

TR202704 - Exploring Commercially Available Systems and MoDOT Data Sets Using AI - Questions and Answers

Eligibility and Contracting – 7 Questions

Q1: Are for-profit companies / private technology firms eligible to submit proposals for this RFP?

A1: Yes, for-profit companies and private technology firms are eligible; however, the research should be performed by a company that does NOT provide these services to prevent a conflict of interest.

Q2: Can international companies participate directly?

A2: MoDOT is unable to provide legal advice through the RFP Q&A process. MoDOT research utilizes both state and federal funding so both Missouri and federal laws would need to be followed. It is up to the individual entity to seek legal advice.

Q3: If a company has a US office/entity with global delivery teams, is that eligible to bid as the prime contractor?

A3: See answer A2.

Q4: Are joint ventures, consortiums, or subcontracting models permitted?

A4: Yes, MoDOT contracts directly with the prime consultant, but subcontracts are allowed if specified within the proposal.

Q5: Is prior experience with state DOTs or US public agencies mandatory, or will equivalent commercial/private sector experience be considered?

A5: It is not mandatory, but the proposer must be aware of the differences between public agencies and private sector regarding such things as regulations, priorities, oversight, etc.

Q6: Is a US-registered entity required for contracting, invoicing, and insurance purposes?

A6: See answer A2.

Q7: Are there any minority/diverse supplier participation goals or subcontracting requirements?

A7: No.

Scope Objectives and Deliverables – 5 Questions

Q1: Is the primary objective of this engagement:

- AI strategy and roadmap - *No*
- commercially available system/vendor evaluation - *Yes*
- proof-of-concept recommendations - *Not required, but would be helpful*
- implementation planning - *No*
- or a combination of these?

Q2: Is MoDOT seeking only a research/report outcome, or are practical pilot recommendations and implementation pathways also expected?

A2: The only required deliverables are listed in the table on page 7. The proposer should identify any other deliverables they can/will provide within their proposal if it would be within the “not to exceed” budget.

Q3: What final deliverables are expected (report, use case matrix, vendor comparison, ROI model, roadmap, presentation, pilot plan, etc.)?

A3: See question/answer above.

Q4: Should cost-benefit analysis / ROI quantification be included?

A4: To the extent possible, a full ROI will not be possible in most cases because MoDOT is not asking the proposer to do any pilots.

Q5: Are there specific departments or business functions that are priority areas (operations, maintenance, engineering, procurement, HR, finance, safety, citizen services, etc.)?

A5: HR and finance are not a priority. Operations, Maintenance, safety and citizen services (benefit to the traveling public) would all be priority areas MoDOT would want evaluated. Other divisions would include Construction and Materials, Highway Safety and Traffic, Transportation Planning and Information Systems.

Data and Systems – 4 Questions

Q1: What categories of MoDOT datasets are expected to be in scope (structured databases, documents, GIS, CAD, CCTV/video, IoT/sensor, ERP, HR, asset management, etc.)?

A1: The only MoDOT dataset mentioned in the RFP to be assessed as a solution is ARAN data. The rest of the solutions would be the off-the-shelf products the proposer feels would be valuable to achieve MoDOT’s ‘items of interest’ on page 3.

Q2: Are there known data quality, accessibility, or integration challenges that respondents should consider?

A2: Various solutions only capture data once a year when it is needed multiple times a year. Some only capture the road in one direction when MoDOT needs it in both directions. Some only capture video during the day when it is needed at night as well. Some may not have the level of pixelation required to adequately make decisions. The proposer should incorporate a period of discovery in their response to dive into these questions with all the divisions impacted in this request – Construction and Materials, Information Systems, Maintenance, Safety and Emergency Management, Transportation Planning, Highway Safety and Traffic. Many divisions can share what has been learned from previously reviewed products.

Q3: Are there current enterprise platforms or preferred ecosystems already in place (Microsoft, AWS, Google, Oracle, SAP, ESRI, etc.)?

A3: MoDOT is not currently using a platform for solutions in this space. The request here is to identify existing solutions (SaaS, on-premises, installable) that would cast the broadest net to achieve the variety of goals MoDOT has with video, imagery, and LiDAR.

Q4: Are there standard contractual, cybersecurity, or data handling requirements respondents should be aware of?

A4: Any solution recommended will ultimately require a procurement path through state contracting or bids, cybersecurity requirements follow NIST 800-53, and any solutions with Artificial Intelligence will be vet through the Architectural Review Committee at the Office of Administration Information Technology Services Division (ITSD).

Technology Expectations – 6 Questions

Q1: Should proposals focus only on commercial off-the-shelf systems, or may respondents also recommend hybrid/custom AI solutions where appropriate?

A1: Both are on the table but the cost of any build out and maintenance must be included in the use case matrix.

Q2: Is open-source technology evaluation acceptable if combined with enterprise support models?

A2: Open-source technology could be the outcome of the research team's recommendation. Open-source should only be considered when it is accompanied by a support model.

Q3: Are cloud-hosted AI solutions acceptable, or is on-prem/private deployment preferred?

A3: Cloud-hosted technology could be the outcome of the research team's recommendation. Artificial Intelligence will be vetted through the Architectural Review Committee at the Office of Administration ITSD. There is no preference whether the recommended solution be on-prem/private. This should all come out in discovery with the awarded research team.

Q4: Approximately how many commercially available systems/vendors would MoDOT like evaluated?

A4: This is at the discretion of the proposer. At a minimum, items in Task 2 must be included.

Q5: Will the list of commercially available AI/ML products used in the transportation sector be specified by MoDOT or is determining this list part of the engagement scope?

A5: This list will be determined as part of the research and literature review (Task 2).

Q6: Does the researcher need to purchase commercially available services selected for the project? Or will vendor provide the device if selected?

A6: There will be no need to purchase anything. MoDOT does not expect any pilot projects to be done as part of this research.

Evaluation Criteria – 2 Questions

Q1: What are the primary evaluation criteria for award (technical capability, relevant experience, methodology, price, team composition, etc.)?

A1: See page 13 of the RFP.

Q2: On Page 13, MoDOT outlines Proposal Scoring Criteria. Will MoDOT share the evaluation points associated with each criteria identified?

A2: MoDOT has not typically given the evaluation points per category in the RFPs. However, most of the points are within the first 4 categories.

Technical Advisory Committee / Subject Matter Experts – 4 Questions

Q1: Will MoDOT assign internal SMEs / stakeholders for workshops and data discovery sessions?

A1: Yes.

Q2: Who should we reach out to within MoDOT to be our potential champion?

A2: Proposers are prohibited from contacting MoDOT staff during the proposal period; doing so will make the team ineligible for the project. After award though, there will be a Research project manager and Technical Advisory Committee assigned to the project.

Q3: Will the MoDOT team contribute to the effort or is the desire for a vendor to be relatively self-sufficient in executing this RFP independently? If applicable, how will the MoDOT team contribute?

A3: The desire is for the team to be relatively self-sufficient, but MoDOT does expect the MoDOT team will need to answer questions and provide what data sets are currently being collected.

Q4: Who are the key stakeholder groups that will work with the Research team? What stakeholders will review the deliverables?

A4: Staff from Information Systems, Transportation Planning, Highway Safety and Traffic, Research and Maintenance are currently involved. Other groups may be asked to help as the project progresses.

Meetings – 1 Question

Q1: Are periodic in-person meetings expected, or can execution be hybrid/remote?

A1: Virtual / hybrid meetings are allowed.

ARAN Capabilities – 10 Questions

Q1: Will anonymized sample datasets or metadata be made available during the project?

A1: MoDOT does not currently anonymize its datasets.

Q2: Can we also obtain any metadata for the ARAN database?

A2: Yes, MoDOT can provide this information if requested.

Q3: What are the sensors attached to MoDOT's ARAN vehicle?

A3: The ARAN vehicle has a Pavemetrics Laser Crack Measurement System 2, a front-facing right-of-way camera, and accelerometer sensors.

Q4: Could you provide more information on the data collected, e.g. the RFP mentions high-resolution imagery, we assume it covers the right-of-way as well as the road, but how much of that space is captured.

A4: *Here is the specification from the contract for the two new ARAN vans MoDOT recently received; an exact distance captured by the camera is unknown.*

“The ATOM 4K Mini 16 is a compact and lightweight camera designed for high-quality 4K video production. Each camera features a 1-inch global shutter sensor, delivering 4K resolution at 4096 x 2160 pixels with high dynamic range capabilities of 12-bit and 72 dB. It supports a wide angle of view up to 98° with a 6mm lens and includes dual 4K-SDI outputs.”

Q5: Is there a LIDAR unit attached and again what is the coverage collected?

A5: *No.*

Q6: What is MoDOT's current data storage capability and what is the size of existing ARAN vehicle data?

A6: *MoDOT uses the State Data Center (private cloud). It is scalable to MoDOT needs and they (the State Data Center) deals in Peta Bytes (PB). The three-year average (2023-2025) for existing ARAN vehicle data is 400 GB.*

Q7: Is it possible to have access to limited amount of ARAN data before the submission of proposals?

A7: *No because it is not being collected currently by the ARAN vehicle.*

Q8: Can we have an estimate/quote of the ARAN data directly from the page <https://www.pavement.com.au/get-quote?>

A8: *The research team is not expected to purchase anything. MoDOT already has the ARAN vehicle so this would not be a new expense that would need to be accounted for in the project.*

Q9: Is MoDOT currently using any AI/ML on existing data, other than for crack detection purposes?

A9: *MoDOT currently has a research project underway looking at predictive analytics. Aside from that, there is no AI/ML being used in operations. However, there are several being discussed, but they are captured in the scope of this RFP.*

Q10: Can MoDOT provide a full list and/or samples of the data to be analyzed?

A10: MoDOT does not understand what data the question is referencing.

Timeline and Scheduling – 2 Questions

Q1: As per the RFP, the time between the kickoff meeting and deadline for the first draft of the final report is only 6 months. Considering the proposed maximum budget of \$400K for the 9-month project, does this budget necessarily account for medium-high expenses of accessing the ARAN data?

A1: There should be no need to access the ARAN data, only the type of data that MoDOT currently collects. The budgeted amount is due to the condensed timeline which will require more staff resources.

Q2: What is driving the Project Schedule and milestone dates identified on page 8?

A2: With the speed at which technology is changing, spending too long on the project would result in obsolete information.

General RFP – 4 Questions

Q1: RFP TR202704 states that, prior to contract execution, a "Researcher must be on MoDOT's Approved Consultant Pre-Qualification list and registered with MissouriBUYS". In reviewing the Consultant Pre-Qualification requirements and categories referenced on MoDOT's website, the listed qualifications appear to be primarily oriented toward architecture and engineering (A E) firms supporting design and construction-related activities. For professional services and research organizations—which provide strategic advisory, applied research, and technology assessment services (including AI-related research), but do not offer traditional A&E or construction design services—could MoDOT please clarify: Whether inclusion on the Approved Consultant Pre-Qualification list is still required for this research-focused RFP, and If so, which pre-qualification category or pathway would be applicable to firms that do not perform A E or construction services? Alternatively, please advise if firms providing non-A E professional research services may proceed without pre-qualification, provided they meet all other RFP and contracting requirements.

A1: The proposer does not need to be on the pre-qualification list to submit a proposal. In order to enter into a contract with MoDOT, the proposer will need to go through the prequalification process and have an overhead rate approved. For entities that are not A-E, there could be some steps that will not need to be completed but there would need to be discussions with MoDOT's consultant services staff as to why certain requirements might not apply to your firm. Registration through MissouriBUYS is required in order to be paid from the state of Missouri.

Q2: Can you please confirm whether this project is required to be led by an individual holding a Missouri Professional Engineer (PE) license?

A2: This project does not require a Missouri PE license.

Q3: Page 9 of the RFP requests a Project Budget. Should the Project Budget table be included within the body of the proposal (along with the work plan and project schedule) or submitted as a separate section? Additionally, is the Project Budget excluded from the 12-page proposal limit?

A3: The project budget does not need to be counted within the 12-page limit. It should be provided directly after the work plan and project schedule.

Q4: What is the anticipated project start date and expected duration?

A4: This information is in the RFP.