ENTERPRISE
ITS Warrants Project

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Topics

• Overview of the ENTERPRISE Warranting ITS Project
• Project Approach
• Progress to Date
• Next Steps
Cost-Benefit – CCTV Example

- Costs
  - Easy to Estimate
  - Easy to Quantify

- Benefits
  - Proven Benefits
  - Great User Feedback
  - Hard to Quantify
The Concept

• ITS Warrants
  – Is a Device Warranted at a Specific Location?
  – Should Further Consideration be Performed?
  – Eliminate Locations Where a Device is not Warranted
Goals of Warrants-

• Answer the Questions:
  – Would installing this ITS device be effective at addressing the transportation problem?
  – Will it accomplish the specific purpose(s) we are trying to achieve?
  – Is it needed at this location?
Goals of Warrants -

• A ‘Yes’ would indicate:
  – More investigation is warranted
  – Not a substitute for engineering process / final deployment consideration
Example Scenario

• Proposal submitted to deploy DMS
• Compare against DMS warrants
• Reach a Preliminary ‘Yes/No’
Scenario (cont)

- **Purpose**: ‘To warn drivers of weather conditions’

- **Factors**
  - # of Weather Events near the site?
  - # of Crashes Related to Weather?
  - Is Weather Information Available?
  - Are Dynamic Messages Needed?
Scenario (cont)

Results:

• Warrant would either determine:
  – DMS is Warranted
  – DMS is NOT Warranted
ENT Warrants Project

• Start with 4 ITS Devices
  – DMS, CCTV, HAR, R/WIS
• Assess the Validity of the Approach
Warrants Development Approach

Step 1: Define Specific Purposes for each Device

Step 2: Identify Factors For Each Purpose

Step 3: Craft Warrants Based on Factors

Step 4: Test Warrants in Many Locations

Step 5: Outreach of Testing Results
Project Status

- Initial Set of Warrants Completed
- Beginning to Test Warrants
- Beginning Outreach
DMS – 8 Warrants

• #1: Weather Conditions

• #2: Traffic Conditions

• #3: Changing Traffic Control

• #4: Special Events
DMS – 8 Warrants

• #5: Parking Availability

• #6: Transit Park and Ride Availability

• #7: Evacuation Routes

• #8: Jurisdictional Border Crossings
HAR – 4 Warrants

• #1: Weather and Driving Conditions
• #2: Venue Parking
• #3: Changing Traffic Control
• #4: Special Events
CCTV – 5 Warrants

1. Traffic Verification (Signal Timing Change)
2. Traffic/Incident Verification
3. Weather Verification
4. Traveler Information
5. Field Device Verification
R/WIS – 3 Warrants

1. Maintenance Support (Key Locations)

2. Maintenance Support (Grid Coverage)

3. Traveler Information
Project Website

WHAT CAN I DO AT THIS WEBSITE?

The purpose of this website is to assist you in your decision making process of determining if an ITS device is warranted. As part of this research project, warrants were developed for Dynamic Message Signs (DMS), Closed Circuit Television (CCTV), Highway Advisory Radios (HAR), and Roadway Weather Information Systems (RWIS).

Please select an ITS device below to begin the process of determining if deployment is warranted at your location.

Is a **DMS** Warranted?  
Is a **CCTV** Warranted?
Warrants Testing

ENTERPRISE
ITS Warrants Project

HOW CAN I TEST THE WARRANTS?

The ENTERPRISE Program ITS Warrants Research Project would appreciate your assistance in testing the ITS Warrants developed for DMS, CCTV, HAR, and RWIS.

To submit the ITS warranted you test, please follow the steps below.

1. Download the appropriate questionnaire from below
2. Fill out the questionnaire electronically or print and fill out
3. Save the file and email the completed questionnaire to ITSwants@aconsultants.org or fax to 503-210-1154.

Test the DMS Warrants
Test the CCTV Warrants
Test the HAR Warrants
Test the RWIS Warrants
Warrants Website

- Current Address:

http://www.acconsultants.org/itswarrants
Preliminary Testing Underway

• Michigan
  – 2 HAR sites
  – 1 DMS site
  – 1 CCTV site
  – 1 R/WIS site

• Virginia

• Kansas
Next Steps

• Two Phases of Testing
  – Planned or Recent Deployments
  – Long Term Monitoring of Installations

• Additional Phase Funded by Transport Canada

• Outreach to Other Groups
Conclusions

• Encouraging Results
  – Tests in Michigan
  – Feedback from Virginia

• We Need More Input