

# METR Summary Points from Workshops

Blue text indicates revisions to vision based on meeting discussions

Red text indicates items that need more discussion

Source	Slide	Topic	Summary Points of Discussion
W1	9	Connectivity	Road vehicles should support short-range wireless; not necessarily true for other transport user systems
W1	9	Connectivity	All ~mobile~ METR-enabled transport user systems should support mobile wireless internet
W1	9	Connectivity	Mobile wireless internet is not guaranteed for any location
W1	9	Connectivity	Mobile wireless internet might not be available (at any time) for some locations
W1	9	Connectivity	METR should support user systems that might not be mobile. For example, a home PC used for planning a journey and understanding the rules when travelling in other areas
W1	9	Connectivity	Users have a need to indicate their preferred internet connectivity mechanism, but user systems must always stay up-to-date per agreements with disseminator
W1	9	Connectivity	User systems might support the ability to download rules in advance of a long journey
W1	9	Connectivity	METR should support ordinary traffic (i.e., driver support systems)
W1	9	Connectivity	METR should cover the full scope of surface transport (e.g., ITS)
W1	9	Connectivity	Need to support rules related to specific types of users (e.g., accessible parking permits/placards) in a manner that allows integration with the user system
W1	14	Trustworthiness	Trustworthiness should include non-repudiation under accountability
W1	17	Roles	Users should have a way to report discrepancies between electronic rules and physically observed rules (and this should be shown on diagram)
W1	17	Roles	We should emphasize that the types of regulators and translators shown in Slide 17 are just examples
W1	17	Roles	Some regions might wish to have a system manager to manage portions of METR
W1	17	Roles	Should provide sample diagrams showing implementations of the role-based architecture; multiple examples will be needed to prevent implying that there is a preferred approach
W1	17	Roles	The role model should add a role between the regulator and the translator that represents the "competent authority". In other words, the regulator might define a regulation, but the "competent authority" is responsible for implementing the regulation where it can then be translated.
W1	17	Roles	The ConOps should provide practical use cases that explain the varied types of rules that might be disseminated and how the process would work

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Source	Slide	Topic	Summary Points of Discussion
W1	21	Modes	The concept of modes does not seem to apply to our collaborative system of systems
W1	21	Modes	State of the transport network needs to be conveyed through the state of each rule (see Workshop 3)
W1	21	Modes	State of rule availability should be captured using a catalogue for each provisioning system
W1	21	Modes	The ConOps should reference ISO/IEC/IEEE 15288 and indicate the type of system of system that METR is
W1	30	Push/Pull	METR should be based on a centralized pull of static data coupled with dynamic data being provided by a combination of (1) provisioning from a central system and (2) pushing/broadcasting from local source(s)
W1	30	Push/Pull	It should be the responsibility of the user system to pull data when needed (e.g., periodically and when entering new area)
W1	31	Push/Pull	Each METR rule (e.g., give way to emergency vehicles) needs to support being associated with conditional logic such that the rule is only active when the condition is true. The conditional logic might need to reference external variables, such as C-ITS data ("it is snowing", "workers are present", "children are present", "it is after dusk"), which might be provided by a METR system component or another source (e.g., TIC, vehicle sensor array, etc.).
W1	32	Push/Pull	Withdrawn/rescinded rules need to be publicized in a fashion similar to publicizing new rules (i.e., static when possible, dynamic otherwise)
W1	32	Push/Pull	METR will rely upon existing standards when appropriate
W1	32	Push/Pull	User systems need high confidence that they have all active rules
W1	32	Push/Pull	Development team needs to contact field crew stakeholders to determine if they have concerns about the work flow changes being proposed (e.g., ensuring that electronic rules are activated simultaneously with field deployment of rules)
W1	33	Push/Pull	Use of push should be minimized while still providing a high certainty of delivery for ~all~ vehicles entering the area of applicability (e.g., even those that just turned on and are entering the roadway); otherwise communication channels are easily overloaded.
W1	33	Push/Pull	Push is probably needed for coordination of installation of signs
W1	33	Push/Pull	Hierarchy of rules should support the concept of default speed limits that can be overridden by local speed limits (and similar local override concepts)
W1	34	Push/Pull	Pull process must support filtering
W1	34	Push/Pull	Centralized dynamic rules either need true broadcast (e.g., broadcast over a metropolitan area) or needs to support filtering (e.g., publication/subscription rather than broadcast, or pull at more frequent rates than for static data)

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W1	34	Push/Pull	Filtering should include almost all parameters that can be identified, including: vehicle classification, user classification (e.g., driver's license type, police officer), road classification, location, type of rule, temporal constraints, nature of load, possession of a permit (e.g., parking), vehicle characteristics (e.g., mass), etc.
W1	34	Push/Pull	There is a lack of consistent terminology and meanings within rules. What exactly does "stop" mean, what are differences between zones, areas, etc.