San Luis Obispo County, CA
Travel Management Coordination Center (TMCC)

Federal Transit Administration
Mobility Services for All Americans (MSAA) Initiative

CalACT 2017 Spring Conference Session: “Designing Customer-focused Coordinated Demand Response Transportation Services in San Luis Obispo”

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Resort at Squaw Creek, Olympic Valley, CA

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Today’s Discussion Topics

• Project Overview
• TMCC Process
• Current Status
• TMCC Design
• Next Steps
• Conclusion
San Luis Obispo County TMCC/MSAA Project
What is a TMCC?

USDOT Generic Definition:
“...provides one-stop, unified customer-based travel information and trip planning services, and supports coordinated human services transportation operations.”

(1) Source: USDOT/ITS Joint Program Office
What is a TMCC?

• It is:
  • People focused.
  • Mobility enabling.
  • Partnership oriented.
  • Community determined.
  • Technology inclusive.
  • Yours to design!

It may include...

• Multiple provider partners.
• Operational collaboration.
• Service coordination.
• One-Call/One-Click Center.
  o In-person mobility services.
  o Telephone-based mobility services.
  o Internet and mobile services.
• Information & Referral.
• Inter-agency agreements.
• Technology enabling.
• Travel training.
• Maintenance agreements.
• Other items of interest.
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TMCC Vision:

“To enhance personal mobility across San Luis Obispo County”
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Overview
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Overview – Evolution of the TMCC Project: Pre-MSAA Environment

• Local partnerships – a fabric of the community!

• Informal human service coordination.

• Regional coordination plan framed a need for additional inter-agency cooperation.

• MSAA application was a catalyst to expand demand response coordination.

• Application led by Ride-On and the San Luis Obispo Regional Transit Authority (RTA).
Overview

- **FTA MSAA Grant Award:** 2015
- **Purpose:** Provide customers with real-time demand response information and services through the coordination of public, private, and human service transportation.
- **Leverage:** Intelligent Transportation Systems (ITS) – Systems Engineering process to design a scalable and replicable TMCC.
- **Expected Outcomes:**
  1. Explore potential local institutional barriers.
  2. Identify opportunities to coordinate public, private, and non-profit agency demand response trips through ITS.
  3. Provide customers with real-time information and services.
  4. Create a system engineering documents to build, fund, and sustain the TMCC.
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Overview – Stakeholders

• United Cerebral Palsy of San Luis Obispo County/ Ride-On Transportation
• San Luis Obispo Regional Transit Authority (RTA)
• San Luis Obispo Council of Governments
• RouteMatch Software
• Community Health Centers
• San Luis Obispo Regional Rideshare
• San Luis Obispo Safe Ride
• Yellow Cab
• Smart Shuttle
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Overview – Stakeholders, continued

• United States Department of Transportation (USDOT), Federal Transit Administration (FTA)
• California Department of Transportation (CalTrans)
• City of San Luis Obispo (SLO Transit)
• CenCal Health (Medi-Cal)
• City of Morro Bay
• USDOT/Federal Highway Administration (FHWA)
• Other Human Service and Community Organizations
• Technology Partners – Bishop Peak, others
• All others are welcome!
TMCC Process
San Luis Obispo County TMCC/MSAA Project

Process – Project Commencement

• FTA grant kick-off and initial site visit.

• Stakeholder Advisory and three (3) working subcommittees established.
  o Advisory Committee meets quarterly.
  o Stakeholder Committees (Provider, Technology, User/Rider) meet on a 4-6 week basis.
  o In-person and conference call meeting capability.

• Project Management team created.

• Regular project communication – telephone, e-mail.
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Process – Project Commencement

• Public involvement.
  • MSAA project website (http://ride-on.org/msaa.php)
  • Initial needs solicitation (spring 2016).
    o Public Survey
    o Public events outreach
    o Human service agency networks – survey and in-person discussions
    o Stakeholder planning sessions
  • Design feedback (still to come!)
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Process – Project Commencement

• Project Plan creation.
• ITS Systems Engineering process. Written deliverable preparation:
  o Concept of Operations
  o System Requirements
  o High-Level Design
  o Phased Implementation Plan

Systems Engineering “V” Diagram
- Illustration Courtesy of FHWA
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Process – Stakeholder Involvement

• Ongoing Stakeholder Engagement – Absolutely Critical
  o Stakeholder Meetings
    ✓ Facilitates open/transparent project dialogue among partners.
    ✓ Encourages “buy-in” or understanding and agreement among stakeholders.
    ✓ Transportation Provider Board inclusion at key decision points.
  o Regular Communication
    ✓ Regular project communication with stakeholders – find the right balance of information sharing and the preferred medium.
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Process – Systems Engineering Deliverables

- **Concept of Operations (ConOps) Creation**
  - Identifies “what is” the TMCC from a stakeholder and customer perspective.*
  - Communicates the TMCC’s characteristics to all stakeholders.*
  - Ensures all stakeholders and customers have an understanding of the TMCC.*
  - Provides operational needs and proposed characteristics for proposed TMCC.*
  - Describes high-level user expectations and functional requirements for TMCC.*
  - Describes information sharing across programs and operators.*
  - Flexibility. Can be modified at anytime during the project.*
  - Enables community needs solicitation.
    - General public, community organizations, human service agencies, transportation providers, others.
    - Project website, online and printed surveys – English/Spanish languages, in-person discussion.

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Process – Systems Engineering Deliverables

• Why Develop System Requirements?
  
  o Identifies “what” comprises the TMCC.
  
  o Seeks to ensure the TMCC meets stakeholder needs.
  
  o Defines expectations for the TMCC’s operation and technology.
  
  o Discourages “solution jump.”
  
  o Enables all stakeholders to review and agree on the TMCC’s composition.
  
  o What the Systems Requirements do not address – “How” and “Who” will operate the TMCC - To be determined in the High-Level Design.
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Current Status
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Current Status – Systems Engineering Deliverable

• High-Level Design preparation.
  
  o Meets System Requirements or TMCC “expectations.”
  o Seeks to address “How” to operate the TMCC.
  o Defines technology interfaces and prepares for Detailed Design work.
  o Provides high-level alternatives and cost benefits to enable informed local decisions.
  o Engages and enables stakeholders to “own” their design.
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Current Status – Institutional Challenges

• **Addressing Institutional Challenges** (examples)
  o Transportation Providers
    ✓ Inter-agency agreements and business processes, services/requirements, cost/accounting, organized labor contractual requirements, trips sharing/ownership (customer care), driver training, insurance, maintenance, communication, service provision consistency, etc.
  o Funding Sustainability
  o Technology systems
    ✓ Transportation Provider – Different technology and telephony systems.
    ✓ TMCC - ensuring access for *all* persons.
    ✓ Identifying existing vs. other possible communication platforms (i.e. 511, 211, and others).
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Current Status – Ongoing Coordination Discussion

- Transportation Coordination – Ongoing Discussion
  - Local Coordination Plan and MSAA Project.
    - The MSAA process and recently completed, currently being implemented, regional coordination plan have expanded ongoing, regular topic-related discussion.
    - The MSAA has facilitated new stakeholders in the coordination conversation.
    - MSAA and Coordination Plan provides the framework for future cooperative coordination ventures.
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TMCC Design
TMCC Design – Initial Hypothetical Architecture

• Proposed Hypothetical TMCC System: Technology Elements
  o **TMCC Focus**: Customer access to transportation information and demand response transportation (DRT) provider services.
  o **Customer Access Methods**: In-Person; Telephone; Website, and Mobile App.
  o **Staff Web Portal**: Quick staff access to specific website elements (i.e. trip reservations) for enhanced customer service.
  o **TMCC Database and Data Dictionary**: Centralized data and definitions (what to do with the data?).
  o **Application Program Interfaces (API)**: Electronic “connectors” between the database/data dictionary and the DRT service providers.
  o **DRT Service Providers**: Leverage existing technologies to support TMCC services.
SLO County TMCC Project - Proposed Hypothetical System High-Level Architecture
TMCC Design – Initial Hypothetical Design

- **Proposed Hypothetical TMCC System: Information & Customer Services**
  - Transportation Information (examples)
    - DRT and Fixed Route (FR) transit provider information (routes, schedules, contact information, physical location).
    - Links to 511, 211, Regional Rideshare, and other project stakeholders.
    - Trip itinerary journey planning.
    - Access to live staff with direct call transfer capability to project stakeholders.
  - Real-Time DRT Services (examples)
    - Trip scheduling across multiple DRT Providers – based on service availability.
    - Secure customer login and “new customer” registration capability.
    - Proposed DRT trip fare cost information availability.
    - Provide real-time DRT Provider vehicle arrival information.
    - Common fare system.
    - Trip scheduling confirmation and verification.
    - Access to scheduled and completed trip history.
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Next Steps...

• Upcoming Project Deliverables - Preparation
  o Finalize System Requirements with FTA
  o High-Level System Design
  o Phased Implementation Plan
  o Final Report

• Advisory Committee and Subcommittee Meetings
  o Stakeholder participation and involvement.

• Ongoing Research – Best Practices
  o Continued research into available technology options to meet TMCC needs.
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Conclusion

• Awareness - Learn from Others
  o We appreciate learning your experiences. Please share any ideas with us!

• Knowledge Transfer - Share the Experience
  o New! Creation of a project “cookbook” as a future knowledge transfer/sharing resource.

• For more information, visit the SLO County MSAA project website at:
  http://ride-on.org/msaa.php
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• Questions? Comments?

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