

9.0 Program Management Element

9.1 Purpose of Program Management in San Joaquin Valley

The most important component of successful Regional ITS deployment is the active and continuous cooperation between transportation stakeholders in the San Joaquin Valley.

This Section of the San Joaquin Valley ITS Strategic Deployment Plan provides suggested deployment guidelines, as well as ITS program procedures and policies to support the development of ITS in the San Joaquin Valley. There are three key actions which should be undertaken by the Region to promote successful ITS deployment:

- Appropriate components of the San Joaquin Valley ITS Strategic Deployment Plan should be incorporated into the regional transportation planning process and the eight county's Regional Transportation Plan (RTP). This is consistent with the USDOT concept of mainstreaming ITS into transportation deployments. The goal is to approach ITS similar to any other transportation deployment effort.
- All significant transportation management and information system deployment efforts should be carried out in a cooperative manner within the Region with projects being proposed, promoted, and deployed with due consideration for the integration objectives of the Region and its Counties.
- Consideration should be given to the potential rural applications of major system deployments in the more urban areas of the Region to maximize any economies of scale possible throughout the Region.

This Section is meant to provide suggestions, not prescriptive requirements. The most important component of successful Regional ITS deployment is the active and continuous cooperation between transportation stakeholders in the San Joaquin Valley.

9.2 Regional Advantages and Disadvantages

The San Joaquin Valley has several important advantages and disadvantages in terms of deploying ITS. These factors should be considered by agencies and individuals when they are promoting ITS deployment in the Region. Promotion and acceptance of ITS deployment in the Valley is likely to follow a somewhat different dynamic than the more urbanized Bay Area and Southern California regions. The smaller size of the transportation community in the Region allows for more direct and interpersonal communication regarding ITS deployment. This means that the more complex institutional arrangements adopted by some urbanized areas should not be necessary in the San Joaquin Valley if the lines of communication remain active, open, and cooperative. The various ITS deployment advantages and disadvantages for the Region are outlined in Table 9.1.



Table 9.1: San Joaquin Valley ITS Deployment Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> ➤ Transportation agencies in the Region have established a good basis for cooperation through past transportation efforts. ➤ Geographic nature of the Region when compared with many areas simplifies communication and cooperation. ➤ Caltrans and several local urban agencies have already begun deployment of some communications, traffic management, transit management and signal system infrastructure. ➤ Agencies have displayed a cooperative spirit in the development of the Strategic Deployment Plan, as well as other regionally significant issues and recognize the need to work together. ➤ Projected growth in the Region should assist in promoting ITS applications. 	<ul style="list-style-type: none"> ➤ Region is still relatively unfamiliar with many ITS concepts and additional promotion of ITS benefits may be necessary. ➤ Many agencies lack the staffing and resources to provide their own support for ITS deployment. ➤ General public in the Region may be unfamiliar with the concept of ITS. ➤ Some agencies may still view ITS as competition for traditional transportation projects as opposed to a complement to traditional projects. ➤ Relative to many of the larger urbanized areas of the State, the Region has a smaller funding pot available for transportation and more specifically, ITS deployment.

ITS mainstreaming is a strategy for planning and implementing ITS, not as a separate Research and Development program, but as a regularly considered, important alternative in planning, designing, and managing our transportation systems.

9.3 Continued Sponsorship of the ITS Program

Successful regional deployment of ITS in the Valley requires continued sponsorship of the ITS concept and its associated projects until such time that the Region fully mainstreams ITS into the transportation planning and programming process. Sponsorship of the San Joaquin Valley ITS program, as outlined in this Plan, stems from two areas: (1) transportation agencies and organizations throughout the Region; and (2) individual program and project champions that promote specific components of the ITS program.

➤ **Agency Sponsorship** - ITS deployment should be regional in character. Even small local deployments can leverage funding for regional projects when the larger project or system is deployed within the context of the Valley Strategic Deployment Plan. The eight Council of Governments (COG's), Caltrans District 6 and 10, California Highway Patrol (CHP), and the other larger transportation and emergency service agencies within the Region should work cooperatively with local jurisdictions in building partnerships and deploying projects that fit within the structure of the Strategic Deployment Plan. In addition, the larger urban Cities and Counties should play key and cooperative roles in deploying ITS throughout the Region. Specific sponsorship roles are discussed for some of the larger transportation players in the Region below.

- COG's and RPTA's – In general, the county planning agencies should be the keeper of the San Joaquin Valley ITS Strategic Deployment Plan and ensure that appropriate elements of the Plan are incorporated into the regional transportation planning process. These agencies



should attempt to establish standards and supporting tools for cooperative deployments in the ITS area. They should be a key player in the provision of ITS project/deployment champions and take the lead in the regional promotion of ITS and in introducing political interests to the concept and benefits of ITS. Through the Steering Committee made up of the COG directors, they should continue to work to organize and support agencies that are attempting to promote, fund, program, and deploy ITS projects. As it is a regional agency, these entities may often be able to operate as an effective umbrella agency for multiple local jurisdictions working cooperatively in ITS procurement efforts.

- Caltrans – In general, Caltrans District 6 and 10 should support and encourage agency staff to proactively champion ITS deployment efforts. Working with local COG representation, Caltrans should promote and support cooperative deployment efforts and/or partnership opportunities among transportation stakeholders. The Districts should also promote ITS deployment efforts at the Caltrans, Headquarters, and federal agency levels. Finally, Caltrans should support the development of consistent ITS standards across the Region and should assist in ensuring that the regional standards are consistent with State and national standards.

The Office of System Planning is Caltrans' long-range transportation planning process used to identify and prioritize future transportation improvements in cooperation with its planning partners. The following documents are prepared by Caltrans System Planning Staff:

- Transportation Concept Report (TCR – The TCR is a system planning document and tool which includes an analysis of a transportation corridor. It establishes a twenty-year transportation planning concept that is consistent with the District's goals as set forth in the District System Management Plan. The TCR establishes the future concept of Level of Service (LOS) for segments along the route and broadly identifies the nature and extent of the improvements needed to attain that Level of Service. Operating conditions for each corridor are projected for ten and twenty-year horizons. Beyond the twenty-year planning period, the TCR identifies the Ultimate Transportation Corridor (UTC) to ensure that adequate right-of-way is preserved for ultimate facility projects. While the ten and twenty-year plans consider funding issues, the UTC does not.



This report is prepared by Caltrans's staff in cooperation with the regional and local agencies that have jurisdiction within this corridor. The objective of the TCR is to have local, regional, and state consensus on route or corridor concepts, improvement priorities, and planning strategies. This document provides concept information only and does not determine policy.

The TCR is updated as needed, as conditions change, or as new information is obtained.

- Transportation System Development Program (TSDP) – The TSDP is one of three Caltrans system planning documents. It replaces the prior Route Development Plan which was a listing of Caltrans recommended capacity increasing improvements on state highways. The other two system planning documents are the Transportation Corridor Report (Route Concept Report) and Transportation System Management Plan. Transportation Corridor Reports are “depth documents that analyze a route from its beginning to end in the district and formulate a “concept” level of service and facility type for the route. The Transportation System Management Plan is Caltrans' plan for maximizing the efficient operation of the state highway system, describes its relationship to other modal systems in the district, and recommends options for improving the overall intermodal transfer and multimodal transport of people and goods on a larger regional and interregional basis.

The TSDP fits between the Transportation Concept Report and the Transportation System Management Plan. It analyzes from a district wide perspective route deficiencies, concept level of service, and concept facilities identified in the district transportation concept reports and proposes a program of alternatives and priorities for addressing them. Alternatives consider a broad range of transportation, land use, and quality of life factors.

The purpose of the TSDP is to identify a comprehensive, reasonable and effective range of transportation improvements intermodal categories (infrastructure/capital outlay), strategies and actions, and demand and system management options that when comprehensively implemented or implemented alone, improve interregional and regional mobility and intermodal transfer of people and goods on state highways and major travel corridors.



- City and County Agencies – City agencies such as Fresno, Stockton, Modesto and Bakersfield have played a prominent leadership role in the deployment of ITS within the local areas and between the smaller Cities and Counties. This leadership role should continue and be expanded if possible. These City efforts in the area of communications are important to Regional ITS deployment, and they should assist in establishing regionwide communications standards. As the largest urban areas in the Region, it is important that the City of Stockton, Modesto, Merced, Fresno, Visalia, Tulare, Hanford and Bakersfield participate in regional ITS activities. They may also serve as an effective pool of potential project champions.
 - Other Transportation and Emergency Service Agencies – There are numerous other agencies in the Region which should play a key role in sponsoring ITS deployment. These agencies should provide project champions and participate in cooperative deployment efforts where appropriate. Specifically, the larger transit properties such as SMART, MAX, FAX and GET should lead the way in ITS deployment and assist the smaller transit agencies in their efforts by providing the opportunities for technical support and joint procurements. Many of the smaller cities in the Region do not have the resources necessary for continuous involvement in ITS deployment. The COG's and the larger cities should consider opportunities to assist deployment of systems in smaller cities as an adjunct to their larger deployments.
- **Deployment Champions** – Deployment champions are individuals who have a political, professional, and/or personal interest in the deployment of certain ITS projects. Champions are critical to maintaining momentum and streamlining the deployment of ITS in the Region. They provide a central “knowledge base” and continuous understanding of the particular deployments in which they are involved. They deal with project deployment issues both inside and outside of structured institutional environments. Taken as a whole, the deployment champions in the San Joaquin Valley Region will comprise the core of ITS sponsorship and deployment support. The characteristics and roles of deployment champions are discussed in greater detail below.

9.4 Plan and Deployment Support

Supporting and managing the deployment efforts for individual ITS systems or projects is primarily the responsibility of the deployment champion. The desired qualities, general responsibilities, and arenas of



institutional involvement for deployment champions are discussed below.

9.4.1 Qualities and Roles of Deployment Champions

Each ITS deployment effort or project should have a designated champion who will see the project through from beginning to end. Ideally, champions should have the following qualities:

- Time to dedicate to the effort,
- Support of their superiors,
- Desire to see the system/project deployed,
- Good communication and moderation skills,
- Willingness to compromise on system/project details combined with the will to maintain the integrity of the system/project,
- Basic understanding of the regional ITS vision and on-going architecture efforts, and
- Solid understanding of the system/project concept and how it will fit into existing operations.

Promotional and mediation capabilities are more important qualities for a deployment champion than technical skill, as long as technical resources will be made available to support the champion. It is desirable for a champion to be supported by a subcommittee or even unofficial group of stakeholders in the project being deployed. However, while tasks may be distributed among members of a group to assist the champion, it is critical that an individual be the recognized coordinator of a deployment effort. The champion is the early project manager for an ITS deployment with the distinction that the project may not be fully conceptualized, funded, or designed. The champion must be a “jack of all trades.” Champions should be prepared to focus their efforts in the following areas.

- **System/Project Concept/Design** – The champion should ensure that the system concept and design are in keeping with the needs for which the project was originally proposed and considered. The champion should establish a basic understanding of how the project fits into the regional ITS vision. Finally, the champion must be able to describe the basic project components or design considerations, although he/she need not be the most knowledgeable in these matters.
- **Funding Applications** - The champion should identify which timely funding sources may be available for deployment of the ITS system/project and aggressively pursue these sources. COG’s may be an excellent support resource for champions from smaller agencies or stakeholder groups.



- **Inter-Agency Communication** – The champion is responsible for maintaining consistent communication with agencies involved in the deployment of a system/project. ITS deployments will likely require the champion to gain local and regional support.
- **Political Support** - The deployment champion should identify the political support required to obtain funding and overcome institutional obstacles. The champion may need to aggressively argue their viewpoint to both internal and external political concerns in order to gain this support. Additional deployment champions from the political arena are often very effective in promoting deployment and overcoming obstacles.
- **Agency Support** – Some champions will be required to promote the project internally with their own agencies and organizations in addition to their external promotion efforts. Champions will have to seek substantial support from their organizations. This may include the identification of additional supporting champions from within the organization, as well as the recognition of the champions' time commitment to ITS deployment efforts by their organizations.
- **Public Promotion** – In addition to gaining and maintaining support from within the champions organization at political levels, the champion will need to consider the application of public promotion activities. Most projects could benefit from some general promotion to the public that will inform them as to the purposes and benefits of the project. Potential use of web pages, flyers, and news articles/reports should be considered. If possible, the champion may seek the support of additional champions with good connections within communities that the project will benefit. Chambers of Commerce, economic development groups, and professional organizations are good sources of support.
- **Deployment Concept** – The deployment concept for the San Joaquin Valley Region is described in Section 7.0 of this Plan. The deployment champion should consider how and where his/her project fits within this concept. Often a deployment champion may find other people promoting similar efforts within the Region. Combining two or more geographically or functionally similar projects can often assist both projects in achieving deployment. The champion should also be familiar with other related projects in the Region. The champion should consider, “Does the proposed system provide or receive information or resources from these projects?”

As a whole, the actions of deployment champions drive successful regional ITS deployment. Potential sponsoring agencies have been identified for each of the projects outlined in Section 6.0 of this Plan,



however many of these projects lack a specific champion to push forward with deployment efforts. COG'S and sponsoring agencies should attempt to select project deployment champions for priority near-term projects.

9.4.2 Arenas of Deployment Champion Involvement

When promoting deployment of ITS projects in the San Joaquin Valley, deployment champions should understand four institutional arenas in which they may be involved. The level of involvement may vary from arena to arena and project to project, but generally some involvement in at least three of the four arenas will be required for successful deployment.

- **Political Arena** – comprised of local, regional, and national politicians and community leaders.
- **Agency Executive Arena** – comprised of transportation related agency executives at upper management levels with the authority to make decisions regarding staffing and funding concerns including the COG Director's and Caltrans District Director's.
- **Private Market Arena** – comprised of private industry and organizations with a recognizable stake in the deployment of effective and marketable ITS services.
- **Agency Staff Arena** – comprised of agency middle management, technical, and support staff.

It is the job of the deployment champion to effectively utilize available resources in each of these arenas. It is likely that deployment champions will come from the agency staff arena, and that they will need to gain the support and championship of key individuals in the political and agency executive arenas. When considering these arenas it may be useful for the deployment champion to consider the abilities, skills, and barriers to utilizing resources from each arena. Figure 9.1 displays some important considerations for each arena.

- **Political Arena** – The champion should point out the public benefits of deploying the system/project, especially any benefits that may be easily promoted to the general public. The champions should seek to describe the project in simple terms that take into account the limited time and variable technical knowledge likely to be present in the political arena. It is ideal if the champion takes a few hours to develop a simple and brief presentation (five slides/five minutes) and project sheet that describe the key concepts of the deployment effort. It is often useful to have politicians participate in tours or visit similar systems deployed at other locations across the nation to generate political support for a deployment effort.



Figure 9.1: Four Arenas of Deployment



- **Agency Executive Arena** – The deployment champion should promote the regional benefits of the deployment. The champion should seek to discuss the deployment of the system/project in terms familiar with each executive. As with the political arena, initial presentations should be simple and brief, with further details and technical information being provided as requested. As with the political arena, the champion should try to get agency executives to visit sites with similarly deployed ITS systems. Tours of similar ITS deployments in neighboring regions or states are an effective means to display the ITS has real operational and resource benefits.
- **Private Market Arena** – The champion should determine the best role for the private market in the ITS deployment under consideration. The current population and market potential of the San Joaquin Valley Region is likely to limit any large-scale private market involvement in the near-term.

Deployment champions may want to consider the potential for leveraging private market involvement in three areas:

- Statewide deployment efforts – If a project is developed in a manner consistent with similar statewide systems the ability to attract private involvement is enhanced. For example, if a statewide deployment of traveler information systems is propagated across the state, and the Cities develop its systems in a manner compatible with statewide efforts, then much of the private sector investment in the statewide system may also benefit Cities.
- Specialized vendor specific deployment efforts – If a project will demonstrate a new technology or equipment from a particular vendor, then the Region may be able to involve the private sector vendor as a partner. This may reduce the costs and risks of the deployment. Vendors sometimes desire to deploy some of their newer equipment in the field to support their marketing efforts.
- Small scale private sector investment – Some of the most successful public/private partnerships occur on a small scale. Deployment champions should consider opportunities for working with local private interests to promote/support ITS deployments. For example, a privately owned or sponsored special event that attracts significant Traffic may benefit from enhanced traffic management and information. They may assist in supporting deployments where the benefits are clear. Another good example is the location of field infrastructure. Some private interests are flexible and will cooperate with the placement of equipment within their property boundaries.



CCTV cameras and information kiosks are common examples of ITS infrastructure often placed within private right-of-way.

- **Agency Staff Arena** – The support of agency staff is critical to a champion being able to perform effectively. The champion should seek the support of stakeholding agencies' staff by pointing out the benefits to agency operations. The champion should work closely with agency staff to maintain open lines of communication.

9.5 Suggested Regional Institutional Structure, Procedures, and Policies

Cohesive, integrated, and well planned regional ITS deployment does not occur on its own. The key is continuing communication and cooperation amongst transportation stakeholders, combined with clearly defined objectives and regional system standards. For the purposes of planning and some specific project deployments, the agencies of the San Joaquin Valley have displayed the willingness to cooperate and work together towards common goals. Regional deployment of ITS requires the Region take the next step and provide some form of institutional structure and regional policies for deployment efforts. The goal of this structure and policies is not to be prescriptive, but instead, to support deployment champions and sponsoring agencies in achieving their goals. Many of the projects defined in this Plan are generally beyond the capabilities of any single agency or person to deploy, and a cooperative effort will not only be desirable, but required. As discussed below in greater detail, this Plan contains a suggested institutional structure and policies to support ITS deployment in the Region.

9.5.1 Suggested Institutional Structure

Figure 9.2 displays the suggested institutional structure for ITS deployment in the San Joaquin Valley. In recognition of the limited time available to deployment champions and the limited resources of sponsoring agencies, this structure is relatively simple when compared with the structure adopted by many other regions. While the implementation of this structure may seem somewhat burdensome at first, it should save time, effort, and money in the long-run considering the Region's desire to better integrate and cooperatively operate its transportation systems.

Figure 9.2 summarizes the name, general roles and responsibilities, and agency involvement for each component of the institutional structure. Each component is discussed in greater detail below.



Figure 9.2: Suggested Institutional Structure



➤ **Valleywide ITS Steering Committee (a.k.a. San Joaquin Valley Council of Governments (COG) Directors)**

Status: Already established

Role: The COG Board of Director's should serve as the regional stakeholder for ITS deployment. The support of the Board is important to promoting the regional deployment and integration of systems. The Board should consider adopting appropriate ITS related policies as outlined in either this Plan or the Regional Transportation Plan. The Board is also an important partner in programming ITS projects into the Transportation Improvement Program (TIP) process. Acting at the direction of the Board and the Executive Director, COG'S staff has a crucial role to play in supporting ITS deployment as described earlier in this Section. It is important that the Board understand that ITS is not "star wars" at ground level. ITS is simply the application of improved systems and communications in our day to day transportation operations.

Participants: COG'S Director's

Objectives:

- Provide political support at the regional level for the deployment and integration of transportation management systems.
- Resolve outstanding institutional issues that present themselves as significant barriers to ITS deployment within the Region.
- Provide a regional entity on which to base sharing of ITS infrastructure, systems, and operational responsibility.
- Pursue any new legislation or regional guidelines necessary to allow the sharing of resources and responsibilities as deemed appropriate by the Region.
- Provide policy level input and a venue for public reaction and input to ITS deployments.

Frequency/Lifespan: Meet quarterly as applicable.

➤ **San Joaquin Valley ITS Deployment Committee**

Status: This Group is already established as the San Joaquin Valley ITS Technical Advisory Committee, however there should be a shift from the development of the Strategic Deployment Plan to deployment activities.



Role: Should serve as the regional forum for the development and deployment of ITS systems within the Region. Also, the Group facilitates the exchange of ideas and issues relating to ITS deployment. The Steering and Review Group should serve multiple roles in supporting integration and deployment efforts, including but not limited to: making suggestions to the COG'S Board, reviewing and adopting project concepts, supporting funding and grant development efforts, and providing a venue for the identification and resolution of institutional issues. Supporting this group are three workgroups focusing on particular areas of ITS deployment: Traffic Systems Workgroup, Transit Systems Workgroup, and Traveler Information Systems Workgroup. Each of these workgroups should occasionally report their activities back to the ITS Deployment Committee. The Group can serve as a systems configuration management group for the Region or delegate this role as appropriate. Finally, as no particular working group has been defined for Valleywide Incident Management, this Group should oversee this deployment area.

Participants: Same as existing ITS TAC, but specific representatives may change depending on the particular activities underway at any one time. It is important that several key players in the Region continue to participate:

- COG'S
- Cities and Eight Counties
- Caltrans
- Transit agencies and/or representatives from the Transit Systems Workgroup
- Emergency service agencies and/or representatives from the urban area Incident Management Teams.

Objectives:

- Coordinate ITS promotion, programming, and deployment efforts.
- Review and act on ITS funding opportunities.
- Support ITS deployment on a regional, valleywide, and statewide basis.
- Promote interagency cooperation and communication.
- Provide project funding and prioritization suggestions to responsible funding agencies.



Frequency/Lifespan: The frequency of meetings should be based on activities underway. At this point and time, the TAC has a great deal of work to do in terms of moving forward with ITS deployment. Regular meetings may occur on a bi-monthly or quarterly basis, however near-term activities may dictate a more rigorous schedule.

➤ **Traffic Systems Workgroup**

Status: Previous cooperative efforts between the Cities and Eight Counties have laid the groundwork for this Workgroup. However, this group has not met in the recent past on ITS deployment issues.

Role: The Traffic Systems Workgroup should focus on deployment efforts in the Freeway/Traffic Management Program Area. This includes the promotion and cooperative deployment of traffic management systems and infrastructure throughout the Region. The Workgroup may choose to act as a somewhat informal configuration management group by building consensus amongst agencies on the particular standards and policies relating to systems deployment. The Workgroup should elect a Chairperson that will be responsible for coordinating meetings and occasionally reporting to the ITS Deployment Steering and Review Group. The Workgroup should prioritize project deployment efforts and focus on one or two key projects at any one time.

Participants: Cities, Caltrans, Eight Counties, and other local agencies as appropriate.

Objectives:

- Promote the deployment of regional traffic system projects to the ITS Deployment Committee, COG Boards, City Councils, and other appropriate entities.
- Establish operational guidelines and regional traffic system standards as appropriate to support regional traffic system deployment efforts.
- Promote interagency cooperation and communication.
- Improve local and regional traffic systems through cooperative programming and deployment efforts.
- Receive input from and provide suggestions to deployment champions and project managers responsible for deploying traffic management systems.
- Provide a knowledge pool for traffic systems information for the Region including funding opportunities, specifications, new technologies, accepted standards, and system capabilities.



Frequency/Lifespan: Varies depending on current activities, although monthly meetings may be appropriate.

➤ **Transit Systems Workgroup**

Status: No current group exists.

Role: Similar to the Traffic Systems Workgroup, the Transit Systems Workgroup should promote the programming and deployment of the projects outlined in the Transit Systems program area of this Plan. The Transit Systems Workgroup should work together to identify opportunities for improving interagency cooperation and improved coordinated transit operations. Throughout the development of the Strategic Deployment Plan, transit agencies emphasized the need to keep deployment efforts simple and maximize the use of existing infrastructure and systems. The most prominent ITS deployments in the Region involve agencies such as SMART, MAX, FAX and GET's AVL and Transit Management Systems as well as smaller services that are beginning to consider automated dispatching and AVL systems. The Transit Systems Workgroup should discuss and review opportunities for the expansion of this system to support the entire Region, while at the same time retaining the desired level of autonomy for each transit agency. Participants in the development of the SDP noted the lack of a map accurate enough for automatic vehicle location (AVL) applications outside of the urban areas. The Workgroup should review AVL deployments in the Valley, as well as GIS efforts that are proposed by San Joaquin Valley, to determine the best path for improving mapping accuracy in rural areas. The Workgroup should elect a Chairperson that will be responsible for coordinating meetings and occasionally reporting to the ITS Deployment Committee. The Workgroup should also review and promote opportunities to provide improved real-time transit information to patrons throughout the Region.

Participants: All Transit and Paratransit agencies implementing ITS including such services as SMART, MAX, FAX, KART, GET, Local Transit services and rural County Paratransit services.

Objectives:

- Promote the deployment of transit system projects to the ITS Steering and Review Group, COG'S Board, City Councils, and other appropriate entities.
- Work to establish guidelines and a plan for enhanced cooperation and coordination between transit agencies within the Region.
- Promote interagency cooperation and communication.



- Improve transit systems through cooperative programming and deployment efforts.
- Receive input from and provide suggestions to deployment champions and project managers responsible for deploying transit systems.
- Provide a knowledge pool for transit systems information for the Region including funding opportunities, specifications, new technologies, accepted standards, and system capabilities.

Frequency/Lifespan: Most of the transit system projects have been identified for mid-term (5-10) deployment in this Plan. If this deployment timeframe is acceptable to the Transit Systems Workgroup then near-term meetings may not be necessary. However, it may be desirable to hold occasional meetings to review funding opportunities and promote cooperation and communication. When deployment efforts commence, meeting schedules will need to be intensified accordingly.

9.5.2 Suggested Procedures And Policies

There are a few suggested procedures and policies that should be considered by the San Joaquin Valley Region. Procedures include processes or tools that support ITS deployment efforts. Policies are statements of policy to be adopted by ITS stakeholders that will promote cooperation and integration in ITS deployment efforts.

Suggested Procedures/Tools

There are several actions that may be undertaken by the region that may not lead to specific ITS deployments, but will promote deployment efforts and the coordination of those efforts. Each of these is discussed below.

- Develop a Regional ITS Deployment Database - COG'S should consider development of a Regional ITS Deployment Database. The purpose of this database would be to serve as a common information resource for all ITS deployments within the Region. Information to be included in the database could include project descriptions, system architecture, design information, hardware/software being deployed, etc. If such as database was deployed, Workgroups and/or agencies could view the information to determine what hardware/software were being deployed on similar projects throughout the Region. The database should be simple, perhaps a spreadsheet or simple Access database.



- ITS Deployment Information Packet – COG’S, with the cooperation of regional transportation stakeholders, should develop an ITS deployment information packet that includes simple presentation materials on the goals and components of ITS deployments. The packet should provide a clear and simple message, and it should be suitable for distribution to political representatives.
- Develop ITS Deployment Impact Analysis Tools - As ITS deployments occur in the Region simple impact analysis tools should be developed for use by deployment champions in determining costs, emissions reductions, traffic impacts, etc. For ITS to become part of the common transportation “tool box” of solutions, simple impacts analysis tools are needed.
- Precede Deployments with Appropriate Studies – Each ITS deployment should be preceded by a study that establishes background conditions prior to deployment. A good example of this process is signal coordination, where before and after studies are performed to determine the impacts of the coordination effort. In addition, ITS deployments throughout the nation have generally suffered from a lack of deployment and operations documentation. Each deployment should provide documentation sufficient to existing and anticipated future needs.
- Review and Update of the Strategic Deployment Plan Every Two Years – COG’S should consider updating Sections 6.0, 7.0, and 9.0 of the SDP approximately once every two years or at least when RTP’s are updated. If these portions of the Plan are incorporated into the regional transportation planning process, it may not be necessary to maintain a totally separate ITS SDP. Responsibility for updating the Plan should rest with COG’S.

Suggested Policies

- The following suggested policies should be considered for adoption by agencies in the San Joaquin Valley to promote and support effective ITS deployment:
- Agencies in the San Joaquin Valley should be encouraged to cooperate and work together to program, deploy, and operate common ITS resources and systems.
- Incorporation or allowance for communications infrastructure should be made during the development of any regionally significant transportation infrastructure.



- Adoption of the regional, statewide, and national architecture should be encouraged to support the exchange of transportation related information and integration of systems between agencies.
- Agencies deploying communications, transportation management and/or information, and emergency services systems should be encouraged to utilize regional standards.
- Institutional arrangements should be sought where the joint deployment of an ITS project promotes economies of scale, avoids duplication of effort, and/or promotes Regional integration of systems.
- When the distribution of ITS projects is considered, preference should be given to projects that represent a cooperative effort between two or more agencies, all other factors being equal.
- Agencies should cooperate at a local and regional level to establish common and/or seamless transportation operations across jurisdictional boundaries.
- Agencies that integrate and/or coordinate transportation management systems should always retain the ability to "take control" of their respective components of integrated system(s).
- Agencies should be encouraged to integrate and establish ITS elements as part of all appropriate major transportation projects during the project development process.
- The accuracy and extent of traveler information provided to the traveling public in the Region should be enhanced through the deployment of ITS infrastructure, communications, and systems. Where appropriate, ITS deployments in the Region should consider future integration with statewide, neighboring regions, and valleywide systems.

9.6 Moving Forward With Deployment

Figure 9.3 provides an overview of the ITS deployment process from the perspective of a deployment champion. Many of the details of this process are described in Sections 7.0 and 8.0 of this Plan, however a brief summary is provided as follows:



Figure 9.3: Moving Forward with Deployment of ITS Projects



Project Initiation

Project Deployment Concept – The project deployment concept serves to introduce deployment champions to the overall regional ITS deployment picture as discussed in Section 7.0. Champions should be aware of how their project fits into this picture.

Sponsoring Agencies/Deployment Champions – The key players in any deployment are the sponsoring agencies and deployment champions. Persistence on the part of these players is crucial to move an ITS project from concept to reality. Deployment champions should try to gain the support of other potential champions.

San Joaquin Valley ITS Institutional Structure – The institutional structure provides a forum within which regional ITS deployment efforts can be introduced, reviewed, and supported. The champion should work within this structure to promote his/her project. This structure can provide a sanity check for projects, and also assist in securing funding.

Project Definition

ITS Strategic Deployment Plan – The SDP provides important information on project concepts, preliminary costs estimates, potential standards, funding opportunities, and the overall regional ITS deployment process. It does not however, provide specific details for project deployment. The champion should review the SDP, determine where the proposed project fits within the Plan, and develop a more specific project definition to move forward.

Specific Project Definition – In order to prepare more detailed cost estimates and define specific deployment efforts and timelines, the champion should develop a brief but specific project definition. This definition may be as brief as one or two pages. The definition may use supporting information from the SDP, but it does not necessarily need to duplicate the information in the Plan. The definition should provide a clear picture of the deployment proposed by the champion, and it should address any issues, changes, or details not outlined in the SDP.

Secure Funding – Perhaps the most difficult and involved part of the deployment process, the champion should work to secure funds for the project. Potential funding sources are outlined in Section 8.0 of the SDP, and the San Joaquin Valley Region ITS institutional structure may prove helpful in realizing funding opportunities.

Regional Transportation Plan (RTP) – An important component of ITS project programming and deployment, the RTP should be reviewed to determine where the proposed project fits within the overall transportation deployment picture. Policies and objectives



within the RTP, which would be supported by deployment of the proposed project, should be noted as they may play a key role in project promotion.

Design

- National, Statewide, and Regional Standards – These standards all play an important role in ITS deployment. Consideration of the standards which may impact the proposed project should be noted early and tracked as the development of these standards proceeds. The champion should work with the appropriate Workgroups and/or agencies to determine which standards are prevalent in the Region. If a standard is identified as critical to deployment, it should be clearly noted in any project documentation from this point forward.
- Preliminary Design/Studies – Almost every ITS project can benefit from preliminary design efforts and/or studies. These documents are often required for certain funding sources, and they often provide the basis for the procurement process. The deployment champion may want to speak with appropriate Workgroup and/or agencies to determine if preliminary study and/or design documents exist for similar projects.
- Procurement Process – Procurement options are discussed in Section 7.0 of this Plan. It is important that the procurement process be appropriate to the project. Timing considerations are an important component of the procurement effort, as many funding sources have timing limitations. Sometimes a regional agency can act as a contract administrator for a smaller agency and speed the procurement process that involves multiple agencies. Lowest bid procurements are often not well-suited to ITS deployment efforts as vendor/employer skill levels and experience varies greatly.
- Detailed Design – Detailed design for ITS software is most frequently done by vendors or system integrators. Agency staff or consultants often do infrastructure design. Detailed design is important for documentation purposes and for identifying specific details, costs, and potential problems.

Deployment

- Prototype (Optional) – Systems or technologies that are new to the transportation field or deployment within the San Joaquin Valley should be prototyped prior to committing to larger scale deployments. It is important that an acceptance test plan be developed for the prototype, and that thorough testing confirm the performance and reliability of the system. Acceptance testing is discussed in Section 7.0 of this Plan. The people/staff



that will be responsible for operating the system should be involved as early as possible so that they may provide input and fully understand the project, as well as its benefits.

- Deploy Project – The step that was the whole point in the first place, deployment of the system to the planned locations and/or agencies is the largest single step in the process. Even though testing may have occurred during the prototype phase, it is important that testing following each significant individual phase of project deployment. It is also important that the project champion continue to promote the project well after its initial deployment to ensure continued support and to highlight project benefits.
- Training – Often overlooked, training is critical with management system deployments. Training should consider both operational and maintenance requirements. Training should be planned for prior to project deployment to ensure proper funds are available. Management system deployments should provide for useful and concise documentation that includes operations instructions and troubleshooting help.
- On-Going Operations and Maintenance – The deployment of the system is only the first step. On-going operations are where the true benefits of the project will be realized, and continued maintenance will be necessary to realize those benefits. The predominate component of operations costs are usually labor, communication, and /or licensing agreement related. Maintenance costs are largely comprised of labor and equipment costs. If the system or project has proven successful then expansion and eventual replacement should be planned for by the sponsoring agencies.

