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JUNE 16, 2017

TO: BOARD OF DIRECTORS

THROUGH: PHILLIP A. WASHINGTON *PAW*
CHIEF EXECUTIVE OFFICER

FROM: JOSHUA L. SCHANK *JLS*
CHIEF INNOVATION OFFICER

**SUBJECT: OFFICE OF EXTRAORDINARY INNOVATION (OEI) QUARTERLY
PROGRESS REPORT**

ISSUE

OEI was created in 2015 to develop and implement ideas to improve mobility in Los Angeles County. This is the fifth general update to the Board highlighting current OEI activities and initiatives in greater detail. In addition to a general update on the status of all unsolicited proposals, it includes updates on unsolicited proposals for major capital projects and for integrating on-demand services into our system. This progress report also provides an update on the Metro Strategic Plan.

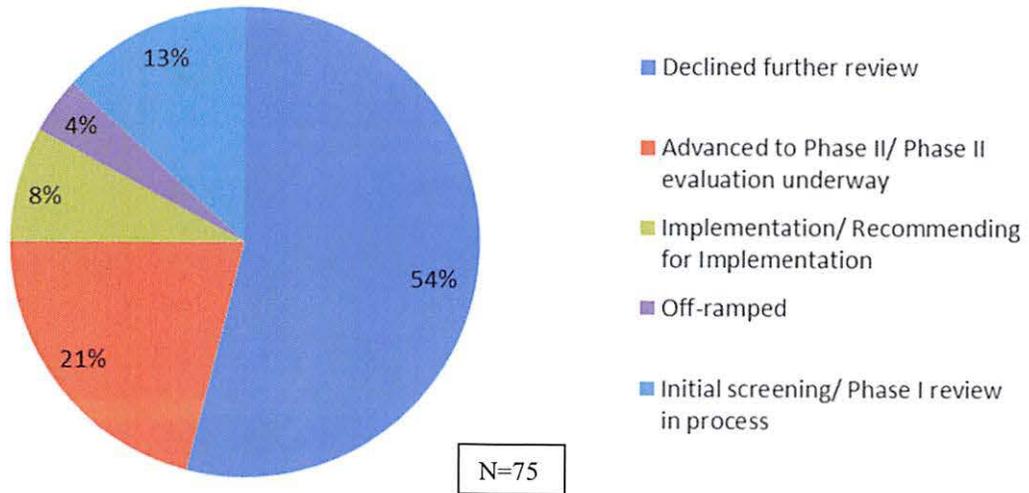
DISCUSSION

Unsolicited Proposals Update

Since the establishment of our Unsolicited Proposal Policy in February 2016, Metro has received 75 Unsolicited Proposals, 10 of which are for Major Capital Projects and programs:

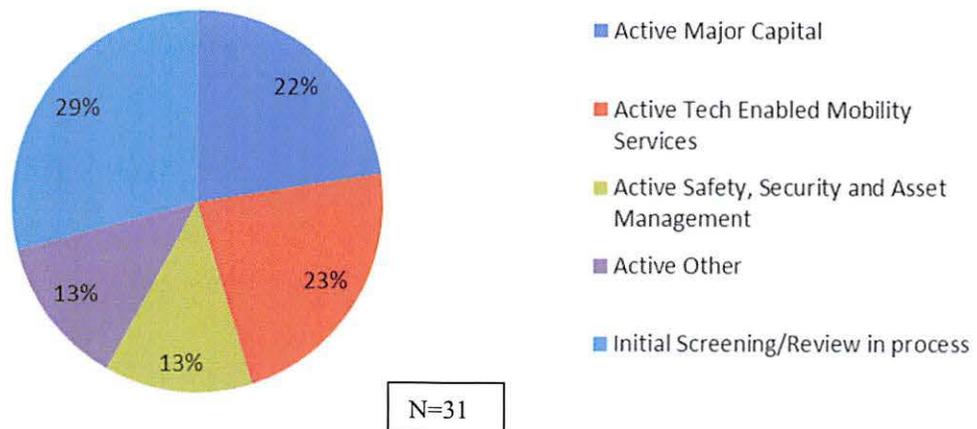
- **66** proposals have completed Phase I Review (Declined, Advanced or Off-Ramped)
 - 18 of these proposals have advanced to Phase II for detailed analysis
 - 6 Phase II Detailed proposals have been received
 - 5 of these proposals have been implemented or are in the stages of implementation
- **9** proposals are in the process of Phase I evaluation

Stages of Review and Implementation



Note: In the pie chart above, UPs which have advanced to implementation are counted only in the green slice. To avoid double counting, they are therefore not included in other categories to which they may also apply.

Types of Proposals Advancing Through the UP Process



Note: the pie chart above categorizes UPs by type, excluding those that have been declined (41) and those that have been off-ramped but not implemented (3). Proposals in Initial Screening/ Review have not yet been categorized by type.

A list of all the proposals received to date by category and status is available in Attachment A. Over 100 subject matter experts across all departments have been involved in the review of these proposals, as well as ongoing and critical support from Vendor/Contract Management (V/CM). V/CM's continuous problem solving, partnership and flexibility have been invaluable in catalyzing the implementation of new and untried ideas, including major capital projects, through the Unsolicited Proposals Process.

Major Capital Unsolicited Proposals

OEI has continued to make progress on each of the Unsolicited Proposals received for major capital project P3s that have been advanced to a Phase II Detailed Review: two for the Sepulveda Pass Corridor; two for the West Santa Ana Branch Transit Corridor; two system financing proposals from Parker Infrastructure Partners and Goldman Sachs.

Sepulveda Pass Corridor: Over the past quarter, OEI has developed an assessment framework for the Sepulveda proposals, conducted research into the proposed delivery methods, and worked with each Proposer to develop the suite of information required for effective assessment. Evaluation has included analyzing whether pre-development agreements (PDA) could drive early project feasibility and ensure a financially viable project that meets the region's transportation needs. We are targeting an initial decision on the next steps of evaluation and implementation based on our review by the end of the summer.

West Santa Ana Branch: OEI has worked with our Advisors to build a financial model for the West Santa Ana Branch Corridor project as a tool to assess the potential value of the various P3 structures suggested in each Unsolicited Proposal that Metro has received. We've developed an evaluation framework for this project, and hosted two sessions to receive more detailed financial and project information from the proposers, which is currently being incorporated into the evaluation framework for modelling and assessment. OEI plans to present initial findings to our Review Team for evaluation and recommendation to the CEO regarding whether to proceed to P3 procurement by the end of the summer.

Parker Infrastructure Partners: The extent of uniqueness and innovation offered in the proposal from Parker Infrastructure Partners has required a longer evaluation timeframe for several reasons, including requiring the negotiation of a nondisclosure agreement. With that in place, OEI has worked with our Advisors to develop a tailored evaluation approach and analytical framework. OEI recently briefed the Review Team on the proposal and proposed evaluation approach. OEI will submit a request for additional information to Parker Infrastructure Partners, based on this approach. Depending on the time required for the proposer to respond to this request, and the time required for Metro to analyze and evaluate the results, OEI plans to finalize a recommendation to the CEO later this year.

Goldman Sachs: Evaluation of the financing proposal from Goldman Sachs has nearly concluded. Initial findings were recently presented to OEI, which is in the process of gathering some final additional datasets to ensure a robust analysis with high reliability. OEI plans to present final findings to the Review Team shortly, with a recommendation to the CEO this summer.

Fluor: Metro advanced a Proposal to accelerate the conversion of the Orange Line to Light Rail from Phase I Conceptual Analysis to Phase II Detailed Analysis. OEI has begun working with our Financial Advisor to analyze the proposal's purported benefits and financial feasibility.

In addition to our Unsolicited Proposal review processes, OEI has also begun working with our Strategic and Legal Advisor, Nossaman LLP, on an agency-wide effort to assess current agency practices against P3 best practices, and developing a suite of recommendations for enhancing Metro's ability to solicit, manage, and deliver an infrastructure project via a P3 structure.

MicroTransit

Based upon an Unsolicited Proposal submitted to OEI to test on-demand technology, Metro is developing and will be issuing a Request for Proposal (RFP) for an on-demand, dynamically routed public transportation service called MicroTransit.

This competitive procurement will require a Contractor Team to assist with the design and implementation of the MicroTransit Pilot (MTP) and provide a technology platform for the solution as well as ongoing strategic guidance to drive pilot project performance.

The RFP is being developed to incorporate key findings from partner agencies including, but not limited to: Kansas City Area Transportation Authority (KCATA), AC Transit, Santa Clara Valley Transportation Authority (SCVTA), and San Francisco Municipal Transportation Agency (SFMTA).

The MTP is being designed in coordination with Metro's system wide bus network restructuring.

The RFP for the MTP is currently scheduled to be issued in July 2017.

Innovation Pilots

Covington & Associates: With the procurement complete for this software that helps prevent unplanned IT system outages before they occur, this new software solution will be the first validated proposal to be fully implemented through the UP process. The software for the pilot is being evaluated and prepared by ITS for agency wide dissemination. The original unsolicited proposer, Francis Covington & Associates, won the contract through a competitive procurement.

Swiftly: ITS is leveraging technology to improve the customer experience. OEI and ITS are in the process of closing out a successful proof of concept demonstration with Swiftly. The demonstration proved that it is possible to obtain a more accurate real time arrival prediction than we currently generate using Nextbus. OEI and ITS will be making a recommendation to the CEO that we close out the proof of concept and begin

developing the RFP.

Street Signal Interface: This pilot project was submitted internally as an Unsolicited Proposal, and authorized by the CEO for implementation in FY18. The project will develop software for wayside to vehicle communication that optimizes operating speed through signalized intersections to create a safer and more efficient operation on the Orange Line.

Progress Report: Ongoing OEI Initiatives

Mobility on Demand

In February Metro received \$1.35 million Mobility on Demand (MOD) grant to develop and deploy an affordable, equitable, and accessible first and last mile partnership with Lyft. Locally, this project is in partnership with LADOT, Access Services, and Foothill Transit. Puget Sound transit operators will be deploying an analogous partnership. The project will consist of three pilot locations within Los Angeles County. The pilot will ensure that wheelchair accessible vehicles are available, and that the service is accessible to those without smartphones or bank accounts. The pilot is scheduled for launch in January 2018.

Connected Bus

ITS has taken the lead on implementing cellular data communication on buses after working with OEI on project development. The budget approved capital project for Connected Buses will begin in July. ITS issued a requisition to install cellular/Wi-Fi router in about 150+ "contracted services" buses. The Connected Bus solution also enables free WiFi service capability on its bus fleet. WiFi service is currently being piloted on selected vehicles with the goal of implementing fleet wide once the Connected Bus solution is fully implemented. OEI continues to offer additional support where helpful.

TAP Collaboration

OEI continues to collaborate with TAP because fare payment plays a central role in ensuring that new mobility partnerships are deployed in a seamless, well integrated, equitable and customer friendly manner. OEI and TAP are collaborating on fare payment integration for both the MTP and MOD projects. OEI continues to receive unsolicited proposals regarding fare payment technology, including mobile payment, and will continue to work with TAP to analyze those proposals as they come in.

Headquarters Ride Along with OEI

OEI continues to lead monthly rides for Employees stationed at Metro Headquarters to walk in the shoes of the customer and enforce a culture of ridership. This past month, OEI opened a ride exploring the bus service in Downtown Los Angeles to the industry.

Each ride along participant is given a post-ride survey, which will be used to provide recommendations and insights from ride participants to Senior Leadership.

If Board Members are interested in participating in a future ride, please contact Nolan Borgman at borgmann@metro.net.

Development of Metro Strategic Plan

OEI is in the process of developing the Metro Strategic Plan (Plan), which will provide the overarching framework to align our business strategies and programs across all Metro departments towards a common and focused purpose and establish the roadmap to guide Metro in achieving our goals. OEI has conducted over 100 meetings and interviews with internal and external stakeholders to seek input on the Plan and will continue to meet with key stakeholders as part of a comprehensive outreach effort. We are summarizing the preliminary trends, themes, opportunities, and challenges that we've heard through these conversations in order to inform the development of the agency vision, goals, and guiding principles. We are conducting a comprehensive customer survey to assess the mobility needs of LA County residents, including online survey and focus group research. The results will inform the initiatives in the Plan. We anticipate that the draft Plan will be available in Fall 2017 and completed by the end of the year. We will provide updates to the Board at key milestones throughout this process.

NEXT STEPS

- OEI will continue evaluating unsolicited proposals with the help of other Metro departments and Financial Advisors, making specific recommendations regarding several major capital projects over the next few months.
- OEI will continue to follow its work plan towards developing a strategic plan.
- OEI will continue building a culture of innovation by building participatory and communicative channels for idea generation, evaluation and sharing.
- OEI will provide updates to the Board periodically.

Attachment A – Unsolicited Proposal Status Log

ATTACHMENT A – Unsolicited Proposal Status Log (as of June 14, 2017)

No.	Originator	Summary	Status
1	Covington & Associates	Assess exposure to unplanned outages and develop mitigation measures.	Procurement Complete; Software in Installation Phase
2	VIA	MicroTransit	Implementation / Procurement
3	Swiftly #1 - GPS	Real Time Arrival Information	Proof of Concept Pilot Complete; OEI Recommending Implementation to CEO
4	Trapeze	State of Good Repair and capital planning management software system	Implementation / Procurement
5	Media Arts	Deploy unmanned vehicles, data management, telemetry and other sensors/connections to improve operations	Phase II Received; Phase II Review in Process
6	Green Charge	Reduce peak demand energy costs	Phase II Review in process
7	aUniform	Demo of self-illuminating safety vests	Advanced to Phase II; RFI Issued
8	MobileQubes	Battery pack vending machines in stations for customers	Advanced to Phase II; RFI Issued
9	Infrashares Inc	Utilize crowdfunding donations, equity and debt for funding/ financing infrastructure projects.	Advanced to Phase II; RFI Issued
10	Accenture #1 – Tolling	Mobile tolling Proof of Concept	Phase II Received; Phase II Review in Process
11	Goldman Sachs	Systems or regional network approach to developing and managing our HOT lanes network	Advanced to Phase II
12	Parker Infrastructure Partners	Proposal to finance mega projects using an alternative finance approach.	Advanced to Phase II
13	Uber	Metro partnership with Uber to provide first last mile service and service in underserved/ low income areas.	Advanced to Phase II
14	Green Commuter	Use electric Tesla vans for Metro employee vanpool, with the option to use the buses for other things during the day	Advanced to Phase II
15	Skanska USA	West Santa Ana Branch transit line acceleration through competitive DBFOM process	Advanced to Phase II
16	Parsons Sepulveda Multi-Modal Corridor	Develop and build Sepulveda Pass rail and ExpressLanes with minimal tunneling using DBFM approach.	Advanced to Phase II
17	Kiewit + AECOM WSAB Corridor	West Santa Ana Branch transit line acceleration DBF.	Advanced to Phase II
18	Turner Engineering	Grid Integrated Energy Storage System	Advanced to Phase II

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	Corporation and Southern California Edison		
19	Fluor Metro Orange Line	Accelerate conversion of Metro Orange Line to Rail through a P3	Advanced to Phase II
20	Ferrovial-Cintra Sepulveda	Develop, build and accelerate Sepulveda Pass Express Lanes and rail using a PDA approach and DBFM or DBFOM.	Advanced to Phase II

No.	Originator	Summary	Status
21	Bike Hub	Smart bike rack pilot	In Process
22	Paylt	Bluetooth based mobile fare payment	In Process
23	Social Bicycles	Bike share system in Venice, Mar Vista and Marina Del Rey	In Process
24	Universoft	SCADA system capabilities and innovations	In Process
25	Southern AM #2	Currency stacking machine	In Process
26	W-9NINE	Automating Bus pre-trip inspections	In Process
27	Goldman Sachs #3	Accelerate projects through financing optimizations.	In Process
28	BMG Money	Providing Metro employees access to emergency cash loans	In Process
29	The Glue FMLM	Mobile App for sidewalks and walking conditions .	In Process
30	James Heimler Sepulveda	Rail and city development concept in Sepulveda Corridor	In Process

No.	Originator	Summary	Status
31	TransitVUE	Dynamic plexiglass illuminator signage that lets you know where you are on the Orange Line	Phase I Not Advanced
32	Southern AM	Retrofit of bus fareboxes with 4G LTE Cellular Link	Phase I Not Advanced
33	TranspoGroupAV	Metro to co-host an autonomous vehicles working group with TranspoGroup to develop policy recommendations	Phase I Not Advanced

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34	Swiftly #2	Integrated transit app that leverages real time information from multiple mobility options to help riders determine best mode of travel their trip.	Phase I Not Advanced
35	Optibus	Address bus delays before they impact customers by alerting control room operators about buses that might be late for their next trips.	Phase I Not Advanced
36	Skybus	Pilot vanpool to a suburban business park to prove concept and technology	Phase I Not Advanced
37	Steiny & Company	LED upgrades for Metro Blue Line parking lots	Phase I Not Advanced
38	Tubular Rail	Preliminary design and engineering assessment for tubular rail	Phase I Not Advanced
39	Cambridge Systematics	Develop and deploy a shared mobility trip planning platform	Phase I Not Advanced
40	ThermoGuard	Piloting energy rejection glass that reduces glare and optimizes bus climate and energy use.	Phase I Not Advanced
41	Accela	Right of Way Management software for Purple Line Extension.	Phase I Not Advanced
42	Rhythm Engineering	Automated signal control technology.	Phase I Not Advanced
43	Owlized	Visualization and virtual reality tools for conducting public outreach and collecting feedback on projects.	Phase I Not Advanced
44	Moovit	Partnership with trip planning platform to co-market and learn trip planning best practices.	Phase I Not Advanced
45	Accenture #2 – Energy Management	Energy management as a service, including shared savings model.	Phase I Not Advanced
46	SoftWheel	Pilot revolutionary bike wheel on bike share, including offering wheelchairs.	Phase I Not Advanced
47	XCLMark	Reduce customer friction points using a patented synch router to embed important and tailored information into the ambient environment.	Phase I Not Advanced
48	Sovrn Holdings	Pilot to monetize several of Metro's web and mobile apps through advertising.	Phase I Not Advanced
49	Bones and Greens	Human performance assessments and workshops	Phase I Not Advanced
50	Air Weather & Sea Conditions	Weather alerts and forecasting for the Expo Line	Phase I Not Advanced
51	Skanska USA	Phase 3 Purple Line Tunnel Acceleration by Q2 2024	Phase I Not Advanced
52	Lloyd Morris Productions	Before and After video documenting the transformation of the Expo alignment and immediate community between Culver City and Santa Monica	Phase I Not Advanced
53	MobilEye Shield +	Bus collision avoidance system	Phase I Not Advanced
54	Connectthings #1	Software as a Service Bluetooth beacon network	Phase I Not Advanced
55	Waltz	Make fare payments easier for smartphones while creating paid advertising and public information space as well as new data streams.	Phase I Not Advanced

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56	ACS Infrastructure Development, Inc. and Dragados USA	Accelerate West Santa Ana Branch Corridor Light Rail Transit Project including availability payment P3 financing model	Phase I Not Advanced
57	HDR Sepulveda Corridor Development	Develop and build Sepulveda Pass Express Lanes and tunnel with PDA approach and DBFOM model, without Federal funding.	Phase I Not Advanced
58	Via Analytics	Demo headway based dispatch and operation on a bus line to improve on time performance and fleet utilization.	Phase I Not Advanced
59	WWT Air Mass Tunnel Generation	Generates electricity using the tunnel winds created by the subway.	Phase I Not Advanced
60	AECOM Ventures	Critical infrastructure, security and preparedness initiative.	Revise & Resubmit Due to Timing
61	AECOM Ventures Resubmission	Critical infrastructure, security and preparedness initiative.	Phase I Not Advanced
62	HDK Media	Marketing campaign.	Phase I Not Advanced
63	Unity Consulting	Electric scooter-way transit system.	Phase I Not Advanced
64	Goldman Sachs #2	Accelerate projects through financing optimizations.	Phase I Not Advanced
65	Here Design Studio & Legacy Games	Interactive and educational public installation.	Phase I Not Advanced
66	Edge3 Solar	Solar, smart grid, and storage project	Phase I Not Advanced
67	Solair	Vehicle compressor proof of concept	Phase I Not Advanced
68	Rhythm of the City	Lifestyle marketing campaign involving using the system and celebrities	Phase I Not Advanced
69	Dream One Transportation	Shuttle services in construction areas	Phase I Not Advanced
70	Connectthings #2	Similar to original idea, a smart city subscription network	Phase I Not Advanced
71	Arkadiy Kornatsky	Mobile Self Propelled Tunnel construction efficiency concept	Phase I Not Advanced
72	Street Signal Interface (Internal)	Street signal interface for real time management of Metro Orange Line	Off-Ramp -- Internal Consulting; Implementation / Procurement
73	RideAmigos	Proposed partnership for pilot program to test TAP card incentives that could induce mode shift from SOV use	Off-Ramp - TAP request
74	BYD	Buy back 8 electric buses; supply 8 new ones with option to extend	Off Ramp - Considered a contract renegotiation
75	CanAM Enterprises	Innovative Capital Financing proposal	Off Ramp – Treasury Review

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LEGEND

- **Phase I or II Not Advanced** – Metro has declined to continue review of the proposal based on lack of financial and/or technical merit and/or scope
- **In Process** – Metro is in the process of reviewing the Phase I proposal
- **Advanced to Phase II** – Metro has indicated interest in learning more details through a Phase II proposal, but has not yet received the Phase II Detailed Proposal
- **RFI Issued** – After advancing the proposal to Phase II, Metro offered additional information including relevant parameters, key policies and outstanding questions to the proposer. This is intended to provide the proposer an account of the review team’s thinking before submitting a Detailed Phase II Proposal.
- **Phase II Received** – Metro has received a more detailed proposal and Phase II review is “In Process”
- **Implementation/ Procurement** – The review team is in the process of implementing or procuring a concept as a direct result of a UP review process
- **Proof of Concept Pilot** – A scaled down version of the project or a demonstration is taking/took place as part of the review.
- **Off Ramp** – Concept is being reviewed and/or pursued outside of the Unsolicited Proposals Process