeking buy-in from places such as San Jose and Santa Clara will be important for the future success of the project, particularly in an area with tight competition for shrinking federal funds. Tracking the progress of the Gateway Tunnel Project as it progresses can yield insights for parties interested in delivering a third crossing.

Joint Powers Authorities

Joint Powers Authorities (JPAs), in the realm of transportation, are legal entities consisting of two or more public authorities sharing control over the provision of some transportation good or service. Capitol Corridor and Caltrain are examples of JPAs that exist in the Bay Area to provide rail services, and both would stand to gain from some of the operational circumstances of a third crossing, gaining access to larger service areas, higher ridership, and potential funding sources.

In southern California, the example Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor provides insights regarding rail operations structures, particularly regarding standard-gauge rail. LASSON is JPA originally formed in 1989 to provide service on the coastal rail route between the cities from which it takes its name[26]; while no major infrastructure projects have been carried out by LASSON, its management is of interest in the case of the third crossing. The 11-member board of directors consists of elected representatives from transportation agencies, transportation authorities,

and local governments along the corridor, as well as Amtrak, Caltrans, and CAHSRA[25]. LOSSAN receives dedicated funding via transportation sales taxes from its member counties, except for Ventura county which has no such tax. It operates with relative ease on rights-of-way owned by other agencies, having negotiated a favorable contract with Southern Pacific (SP) railroad as SP was moving towards bankruptcy. The managing agency, which provides staffing and day-to-day operations is the Orange County Transportation Authority (OCTA). In 2015, LOSSAN officially assumed control over Amtrak's Pacific Surfliner Service, making the operations under the agency's control the second busiest inter-city passenger rail service behind Amtrak's Northeast Corridor[27]. By utilizing a JPA, LOSSAN's leadership structure is necessarily responsive to the needs of stakeholders along the route, including private freight rail operators who, although not represented on the board, are important players and right-of-way owners in the corridor.

More generally, JPAs can be susceptible to issues stemming from conflicts regarding a multitude of divergent opinions. With the provision of a service, often the needs of each public agency align enough that differences can be accommodated. However, for a large infrastructure project, the shared goal or incentive may not exist as concretely. In such a situation, each agency may have specific goals for its own constituents that are mutually exclusive to another set agency's goals, thus a stalemate could ensue. Even in a less contentious situation, a project could fall victim to the inclusion of too many aspects, attempting to accomplish too many things at once while doing none well. Additionally, JPAs can be subject to unstable funding sources, depending upon the nature of contributions, and willingness to contribute, from member agencies. Securing dedicated funding for an infrastructure project is possible, but operating funds can be harder to obtain of the nature of federal funding incentives, and the desire of political office holders to implement legacy projects. Although some agencies structured with JPAs may be partly included in the third crossing, pursuing a larger agreement amongst transportation agencies, and local, state, and regional public agencies could create a situation of discordant goals and interests.

Governance Structure Recommendations

For each scenario, ideal and constrained, recommendations based on the literature, case studies, and stakeholder discussions, are offered on governance structures by different operating circumstances. Regardless of operating circumstance, however, external independent project oversight and peer review, and a comprehensive risk management program should be integrated into project governance from the onset (see Risk Management and Independent Project Oversight section).

Again, a project sponsor would be responsible for assembling the diverse set of local, regional, state, and private actors necessary to conceptualize, design, finance, construct, operate, and maintain a large infrastructure project, as well as for land development around station areas, regional transit planning, fare setting, and parking provision and pricing, negotiating contracts with technology providers and labor unions, collaboration with private freight rail depending upon scenario selected, and interfacing with both regional and state entities involved in transportation planning, such as MTC, ABAG, and the California State Transportation Agency (CalSTA), and other agencies such as the Bay Conservation and Development Commission. Remaining alignment agnostic, and considering a constrained vs. an ideal scenario, the recommendations are as follows. Internal planning regarding staffing remains important for any third crossing as well. Additionally, a project sponsor would need to overcome all challenges

inherent to megaprojects, both technically, and politically, and remain adaptive enough to navigate a long planning and execution horizon.

Constrained Scenario by Operational Circumstance

In the constrained environment of the Bay Area, choice of mode will shift the appropriate governance structure. Existing agencies and operators will influence future structures, and any benefits or drawbacks that currently exist may be carried over. Recognizing strengths and weaknesses can inform the best ways to complement positives and reduce negatives, particularly regarding the details of JPA and board structures. Any constrained governance structure must build upon the reality of the Bay Area and seek to inject innovation where possible, as well as maximize the political support, including from Santa Clara, and San Mateo Counties which currently do not have representatives on the BART board (The BART board currently consists of directors from counties of Alameda, Contra Costa and City/County of San Francisco).

1) BART Operation Only

If the new crossing is to solely provide BART service, then a structure similar to that of the Gateway Tunnel Project is appropriate. BART could create a special purpose entity to oversee the design and construction of a new tunnel, with the entity dissolving after construction and transferring all ownership rights over the infrastructure back to BART. Some shared staffing between the special-purpose entity and BART, along with dedicated staff on the project, would allow BART to continue its day-to-day operations while also managing a megaproject. The board of the new entity could be comprised of representatives from BART, as well as involved cities, and regional and state entities. The subsidiary entity would need to be careful to balance the present and future needs of the system, which could cause friction between it and BART. Regarding public buy-in, the recent passage of BART's major infrastructure bond (Measure RR of 2016) gives the sense that although some discontentment about the system exists (particularly regarding reliability, service hours, and cleanliness) the public could be open to backing a large project.

2) Standard Rail Operation Only

In the situation where only standard gauge tracks are incorporated as part of the crossing, it would not make sense for BART to the central governing body, although a board position could increase coordination between modes and benefit the region overall. Capitol Corridor, with its well-structured JPA, could absorb Caltrain, thus merging the East Bay and West Bay service areas and expanding its pool of member counties. A new funding agreement would need to be reached, with newly added counties contributing some portion of the eventual operating budget. As Caltrain currently operates based upon donations from its member counties, reaching a new agreement could prove difficult, although the prospect of true rail connectivity from Sacramento, through San Francisco, all the way to Silicon Valley might provide enough of an incentive for counties to provide dedicated funding. Both Capitol Corridor and Caltrain have limited full-time staffs, greatly below anything necessary to oversee the construction of a crossing and the operation of expanded service. Each of the managing agencies—BART for Capitol Corridor and SamTrans for Caltrain—could provide some employees, but a new managing entity would be required in the long-term. Because neither Capitol Corridor nor Caltrain has the kind of name recognition that BART has, enlisting public support for such a merger would pose a greater challenge than for BART. Furthermore, all owners of right-of-way in the corridor would need to

be included in the project, and this could pit freight service against passenger service on tracks owner by freight providers. Even though freight demand is relatively low, few tracks exist to serve existing dispatches in the East Bay, and Union Pacific would be hesitant to allocate more track time to passenger service, particularly in light of future rail development around the Port of Oakland.

3) BART and Standard Rail Operation

For a two-tunnel crossing, a special purpose entity created by BART, but which would retain ownership rights to the built infrastructure in a similar fashion as to the Gateway Tunnel Project, would be able to carry out the construction and eventually lease rights to any operators. BART, by far the largest transportation provider in the region, currently possesses the most dedicated staff, available funding and bonding potential, and name recognition to become a project champion. Further, BART staff have begun pursuing alternatives for a third crossing already, and although different technical constraints exist for non-electrified locomotives, alternatives could be amended regarding standard-gauge rail. A merger of Capitol Corridor and Caltrain would still likely be necessary, but the combined entity would only be responsible for current and future operations of the rail corridor. This network of relationships would be the most complex of the constrained scenario proposed here, but creating one entity solely in charge of capital project execution can insulate it somewhat from divergent goals of providing regional connections from Sacramento to Silicon Valley versus relieving congestion in the Bay Area and seeking benefits for historically disadvantaged communities.

4) Performance Pricing (no Third Crossing)

In a Performance Pricing alternative, there is little justification for shifting any currently functioning governance structures in the Bay Area. The Bay Area Toll Authority and MTC would retain authority, and BART and AC Transit would continue their operations as planned. While there are potential changes to the overall Bay Area that could improve upon the overall regional governance, such as stronger coordination between transit providers regarding capital planning and service provision, in the current constrained environment these are assumed unlikely.

Ideal Scenario by Operational Circumstance

Under the ideal scenario, favorable political conditions exist in the Bay Area that render difficult to achieve structures possible. Under such conditions, consolidation of transportation services to the maximum extent possible, creating a multi-modal transportation agency providing service across the bay, has the potential to yield the most benefit. This agency would need to control all bay crossings between Oakland and San Francisco, by putting BART, AC Transit, The San Francisco Bay Ferry, and Caltrain and Capitol Corridor—if standard-gauge rail tracks are included—under one roof.

Additionally, toll authority for SFOBB crossings would be needed to fully manage demand in the corridor. This merger needs to precede construction activities, so that the entity would be maximally responsive to decreases in capacity from any of the modes, both during and after construction. This structure would also allow for dynamic incentives based upon mode to bring about desired modal shifts; an integrated fare structure would set the basis for pricing that could also take into account financial means, although it would require synchronizing Bay Area FasTrak and Clipper Cards. While no agency of this particular scope and size exists, and the prospect of one may seem daunting, the benefits of integrated service, economies of scale in provision and management, and over individual mode choice

decisions—automobile, bus, rail— outweigh the uncertainties regarding larger union agreements, organizational structuring, and legal basis for existence. Investigating the legal and other particulars of such a structure warrants a report in and of itself, but the process of looking for areas of coordination would be beneficial for any region seeking to unify transit services.

1) BART Operation Only

In this conception, the above entity would exist, but would not incorporate Caltrain and Capitol Corridor, as neither service would cross from Oakland into San Francisco. Thus, the entities to merge would be BART, AC Transit, BATA, and SF Bay Ferry. Board membership would need to include San Mateo and Santa Clara Counties in addition to Alameda, Contra Costa and San Francisco.

2) Standard Rail Operation Only

Even if a third crossing did not incorporate BART, under these circumstances BART, AC Transit, BATA, SF Bay Ferry, Caltrain, and Capitol Corridor would merge into a new entity, as BART currently operates a crossing.

3) BART and Standard Rail Operation

This scenario would be the same as the Standard Rail operation only, with a merger of all major transit providers across the Bay between San Francisco and Oakland.

4) Performance Pricing (no Third Crossing)

Even without a third crossing, this unification effort would be valuable to the region as it plans to accommodate significant growth in the coming years.

Equity & Governance

To complement the governance structure responsible for carrying out the third crossing, there is an opportunity via governance to create positive outcomes for vulnerable communities. Particularly for residents underserved by transit, and historically left out of planning processes, this project must serve as an exemplar for future coordination between citizens and public agencies. Moving beyond traditional public outreach procedures, during which comments are accepted for previously prepared designs, any project sponsor must work with directly and indirectly affected communities to seek meaningful conceptual and design input.

Community Advisory Board

To allow for this without over-extending public resources on rounds of intensive design workshops and scoping sessions, a representative board comprised of elected officials from directly and indirectly affected communities supplemented by appointees from community-based and advocacy organizations could incorporate the needs and goals of local citizens into those of the overall project. This community advisory board would function like a hybrid technical advisory committee, but would hold some of the same powers as the overall project board.

In Minnesota, the Metro Council—the Twin Cities' Metropolitan Planning Organization and Regional Planning Agency—created a policy board comprised of members from local governments and transportation agencies, as well as non-profits, community-based organizations and philanthropic and academic institutions to head the Corridors of Opportunity (CoO) program[28]. The CoO program utilized funding via a grant from the U.S. Department of Housing and Urban Development (HUD) and private funding from Living Cities—a collaboration of large philanthropic and financial institutions—to carry out an integrated set of projects aligned under one common vision and governance structure[29]. The policy board was in charge of disbursing all funds, and established a set of desired outcomes to guide funding allocations. A Community Engagement Team was created to work closely with communities to identify ways to promote existing community assets along transit corridors, and recommend grants to the policy board for funding[30]. Following the successful completion of CoO, the Partnership for Regional Opportunity (PRO), comprised of many of the original CoO organizations, was created as a follow-up to focus on four major work areas: Regional Equity and Community Engagement, Shared Prosperity, Transit-Oriented Development, and Transportation Funding.

Focusing on the third crossing, adapting some of the aspects of the CoO and PRO to the case of a third crossing informs a potential structure. While CoO was a program combining individual projects to meet goals, the third crossing is one larger project in service of local, regional, and state goals. As such, it will require a governing board with a sole focus on the crossing and related issues, such as ongoing project monitoring, coordination of land uses and ancillary services, as well as funding. The community advisory board must hold equal voting powers to the governing board, so that community needs are as influential in decision-making as project needs; the community board would also provide oversight similar to the project board, with additional duties outlined below. A dual board structure of this type would be unique, but voting power is necessary to ensure meaningful engagement during conceptualization and design. Staffing the community advisory board to avoid conflicts of interests will be important; through staggered terms, and a mix of appointed and elected officials representing a wide array of viewpoints, a balance can be achieved. The question of whether to give a board chairperson the power to appoint members, to leave it to a vote amongst elected members, or to give selection power to the state legislature remains. Having the board adopt a set of guiding visions and goals in accordance with those set forth in the problem statements also works to support continuity over the life of the project.

Along with championing the needs of communities with regards to the third crossing, this community advisory board would be tasked with administering funds via grants funded by revenue generation around station areas. The specifics of the revenue generation are covered in the funding and finance section, and the details of grant evaluation and administration are discussed here. An outreach team could seek to identify areas of opportunity in communities and the board could evaluate grant proposals on their alignment with the guiding principles, utilizing the metrics developed in this report to rank proposals. The grants would serve to build upon benefits provided by the crossing, and address community needs beyond the scope of the crossing as well such as intra-city transit service, and jobs access programs to name a few examples. Any organization would be eligible to apply, and support would be provided to aid in the development of grant proposals, if necessary. The size of both the CoO and the PRO was orders of magnitude below expected estimates for the grant program, and scaling up the effort provides both opportunities and challenges. A wider array of projects and programs could be funded in pursuit of goals, but additional oversight and ongoing administration and internal evaluation

would be critical to determine the overall effectiveness and institute any necessary internal tweaks adjustments accordingly.

Just as a project's governance structure including risk assessment and external independent oversight needs to be in place long before many project decisions are made, this community advisory board must be established in a parallel manner to the project governance team. Only by establishing such a board very early on can the third crossing truly break from historical patterns of megaproject planning by involving a diverse set of community stakeholders from the outset, and become an exemplar for projects to come.

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