Wi-Fi

Network: MPO Guest
Password: Welcome123
SMART CITY ROUNDTABLE

June 25, 2018
June 25, 2018 Agenda

• Welcome and Introductions
• Recap of April 30th Meeting
• Presentation and Discussion
  – United Way OpporUNITY Plan – Seth Johnson, United Way of Central Iowa
  – Microsoft/Valley Junction Broadband Pilot Project – Clyde Evans, City of West Des Moines
  – Iowa DOT Transportation Systems Management and Operations (TSMO) and Automated Vehicles Project – Donna Matulac, Iowa DOT Office of Traffic Operations
  – Downtown Des Moines Pedestrian Counts – Tim Leach, Greater Des Moines Partnership
• Feedback and Topics for Next Meeting
• Adjournment
OpportUNITY is a collective impact initiative fighting to reduce poverty and eliminate barriers that prevent central Iowans in Dallas, Polk, and Warren counties from thriving.
<table>
<thead>
<tr>
<th>EXTREMELY POOR</th>
<th>VERY POOR/LOW INCOME</th>
<th>POOR/LOW INCOME</th>
<th>SELF-SUFFICIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 100% of the federal poverty level</td>
<td>100% to 184% of the federal poverty level</td>
<td>185% to 249% of the federal poverty level</td>
<td>250% and above of the federal poverty level</td>
</tr>
<tr>
<td>Struggling or unable to afford basic needs including food, housing, clothing, transportation, healthcare</td>
<td>Likely employed but income doesn’t cover the basic household needs and often requires public assistance support</td>
<td>Likely employed, but income does not cover all the basic household needs; public assistance is not available</td>
<td>Reached economic success; able to afford basic needs, no longer need public assistance or family support</td>
</tr>
</tbody>
</table>

**WORKING POOR**

Asset-Limited, Income-Constrained, Employed (ALICE)

<table>
<thead>
<tr>
<th>Central Iowa Population:</th>
<th>11.1%</th>
<th>12.3%</th>
<th>10.6%</th>
<th>65.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual income for a family of four:</td>
<td>less than $25,100</td>
<td>$25,100 to $46,435</td>
<td>$46,435 to $62,750</td>
<td>Above $62,750</td>
</tr>
</tbody>
</table>

34% OF THE CENTRAL IOWA POPULATION

Source: U.S. Census Bureau, American Community Survey, most-recent 5-year estimates for Polk, Warren, and Dallas Counties
• Surrounding communities are seeing a growth in the numbers of individuals and families living in poverty

• Most notable increases:
  - Des Moines- 6,016 (18%)
  - Ankeny- 2,255 (121.1%)
  - Urbandale- 1,143 (80%)
  - Waukee- 579 (159.1%)

Source: U.S. Census Bureau, American Community Survey, most-recent 5-year estimates for Polk, Warren, and Dallas Counties
# Poverty in central Iowa

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Total population in 100% poverty by race</strong></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Iowa</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>10.5%</td>
<td>10.9%</td>
<td>11.0%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>10.9%</td>
<td>-0.2%</td>
<td>0.4%</td>
</tr>
<tr>
<td>AA</td>
<td>37.3%</td>
<td>37.1%</td>
<td>36.8%</td>
<td>37.2%</td>
<td>36.5%</td>
<td>34.7%</td>
<td>-1.8%</td>
<td>-2.6%</td>
</tr>
<tr>
<td>Asian</td>
<td>14.1%</td>
<td>13.6%</td>
<td>15.2%</td>
<td>17.8%</td>
<td>19.1%</td>
<td>18.3%</td>
<td>-0.8%</td>
<td>4.2%</td>
</tr>
<tr>
<td>2 or more race</td>
<td>28.6%</td>
<td>27.7%</td>
<td>27.8%</td>
<td>27.1%</td>
<td>25.0%</td>
<td>23.4%</td>
<td>-1.6%</td>
<td>-5.2%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>25.8%</td>
<td>26.6%</td>
<td>26.0%</td>
<td>25.5%</td>
<td>24.9%</td>
<td>23.9%</td>
<td>-1.0%</td>
<td>-1.9%</td>
</tr>
<tr>
<td>Central Iowa</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>White</td>
<td>7.8%</td>
<td>8.4%</td>
<td>8.7%</td>
<td>9.0%</td>
<td>9.3%</td>
<td>9.2%</td>
<td>-0.1%</td>
<td>1.4%</td>
</tr>
<tr>
<td>AA</td>
<td>32.8%</td>
<td>35.3%</td>
<td>34.6%</td>
<td>35.6%</td>
<td>36.8%</td>
<td>32.0%</td>
<td>-4.7%</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Asian</td>
<td>9.3%</td>
<td>9.1%</td>
<td>10.0%</td>
<td>14.1%</td>
<td>15.2%</td>
<td>15.2%</td>
<td>0.0%</td>
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<td>27.0%</td>
<td>26.6%</td>
<td>23.3%</td>
<td>20.1%</td>
<td>-3.3%</td>
<td>-9.3%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>24.3%</td>
<td>24.5%</td>
<td>23.9%</td>
<td>23.8%</td>
<td>24.7%</td>
<td>23.4%</td>
<td>-1.2%</td>
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Tactics

Summits
• Deep dive into the topics of the working groups and partner groups

Work Groups
• Day to day work of eliminating barriers to self sufficiency

OpportUNITY Council
• Diverse community leadership leading the charge to reduce poverty
Participation Mix

- Government: 14%
- Business: 33%
- Nonprofit: 33%
- Education: 13%
- Faith: 4%
- Legal: 1%
- Philanthropy: 2%
MICROSOFT/VALLEY JUNCTION BROADBAND PILOT PROJECT

JAMIE LETZRING – DEPUTY CITY MANAGER

CLYDE EVANS – COMMUNITY & ECONOMIC DEVELOPMENT
PROJECT BASICS

• Needed to spend $400k CDBD funds, specified for broadband access for LMI

• Ubiquitous broadband has been a 20-year strategic goal of West Des Moines’, including equitable access for all residents

• Microsoft has program for similar goals: Data Center Community Development

• Looked to an area where no one else was looking to invest & added an educational component with the WDMCSD

• 3-year Pilot – VJ is an LMI Census Tract
Project Area:
Railroad Ave to Vine Street
1st to 8th Street
ADDITIONAL CHALLENGES

• Students are 1:1 with Chromebooks but many in this area lack affordable broadband access

• Small businesses in VJ also lack access to affordable broadband

• Reliability of connected service

• Ordinances prohibit use of towers in residential district

• Lack of full build-out of existing fiber infrastructure
STEPS TO START SUCCESS – IDENTIFYING PARTNERS

• Contacted HUD to inquire re: parameters for use of CDBG funds
• Met with MS on timelines & hardware brainstorming
• Included WDMCSD early, using existing qualifying infrastructure
  • Free/Reduced Lunch program
• Wrote RFP for wireless carriers, indicated MS partnership to incentive participation
• Brought in Ovation Networks & Aureon, to backhaul fiber, data loads & day-to-day operations
3-FOLD ACCESS

# 1: Collaboration with Cell Provider, all kids WDMCSD in this elementary school will receive a Mi-Fi hotspot
  • Add’ly WDM Library is renting Mi-Fi hotspots to anyone with Library Card- Unlimited Data

#2: Community Wi-Fi will be available
  • Stealth Pole in Railroad Park, Antenna on top of city-owned Business Incubator in Downtown VJ district, WiMax hardware fixed atop former Phenix Elementary school – now converted to market rate/LMI apartments

#3: Towers on WDM poles will support on-home devices for future point-to-point
THINKING AHEAD

• Access for businesses will run through VJ Foundation
  • Can “buy up” to more solid connections at a cheaper rate

• Once infrastructure is in place, barriers to access for smaller ISP will be removed, potentially making private investment easier for more nimble ISP's

• Goal is to model this program and light next neighborhood within two years
SUMMARY

• Initially offering Hillside students on Free/Reduced Lunch free access
• Free Wi-Fi in VJ Commercial District
• Reduced rates for commercial businesses in VJ area
• All LMI individuals and families next, utilizing other fixed income infrastructure
• Ultimately available to all neighborhood for a managed fee
• Increasing eligibility for multiple ISP’s in an otherwise “forgotten” market area
Why Manage Traffic in Iowa?
A coordinated approach to managing and operating our roadways as safely and efficiently as possible, focused on maximizing existing infrastructure, addressing the causes of breakdowns in flow, and overall performance of the transportation system.
Three Levels of the TSMO Plan

**TSMO Strategic Plan**
- **COMPONENTS**
  - Iowa’s Challenge
  - The Case for TSMO
  - Mission and Vision
  - Strategic Goals and Objectives
  - Program Plan Overview
- **AUDIENCE**
  - All Levels of DOT

**TSMO Program Plan**
- **COMPONENTS**
  - Program Objectives
  - TSMO Integration with other DOT Programs
  - Leadership and Organization
  - Business Processes and Resources
  - Performance Management and Decision Support Assessment
  - 5-Year TSMO Program
    - Interstate Conditions Evaluation
    - Traffic Operations (ICE-OPS) Analysis
    - Activities to meet Goals and Objectives
    - Budget
    - Service Layers Overview
- **AUDIENCE**
  - Agency Leadership

**TSMO Service Layer Plans**
- **COMPONENTS**
  - Opportunities and Challenges
  - Description of Services, Activities and Projects
  - Existing Conditions
  - Gap Analysis
  - Recommendations
  - 5-Year Service Layer Cost Estimate
- **8 Service Layer Plans**
  - Traffic Management Center
  - ITS and Communications
  - Traveler Information
  - Traffic Incident Management
  - Emergency Transp. Operations
  - Work Zone Management
  - Active Transportation and Demand Management
  - Connected and Autonomous Vehicle
- **AUDIENCE**
  - Staff involved with TSMO

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http://www.iowadot.gov/tsmo/
How is the TSMO Plan Helping?
Expanded Partnerships

- Internal TSMO Steering Committee
- Continue to foster TIM-Related Partnerships
- Growing Interest in Integrated Corridor Management
- Continue data sharing partnerships like Waze
- Expanded University R & D Collaboration
Highway Helper Strategic Expansion

- Des Moines
- Quad Cities (for I-74 reconstruction)
- Iowa City (for 80/380 Reconstruction)
Maximizing Existing Roadway Capacity
Why Automated Vehicles?

94% of Crashes attributed to Driver Error or Choice

80% Potential Reduction in Crashes
Preparing for the AV Future at Iowa DOT

- Automated Vehicle Project
- I-80 Automated Corridor Study
Iowa DOT’s AV Project

Project Location
What data does the DOT have?

- **Speed and Volume** –
  - Over 300 traffic sensors
  - 167 automatic traffic recorders
- **Incidents** – Traffic Management Center 24/7/365
- **Track A Plow** – location, plow status, material, images
- **Work Zones**
- **Winter road conditions**
- **RWIS stations**
- **Pavement condition**
- **Curve location**
- **Camera imagery**
- **Crash data**
How will the DOT data be used?

A. What do we need to share?
   ✓ Minimum data content to enable Supported Functions

B. How will we share data?
   ✓ Data content format
   ✓ Data transmission protocol

C. How will we help ensure that data is “suitable for purpose”?
   ✓ Data quality description and thresholds

Enables

Hazard Alerting
- Weather
- Work Zones
- Queue Detection
- Crashes
- Obstacles
- Event Congestion

AV Functions
- Curve Warning
- Adaptive Cruise Control (ACC)
- Speed Advisory
Proofs of Concept, Pilots, and Demos – Working toward Information for Vehicles; Starting with Humans

- **V2X Hazard Alerting**
  - **handheld device**
    - Hazard alerting to humans via app interface *(deployment-ready)*
  - **in-dash display**
    - Hazard alerting to humans via in-dash interface *(research stage)*
  - **vehicle control**
    - Hazard alerting and map information informing the control of an automated vehicle *(research stage)*

- **HD Live Map Tiles**
I-80 Automated Corridor Study

• Goals of study:
  – Leverage existing AV knowledge
  – Help understand AV’s and other transformative shifts in transportation
  – Prepare for AV impacts on safety, mobility and travel time reliability in Iowa
  – Plan for the future by considering the impact of AVs in the design of the proposed improvements

https://iowadot.gov/interstatethestudy/pel-study-report
### Study Results

#### 2040 Scenarios versus Existing Conditions

- **Safety**
  - **4-Lane I-80 Unimproved in the Year 2040**
    - Average crashes per mile will increase **9%** with little change to the number of fatal and major injury crashes.
    - *(with a 48% increase in volumes)*
  - **6-Lane I-80 Improvements**
    - Average crashes per mile will increase **14%** with little change to the number of fatal and major injury crashes.
    - *(with a 72% increase in volumes)*
  - **6-Lane I-80 with AV Improvements**
    - Average crashes per mile will **decrease 59%** and fatal and major injury crashes will **decrease 50%**.
    - *(with a 104% increase in volumes)*

- **Traffic Capacity**
  - **Vehicle crowding will increase by 55%** causing average speeds to decrease **5%**.
  - **Overall travel times will grow, increasing the Misery Index**
    - 6 to 12% for 4-Lane I-80 Unimproved in the Year 2040
    - Misery Index: Slight improvement (1 to 8%)
    - Misery Index: More improvement (-1 to 3%)

- **Reliability**
  - **Overall travel times will grow, increasing the Misery Index**
  - **20% less vehicle crowding and average speeds remain the same as today**
  - **35% less vehicle crowding and average speeds increase 2%**

Data based on studies and analyses of two to five general segments of rural I-80.
What Do We Expect?

• Safer highways because we keep traffic moving
• Fewer delays because we reduce the time it takes to open lanes for a traffic incident
• Extending the life of highways through aggressive traffic operations management
• Better Customer Service
• Quicker response to major emergencies impacting highways
• More economic development opportunities because of reliable supply chain
• Better quality of life
Thank You!

Donna Matulac
Iowa DOT
Office of Traffic Operations
515-239-1192
donna.matulac@iowadot.us