



Camino Real Regional Mobility Authority (CRRMA) and
El Paso Metropolitan Planning Organization (EPMPO)

Metropia Operations Project

Cooperate

Reduce Traffic

Plant a Tree

Arrive on Time

Metropia, Inc.

Jenda Chen, COO

Zenia Hernandez, El Paso

Program Manager

Presented to:

Camino Real Regional Mobility Authority

Wednesday, August 13, 2014



About us

Metropia is an incentive-based intelligent traffic management platform that incentivizes commuters, businesses, employers and governmental agencies to work together to obtain improved mobility and a better quality of life

community
vision • utopia • unity
conservation • environment
cooperative choice • plant a tree
save my earth • rewarding
entertainment • fun • simple • immersive
social • convenient • solution
mobile • everyone wins • navigation
beneficial • improvement • city
urban • science • societal benefits
smart • savvy • go local
on my way • get going
save time • cutting edge
metropian



Metropia Team



Yi-Chang Chiu
Founder



Jenda Chen
Chief Operating Officer



Mia Zmud
Principal



Corey Smith
Advisor



Jorge Villalobos
Board of Directors



Arif Maskatia
Strategic Advisor of Technology



Xianbiao Hu
R&D Director



Ray Luo
Software Engineering Director



Steve Delgado
Marketing Communications



Zenia Hernandez
Program Manager



Paul Hoffer
Imaginer



Mario Salomon
Operations Engineer



Jason Freitas
Product Operations Engineer



Matt Bush
R&D Engineer



Michael Schoen
Operations Engineer



Jaclyn Hubersberger
Community Manager

Confidenti

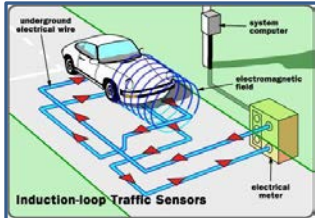




Project Goal

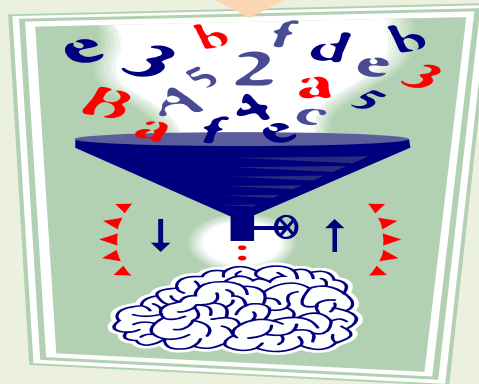
To enhance the quality of life in the El Paso region by supporting **CRRMA** and EPMPO (champions in metro mobility) to manage traffic congestion and reduce mobile source emissions in the El Paso region by developing the incentive-based Metropia Ecosystem.

Metropia Vision



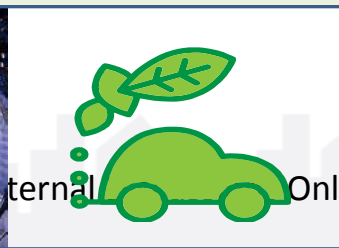
Data

Model



Objective

Capability



Metropia Ecosystem



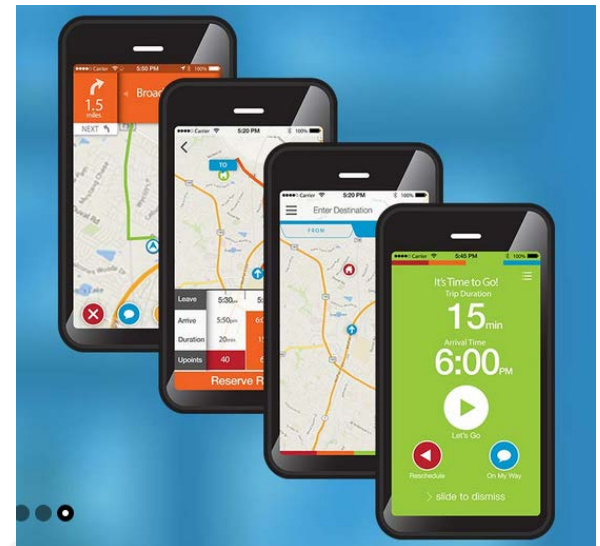
Confidential, Internal Discussions Only

Top 5 Reason — Why Metropia ?

TOP 5 REASONS TO TEST DRIVE METROPIA TODAY



- Cooperate
- Reduce Congestion
- Reward Yourself



Learned from Rice Grains



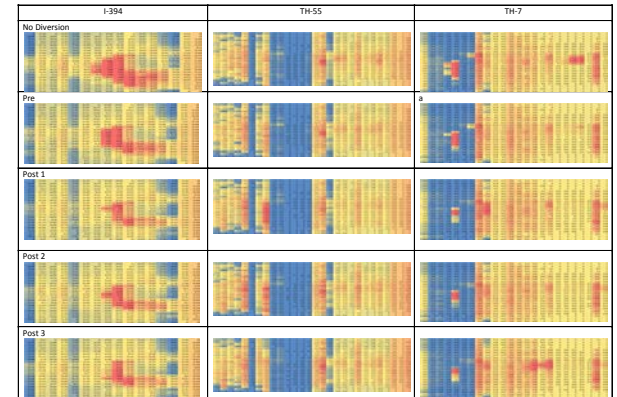
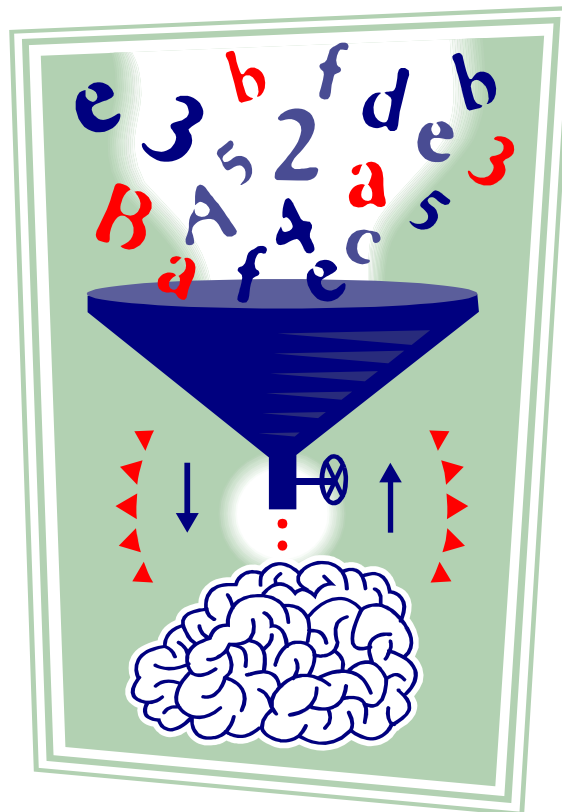
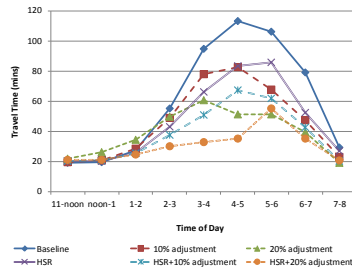
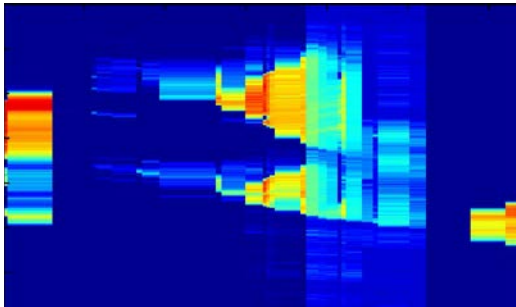
Source: WSDOT

Discover

Reserve

Validate

Receive



Discover

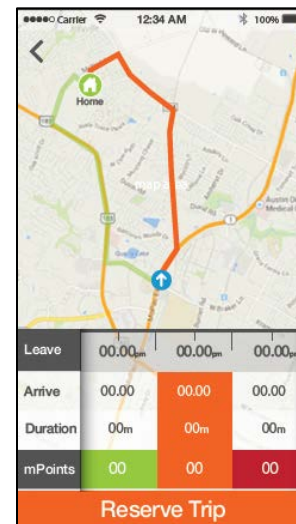
Reserve

Validate

Receive



Departure	Travel Time	Reward
7:00-7:15 AM	0:20	100 pts
7:15-7:30 AM	0:25	65 pts
7:30-7:45 AM	0:40	20 pts
7:45-8:00 AM	1:05	No Reward
8:00-8:15 PM	0:55	No Reward
8:15-8:30 PM	0:46	40 pts
8:30-8:45 PM	0:32	50 pts

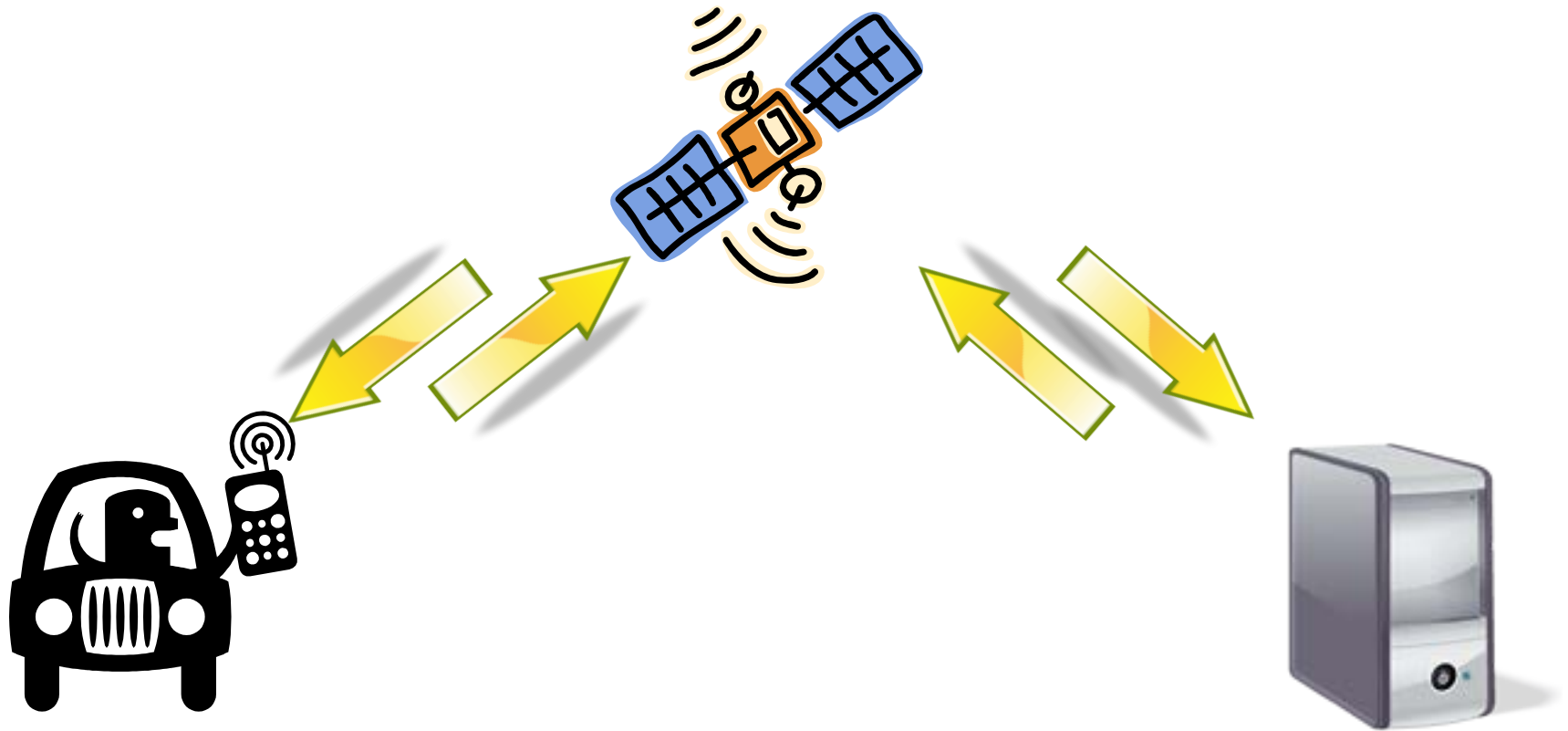


Discover

Reserve

Validate

Receive



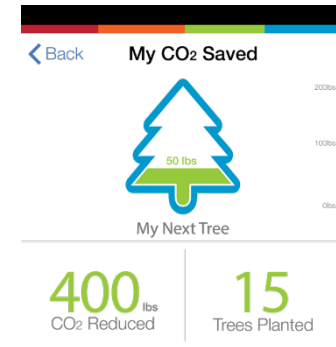
Discover

Reserve

Validate

Receive

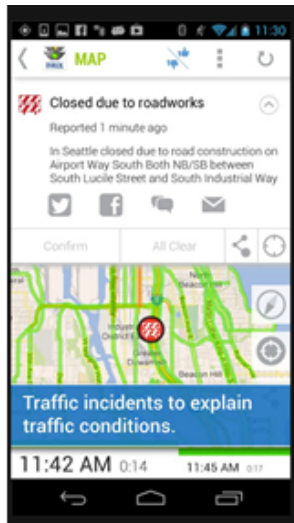
- Personal gain
 - Reward [Points](#)
 - Sponsors
 - [Local merchants](#)
 - City rewards - for CO2 reduction
- Altruistic
 - [Plant a tree](#)
 - Charity donation



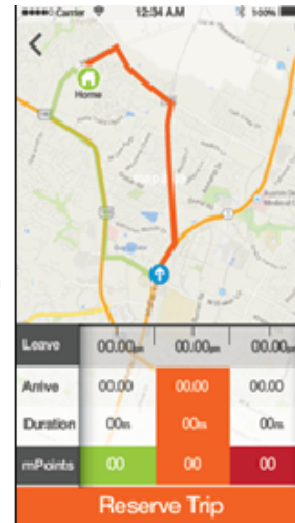
Venue Planning & Incident Management

Load Balancing

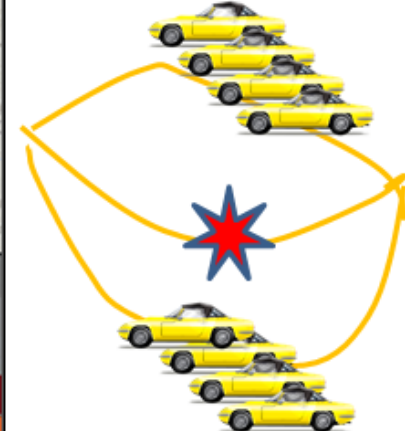
- Coordinated user responses
 - Normal and incident
- Avoid herding effect
- Event / Venue Management



Traffic Apps



Metropia



Benefits of Implementing Metropia

- TTI Report (Travel Time Saving from Metropia Synergy)

Mobility Investment Priorities Project

Long-Term Central Texas
IH 35 Improvement Scenarios

August 2013



mobility
INVESTMENT PRIORITIES

Texas A&M
Transportation
Institute

Technology Strategy: Daily Average Travel Time

Flexibility in Departure Time	5% of drivers use Smartrek	10% of drivers use Smartrek	20% of drivers use Smartrek
15 minutes	24 minutes	not tested	not tested
30 minutes	not tested	21 minutes	17 minutes
60 minutes	not tested	21 minutes	17 minutes

Technology Strategy: Daily Average Travel Time for Non- Users

Flexibility in Departure Time	5% of drivers use Smartrek	10% of drivers use Smartrek	20% of drivers use Smartrek
15 minutes	26 minutes	not tested	not tested
30 minutes	not tested	25 minutes	24 minutes
60 minutes	not tested	24 minutes	23 minutes

Technology Strategy: Total Daily Travel Time Savings for All Drivers

(% is comparing savings to Scenario 0: Base Case)

Flexibility in Departure Time	5% of drivers use Smartrek	10% of drivers use Smartrek	20% of drivers use Smartrek
15 minutes	14,000 hours (0.4%)	not tested	not tested
30 minutes	not tested	72,100 hours (2.3%)	111,900 hours (3.5%)
60 minutes	not tested	153,900 hours (4.8%)	215,900 hours (6.8%)

Los Angeles Pilot Study 2013~2014

Sponsor: City of Los Angeles



How Many Saved Travel Time?



Saved by how much?



6 min/trip = 40 hrs/yr = 1 week

80 MM hrs/yr region wide



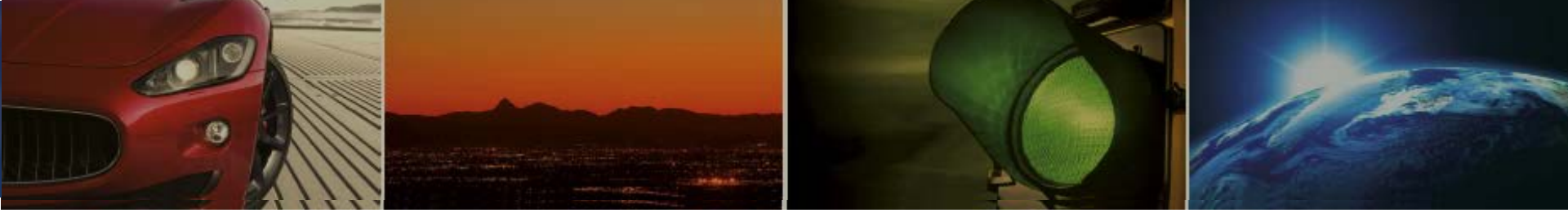
Average Savings of Travel Time Resulting from Modifying Behavior

- Shifting departure time : 20.4%
- Changing only route : 21.9%
- Changing both route & departure time : 20.9% savings
- Departing earlier saved : 18.5%
- Departing later saved : 20.6%
- AM commutes saved : 27%
- PM commutes saved : 15.1%



El Paso Regional Benefits

- Reduce congestion on El Paso road network and manage capacity
- Ability to directly communicate with system user
- Manage capacity throughout region (increase efficiencies out of the existing infrastructure)
- Promote local business
- Increase future Border Highway West Express Lane utilization and overall capacity utilization
- Potential to improve air quality
- Identify potential opportunities to enhance border crossing operations and improve the effectiveness of the regional incident management program
- Potential to improve multi-modal choices in the El Paso region (further contributing to improved congestion and air quality)



CRRMA/EPMPPO

Metropia Project Work Plan



Cooperate

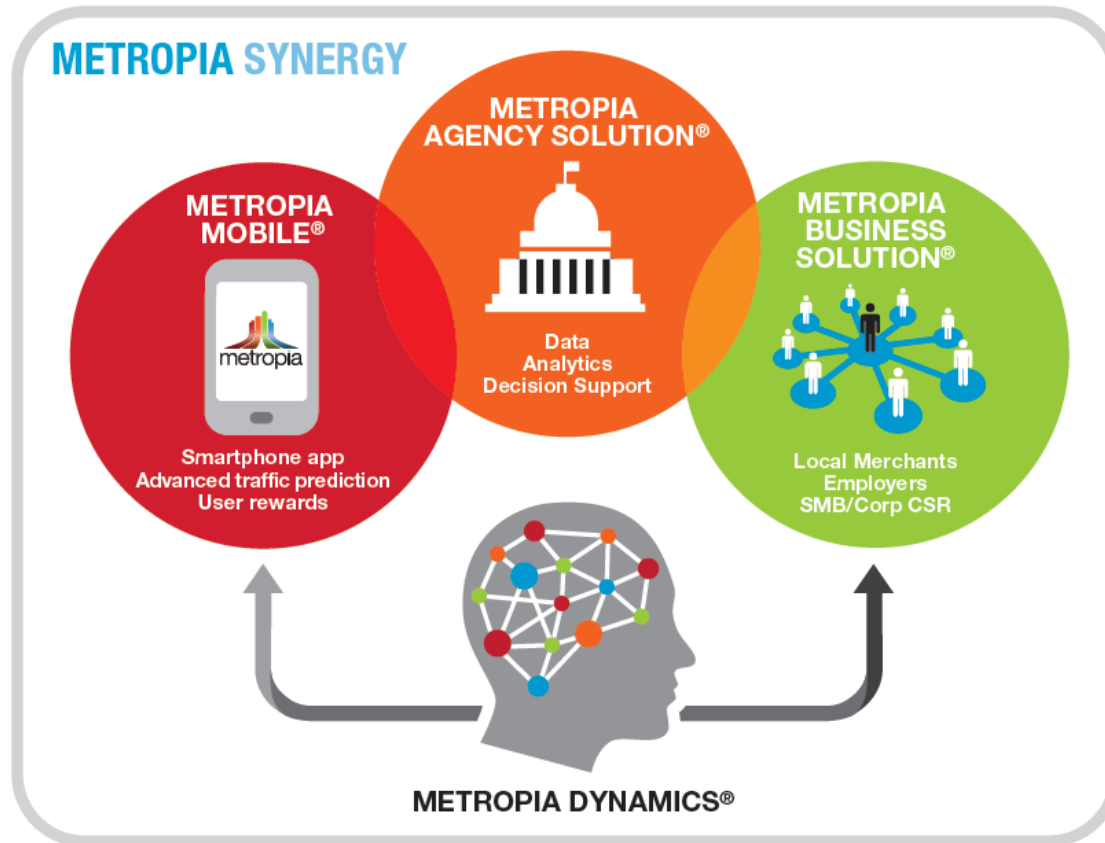
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Metropia Synergy





Project Phases

Phase 1: Program Planning (Month 1-3)

Goal: Plan for official launch, network and local operations, and stakeholder engagement

Working Metropia Synergy System with basic TMC integration



Phase 2: Official Launch - Initial Engagement (Month 4-9)

Goal: Launch, engagement and outreach, rapid optimization and program refinement

A robust engineering Metropia Mobile and Synergy system that is ready for a large adoption



Phase 3: Expanded Adoption (Month 10-End of Project)

Goal: Expand stakeholder involvement, robust services

Scaled and robust operations for a large user base



Performance Metrics

	Microscopic (per person/unit)	Macroscopic (total/average)
Commuters	<ul style="list-style-type: none"> • Travel time saving • Routing prediction accuracy • User experience satisfaction • CO2 saving • Fuel saving 	<ul style="list-style-type: none"> • Total travel time saving • Average routing accuracy • Overall user satisfaction • Total CO2 saving • Total fuel saving
Agency	<ul style="list-style-type: none"> • Travel time saving for participants • Routing prediction accuracy for participants • User experience satisfaction for participants • CO2 saving for participants • Fuel saving for participants 	<ul style="list-style-type: none"> • Total travel time saving (for all El Paso) • Average routing accuracy • Overall user satisfaction • Total CO2 saving • Total fuel saving
Merchants and Sponsors	<ul style="list-style-type: none"> • Return of Investment (ROI) for participating in the MME for individual merchants/sponsor 	<ul style="list-style-type: none"> • Total benefits for all merchants/sponsors in the MME program.
Employers	<ul style="list-style-type: none"> • Travel time saving • Routing prediction accuracy • User experience satisfaction • CO2 saving • Fuel saving 	<ul style="list-style-type: none"> • Total travel time saving by employer (with respect to Agency) • Average routing accuracy • Overall user satisfaction • Total CO2 saving • Total Fuel saving

Cost of Operations Project

		M1-3	M4-9	M10-24			
Cost Categories	Hourly Loaded Rate	Phase 1	Phase 2	Phase 3	Pt Time	FTE	Grand Total (All Tasks)
		Hours	Hours	Hours			Hours
Direct Labor Classification(s)							
System Architect	\$94	160	188	276	10%	1	624
R&D Director	\$89	320	376	552	20%	1	1,248
Operations Engineers (x2)	\$63	832	978	1,435	52%	2	6,490
Senior Software Engineer	\$105	320	376	552	20%	1	1,248
Software Engineer	\$79	320	376	552	20%	1	1,248
Program Manager	\$94	333	1,000	1,787	50%	1	3,120
Community Manager	\$58	333	1,000	1,787	50%	1	3,120
Operation Field Engineer	\$73	320	376	552	20%	1	1,248
Subtotal-Direct Labor		\$228,629	\$361,089	\$578,524			\$1,168,242
License Fee		\$62,500	\$187,500	\$250,000			\$500,000
Subtotal-Fixed Fee		\$62,500	\$187,500	\$250,000			\$500,000
Other Directed Cost (ODCs)							
Travel		\$6,000	\$6,000	\$8,000			\$20,000
Sub-consultant (PR/Marketing)		\$40,000	\$60,000	\$50,000			\$150,000
Volunteer Program		\$0	\$40,000	\$60,000			\$100,000
Subtotal - ODCs:		\$46,000	\$106,000	\$118,000			\$270,000
Total Direct Cost		\$337,129	\$654,589	\$946,524			\$1,938,242
Profit (10%)		\$0	\$0	\$0			\$0
		\$337,129	\$654,589	\$946,524			
Grand Total							\$1,938,242



Deliverables by Phase

Phase I	Official launch of Metropia Synergy, the Congestion Mitigation Service to the general public
Phase II	(1) A report documenting user adoption, user and system benefit and performance monitor and analysis, and (2) a Windows based, Traffic Management Synergy Operator Console Software allowing an agency to view and monitor traffic condition
Phase III	Evaluation Report and Data with recommendations to improve planning and operations in the region: (1) A final report documenting user adoption, user and system benefit and performance monitor and analysis, (2) link/corridor traffic data (speed/volume) and OD data collected for the project period and a data dictionary description manual



Rewards Get Points
to help your **City**

Trees for All



Metropia plants a tree for your city

Thank You
Q&A