

Section 6 Research Implementation

6.1 Introduction

DRISI places emphasis on applied research as the means of developing innovations that can solve the problems facing the transportation infrastructure owners, operators, and users.

DRISI research also addresses transportation trends and policies that are driven by increasing demands, limited resources, and greater stakeholder expectations. Research results are most effective when completely implemented in the intended transportation environment.

Towards that goal, a well-developed research implementation strategy is needed to maximize the likelihood of implementing products of completed research.

6.2 Roles

6.2.1 DRISI Research Implementation Responsibilities

The PM, together with the Project Panel, the researchers, the customers, and the sponsors, guide the eventual implementation of research products throughout the research process.

6.2.2 Project Manager

The Project Manager (also see Section 3.4.2):

- Works with the customer representative, researcher, the Project Panel and DRISI to develop a detailed Implementation Plan. This plan provides the means for the customer to identify and document the necessary resources, processes, and requirements that will be needed to implement the product of the research
- Reviews and revises the Implementation Plan during the research process and throughout the life of the project
- Works with customers to evaluate and place the research in context with Caltrans operations
- Prepares a summary document of the problem studied, research findings, what they mean and how they should be used by Caltrans or other organizations, and their expected benefits

6.2.3 Researcher

The researcher plays an important role in the preparation of information, materials, and mechanisms needed to implement the research findings.

The researcher works with the PM to develop suitable mechanisms for implementation, and participates in technology transfer activities. Examples include presentations and training classes. The researcher may also participate in the development of marketing brochures, user manuals or other mechanisms appropriate for the implementation of the research results.

6.2.4 Customer Representative

The customer, typically a Caltrans Division or District, engages in the project throughout the research process. Customer participation is critical since the customer needs to assure that resources will be available to implement the new policy, practice, product, or service. Customers may be the end-user, a sponsor or a champion on behalf of another public entity.

6.3 Approach

The DRISI implementation approach is based on a gradual increase in customer involvement and ownership as the research moves through its progressive phases over time as it leads to the final product.

6.3.1 Implementation

Implementation describes the various activities that are required to put the product of a research project into widespread use. Implementation mainstreams a technology or innovation into an organization's standard operating procedure.

In the context of the DRISI research development process, implementation is the adoption of research products within the California transportation system infrastructure.

6.3.2 Implementation Plans

Implementation Plans are the documents that will be used to guide DRISI research towards the implementation of the research products.

Implementation Plans complement the Project Plans (See Section 3.4.3 Project Plan).

Implementation Plans help the PM and the Project Panel to identify the expected outcome and to develop a clear implementation strategy at the outset of the research process.

The scope, content and extent of the Implementation Plan is dependent upon a number of factors, including complexity of research, costs, risks, uniqueness, etc. For simpler projects, the Implementation Plan may

be a few pages, whereas for more complex projects, it will be more detailed.

6.3.3 Technology Transfer

Technology Transfer is the process by which research knowledge is communicated or shared by Caltrans.

Technology Transfer includes those activities that lead to the adoption of a new technique or product and can involve implementation, dissemination, demonstration, and training.