

*Solving Emerging Transportation Resiliency, Sustainability, and Economic Challenges through the Use of Innovative Materials and Construction Methods: From Research to Implementation*

Transportation Consortium of South-Central States

# Project-Specific Technology Transfer (T2) Plan

## **Context**

As of July 2018, the [*Grant Deliverables and Reporting Requirements for 2016 UTCs*](https://www.transportation.gov/sites/dot.gov/files/docs/utc/261051/fast-act-grantdeliverablesandreporting-september-2017-verision-13-final_0.pdf) mandated a Center-wide Technology Transfer (T2) Plan and an annual T2 Report. Operating within the content requirements of the plan and other provided instructions/guides supplied by OST-R, Tran-SET developed its [*T2 Plan*](http://transet.lsu.edu/center-plans/) on May 2018.

Recognizing that Tran-SET administers research in diverse transportation topical areas with varying technology maturity, the *T2 Plan* requires each funded project to have an individual, project-specific T2 Plan. The project-specific T2 Plans will specify their own unique set of key stakeholders and unique methods to engage these stakeholders. ***Project-specific T2 Plans are a guide to successfully plan and execute activities during the implementation phase of the project***.

## **Instructions**

Principal Investigators (PIs) are required to utilize the following template (and provide the requested information) to develop their project-specific T2 Plan. General requirements and a basic timeline are as follows:

* PIs submit an initial, project-specific T2 Plan (utilizing this template) with their proposal.
* The T2 Plan will be reviewed during the proposal review process.
* If awarded, the initial, project-specific T2 Plan will be further reviewed by the respective Project Review Committee (PRC) at the end of the second quarter1. Based on comments received, the PIs will revise the T2 Plan within two weeks.
* At the end of the technical (research) phase, the PRC will assess the technology readiness level (TRL) of the developed products/technology. Based on the TRL assessment and further comments from the PRC, the PIs will revise the T2 Plan within two weeks.
* The T2 Plan will act as the PIs’ main roadmap during the implementation phase, documenting and guiding its outreach activities.
* The Final Implementation Report template will be based on the T2 Plan template (and its required sections). The Final Implementation Report template will be accessible on Tran-SET’s [website](http://transet.lsu.edu/pi-toolbox/templates/).
* *1Note:* the PIs are encouraged to revisit the T2 Plan on a consistent basis (quarterly basis is recommended), as the products/technology continually develop and mature.

Please review Tran-SET’s [*T2 Plan*](http://transet.lsu.edu/center-plans/) for additional information.

## **Contact**

Please contact Dr. Husam Sadek (at [transet@lsu.edu](mailto:transet@lsu.edu) or 225-578-0131) if you have any questions or would like additional information.

## **Technology Transfer (T2) Plan**

**Step 0. Project Information**

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| **Element** | **Information** |
| Project Title |  |
| Project Number |  |
| Principal Investigator(s) |  |
| Participating University/Institutions |  |
| Date of T2 Plan |  |

**Step 1. Describe the Problem**

*Please succinctly describe the problem the proposed products/technology aims to solve. This can be summarized from the RFP and the proposal. However, it must showcase awareness of the problem, awareness of available solutions, and factors needed for decision-makers to decide positively to invest in the proposed solution (Step 2). Please think of this section as defining the appropriate context if having a meeting/discussion with various project stakeholders; placing everyone “on the same page”. Suggested length: no longer than 4 paragraphs.*

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**Step 2. Describe the Proposed Solution**

*Please succinctly describe how the technology solves the problem stated in Step 1, its feasibility of use, and its* ***value****. Please emphasize and communicate the latter element (its* ***value****), such as describing its improved accuracy, effectiveness, cost-effectiveness, speed, quality, etc. This can be summarized from the proposal (and later, the final research report). However, please think of this section as defining the* ***value*** *of the solution to various project stakeholders in non-technical, easy to understand language. Suggested length: no longer than 4 paragraphs.*

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**Step 3. Identify Stakeholder Groups by Name and Role**

*The stakeholder is the entity who is (or might be) interested in your research project and its outcomes. A wide range of stakeholder types can be involved in Tran-SET’s research program. The* ***type of a Stakeholder*** *can be:*

* *State DOTs;*
* *Local Government Entities;*
* *Non-Profit Organizations;*
* *Industry Partners; and*
* *Others: federal governmental agencies, trade associations, research institutions, and tribal organizations.*

*Please create a list of key stakeholders, describe their roles relative to the adoption of the technology, and assess the level of authority they have. Specifically, please identify the stakeholders’ role according to the following six fundamental* ***categories****:*

* *Sponsors of research and T2;*
* *Researchers and developers;*
* *Deployment team;*
* *Early potential adopters and problem owners;*
* *Late potential adopters that follow the technology’s development; and*
* *Others: allies and foes, such as trade organizations, regulators, suppliers, etc.*

*Please add or delete rows as necessary.*

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| **ID** | **Stakeholder Name** | **Stakeholder Type** | **Category(ies)** |
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*Please note that Steps 3, 4, and 5/6/7 must describe industry’s proposed involvement in the T2 activities. If industry is proposed to be involved, please* ***demarcate*** *the industry stakeholder to distinguish from other stakeholders. For example, utilizing a colored background or superscript (e.g., Barriere Construction,aHVJ Associates, etc.). Please do this every time the industry stakeholder is mentioned in the T2 Plan (in Steps 3, 4, 5/6/7, 8, and 9).*

*If industry is not proposed to be involved, please* ***provide a brief reason*** *below (e.g., if the project is solely focused on public sector policy, etc.).*

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**Step 4. Analyze Stakeholder Alignment**

*For each stakeholder identified in Step 3, assess their: (1) interest in the technology’s adoption and (2) own support and alignment of the technology. Map stakeholders by their alignment and interest in the sections/quadrants below. Please map the stakeholder by inputting their letter ID in the appropriate cell.*

*High*

*Low*

**Alignment**

**Interest**

*Low*

*High*

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**Steps 5/6/7. Organize Communication Tracking for Stakeholder Groups, Develop Engagement Plans, and Identify Resources to Engage all Stakeholders**

*Please specify a unique set of engagement activities (that will be conducted during the implementation phase) for each stakeholder identified in Step 3. Engagement activities includes but are not limited to:*

* *Peer-reviewed publications and presentations;*
* *Educational and training materials;*
* *Webinars, short courses or workshops;*
* *Product demonstration fairs;*
* *Field testing; and*
* *Meetings (in-person or online) with potential adopters.*

*Determine which stakeholders to engage earlier versus later, whom you will engage, how you will engage them, and what information you’ll receive back. Please base the activities on the general recommendations below.*

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| *High Alignment* | Inform and raise interest | Engage closely and ally |
| *Low Alignment* | Minor (minimal effort) | Negotiate, lobby, or neutralize |
|  | *Low Interest* | *High Interest* |

*Please also specify the required resources to support each activity (e.g., this could include presenting at a technical conference (requiring being on the agenda and travel funds), resources for organizing demonstrations, etc.)*

*This Step should comprise all the activities planned for the implementation phase. Please add or remove rows as necessary.*

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| **ID** | **Engagement Activity**  **[Approx. Date of Completion]** | **Stakeholder(s) Involved [mention ID(s) in Step 3]** | **Project Info Communicated to Stakeholder** | **Project Info Gathered from Stakeholder** | **Resources Required to Conduct the Activity** |
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**Step 8. Identify and Address Barriers to Adoption**

***Note: This section is recommended to be completed in the initial and revised T2 plan; it will be a required section in the Final Implementation Report.***

*As engagement activities are executed, please identify stakeholder barriers to adopting the technology. Please communicate these barriers to your respective Associate Director, Tran-SET’s Program Manager, and Tran-SET’s Research and T2 Program Coordinator, who will assist you in identifying solutions to address the barriers. Please summarize the barriers in the table below.*

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| **ID** | **Stakeholder Name** | **Barriers to Technology Adoption** | **Potential (or Actual) Actions to Address the Barriers** |
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**Step 9. Establish an MOU between Early Adopter and Research Sponsor**

***Note: This section is recommended to be completed in the initial and revised T2 plan; it will be a required section in the Final Implementation Report.***

*After the implementation phase is completed, Tran-SET’s Research and T2 Program Coordinator with assistance from Tran-SET’s Program Manager and Associate Directors will informally and formally assess the effectiveness of engagement activities that occurred during the respective project cycle. This assessment will include identifying products/technology suitable for further studies via MOUs with established stakeholders.*

*In regards to T2, MOUs are typically entered into with early adopters to collect data on the technology’s performance in the working environment when it is implemented. Please provide any information that may inform and be useful for Tran-SET in deciding to pursue MOUs related to the developed products/technology. For example:*

* *Would the products/technology benefit from an MOU with an established stakeholder? Are the products/technology at the state where stakeholders can provide insightful feedback or provide supplemental performance data?*
* *What would the MOU look like? Who would be the stakeholder and what would their role and contributions be?*

*It is OK if the products/technology are not in an appropriate state or form to pursue MOUs; but if so, please state so with* ***a brief reason why****.*

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**Step 10. Performance Metrics**

***Note: This Step will be conducted at the programmatic level through existing methods (quarterly progress tracker and reports). No input is required. If you would like additional information, please see Tran-SET’s*** [***T2 Plan***](http://transet.lsu.edu/center-plans/)***.***

## **Emphasis Areas**

*OST-R has identified the “commercialization and licensing of research outputs” as an emphasis area that the T2 Plan needs to fully address.*

*Please describe the commerciality of the developed products/technology and if there are any plans to pursue commercialization, a patent, or a license. This may (but isn’t required to) include:*

* *Market need/value proposition, highlighting the unique value proposition and market research evidence;*
* *Market size and societal need presenting the size of the market and the societal need it addresses; and*
* *Competition and competitive advantage presenting the existing competitors and market leaders.*

*Tran-SET realizes that a minority of products/technology will pursue commercialization. If this section is not applicable, please state so with* ***a brief reason why****.*

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