

# Web-Based Project Management Action Research for Highway Projects Under \$10 Million

## Purpose

Identify a web-based project management system for the Iowa DOT, specifically for the shop drawing approval process in smaller highway projects (< \$10 million).

## Methodology

Action Research, an iterative approach, was used to identify a solution. See Figure 1. An iteration begins with the diagnosing step and ends with the identification of the iteration's lessons learned. The workflow of sign truss shop drawing approval process was documented in order to identify, test , and implement a WPMS solution that met these requiriements. See Figure 2.

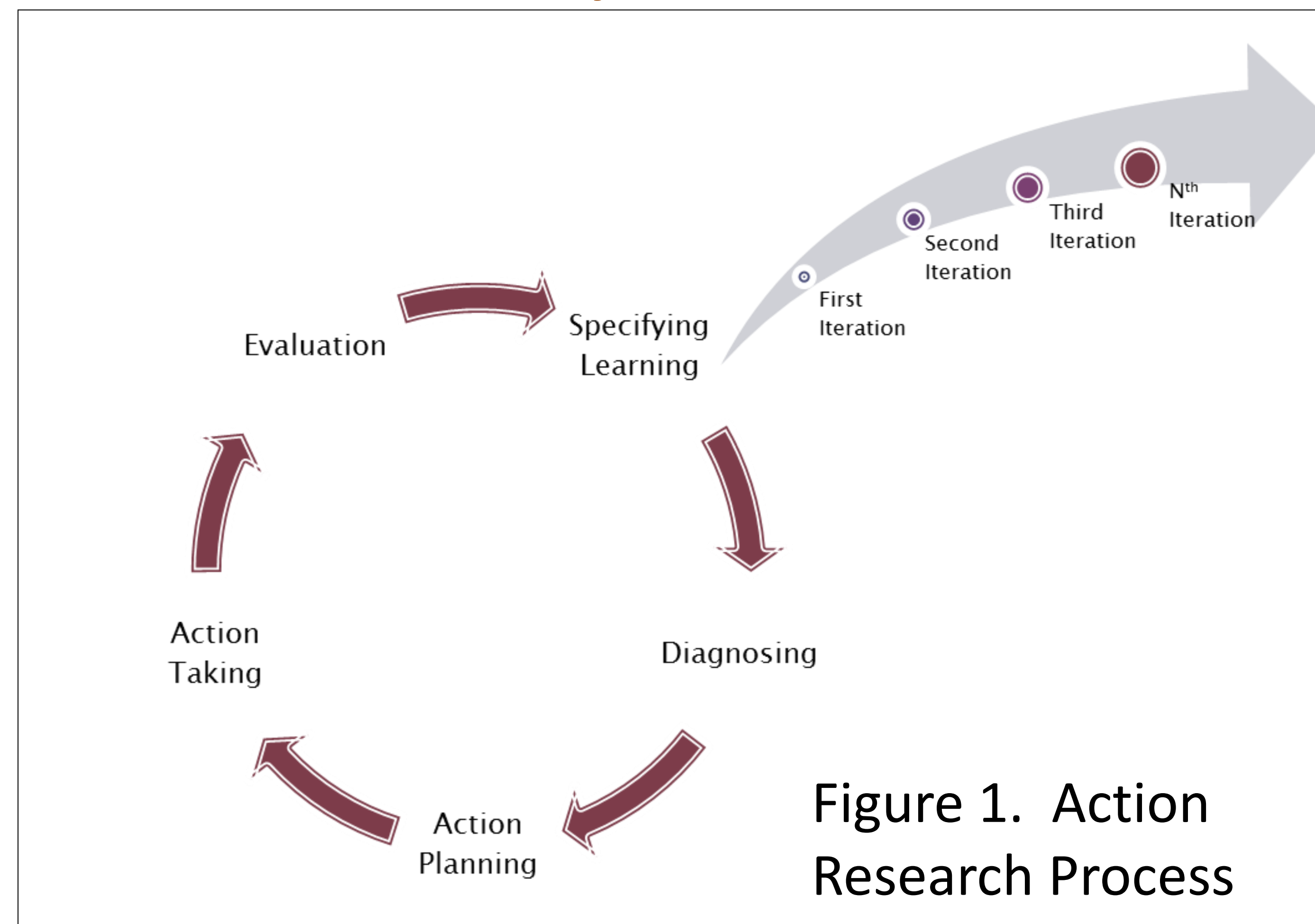
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After 3 action research iterations, Microsoft SharePoint, a web-content management system, was selected for implementation. SharePoint allows the development of pages with customized workflows and terminology to better meet the Iowa DOT needs and specifications.

The diagram illustrates the Action Research Process as a cyclical flow. It begins with 'Evaluation', which leads to 'Specifying Learning'. From 'Specifying Learning', the process moves to 'Diagnosing', then 'Action Planning', and finally 'Action Taking'. An arrow from 'Action Taking' loops back to 'Evaluation', completing the cycle. Additionally, a large, light blue arrow points from the 'Specifying Learning' stage towards the right, indicating an iterative process. Along this path, four points are marked: 'First Iteration', 'Second Iteration', 'Third Iteration', and 'Nth Iteration', showing the progression of the research over multiple cycles.

Figure 1. Action Research Process



## Figure 1. Action Research Process

## Lessons Learned

- Action Research is an effective method to identify a WPMS solution available.
- Establishing a workflow before identifying solution is helpful.
- Identifying the roles and responsibilities of each project team member, accelerates the development and implementation process.

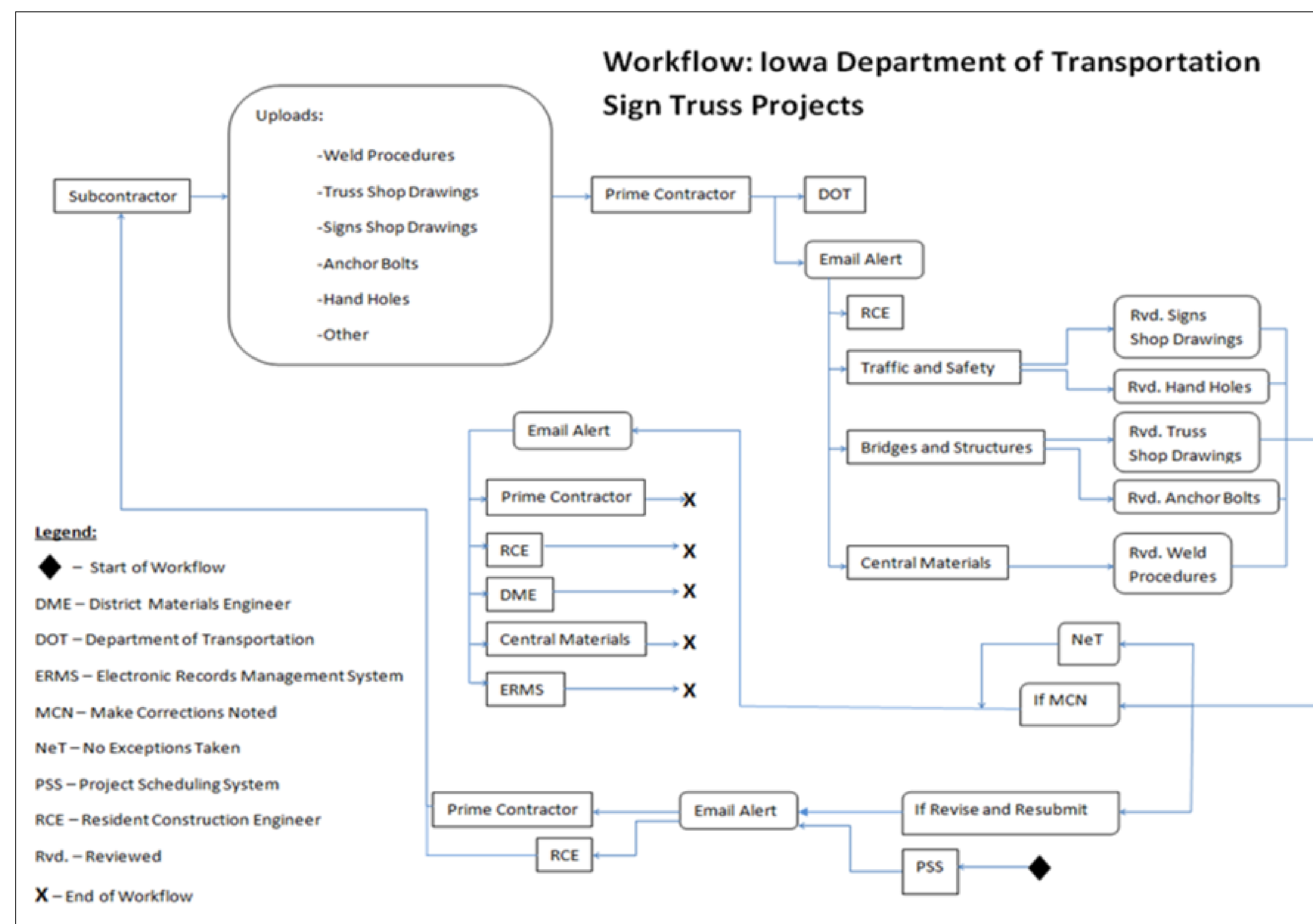


Figure 2. Workflow for Sign Truss Projects