



ITRC Project Life Cycle White Paper
Revised January 2011

Purpose of this Paper

This paper outlines the components of an ITRC project life cycle, roles of ITRC members throughout the project life cycle, and cost implications of each phase. This paper also defines key terms associated with ITRC projects and identifies how technical team closure (and associated process) fits within the project life cycle. Furthermore, it outlines ITRC funding for Team Leaders to remain active during project implementation phase after team closure.

Key Definitions

What is an ITRC project?

A project defines the product(s), schedule, and resources required to encourage progress to overcoming the problem. The project may contain a variety of products that individually inform, educate, and guide the environmental industry how to progressively overcome the problem. A project includes both product development (e.g., work of ITRC technical teams) and implementation when a technical and regulatory guidance document (tech-reg) is produced (e.g., outreach to product users, documenting concurrence, training users on products, evaluation of impact/further work needed to address the problem, etc.).

How are ITRC projects selected and by whom?

ITRC's Board of Advisors (Board) select projects annually based on the defined proposal development and selection process and available funding. The process is described on the ITRC website under "Planning" (www.itrcweb.org/planning.asp).

What is meant by "life cycle"?

The life cycle of an ITRC project begins with the identification of a problem in the environmental industry. A proposal is prepared describing the path to a solution to the problem, and upon approval, a group of professionals are organized into a team to produce ITRC products intended to help solve the problem and finally—through ITRC marketing and training, state engagement, and Team Leader (TL) implementation—to expose potential users to the products.

What are ITRC team products?

An ITRC product informs, educates, or guides the environmental industry how to progressively overcome a particular problem or issue. It displays the critical questions or decision points used to evaluate proposed alternatives and is targeted to a particular customer. ITRC tech-reg guidance includes protocols, decision trees, flow diagrams, and other graphical means to display, in their proper sequence, the critical questions or decision points leading to the selection or rejection of proposed alternatives containing innovative or emerging technologies or applications.

- **Information Collection**—Case studies and other information are collected to establish that a technology/methodology has some field applications containing defensible data which document its proper application, expected performance,

and reliability. The team uses this information to evaluate whether a technology/methodology has enough information to be considered a potential application in the environmental industry. For technologies/methodologies that have adequate information and application, a more detailed evaluation can occur in the technology/methodology overview phase of the project. These do not necessarily need to be published separately (see “Technical and Regulatory Guidance” below).

- **Technology/Methodology Overview**—The advantages and limitations of each technology are summarized based on the team’s criteria. A technology/methodology overview does not necessarily need to be published separately as a stand-alone document (see “Technical and Regulatory Guidance” below).
- **Technical and Regulatory Guidance**—A tech-reg guidance compiles the information from the case study and technology/ methodology overview phase of the team’s research and prepares guidance that describes to regulators and consultants the proper questions and criteria required to make supportable decisions when developing and reviewing applications for deployment. ITRC tech-reg guidance provides customers with tools to make better decisions versus just information.

Every technical and regulatory guidance document requires the simultaneous development of Internet-based training for two specific purposes:

- Inform the State Points of Contact (POCs) of the use and usability of the tech-reg guidance prior to ITRC concurrence review
 - Teach ITRC customers how the tech-reg guidance should be used
- **Classroom Training Curriculum**—Some topics addressed by a team may require classroom-style training to teach additional principles and practices of the project to ensure its proper application in the field.
 - **Poster and Related Marketing Material**—Teams prepare visual and concise narrative material to be used to introduce the environmental industry to the project, the results, and the products of ITRC.

What is an ITRC team?

ITRC-approved projects result in the creation of technical teams to develop ITRC products to meet the information and educational needs of regulatory staff, technology vendors, and environmental consultants. These products offer state environmental agencies up-to-date and valuable technical knowledge and develop consistent regulatory approaches for reviewing and approving the use of specific technologies or methodologies.

State regulators lead ITRC technical teams. Teams are required to contain broad-based perspectives and skills from state and federal agencies, industry, academia, and community stakeholders to compile collective knowledge; collaborate on specific guidance needs; and complete usable, valuable, and useful guidance.

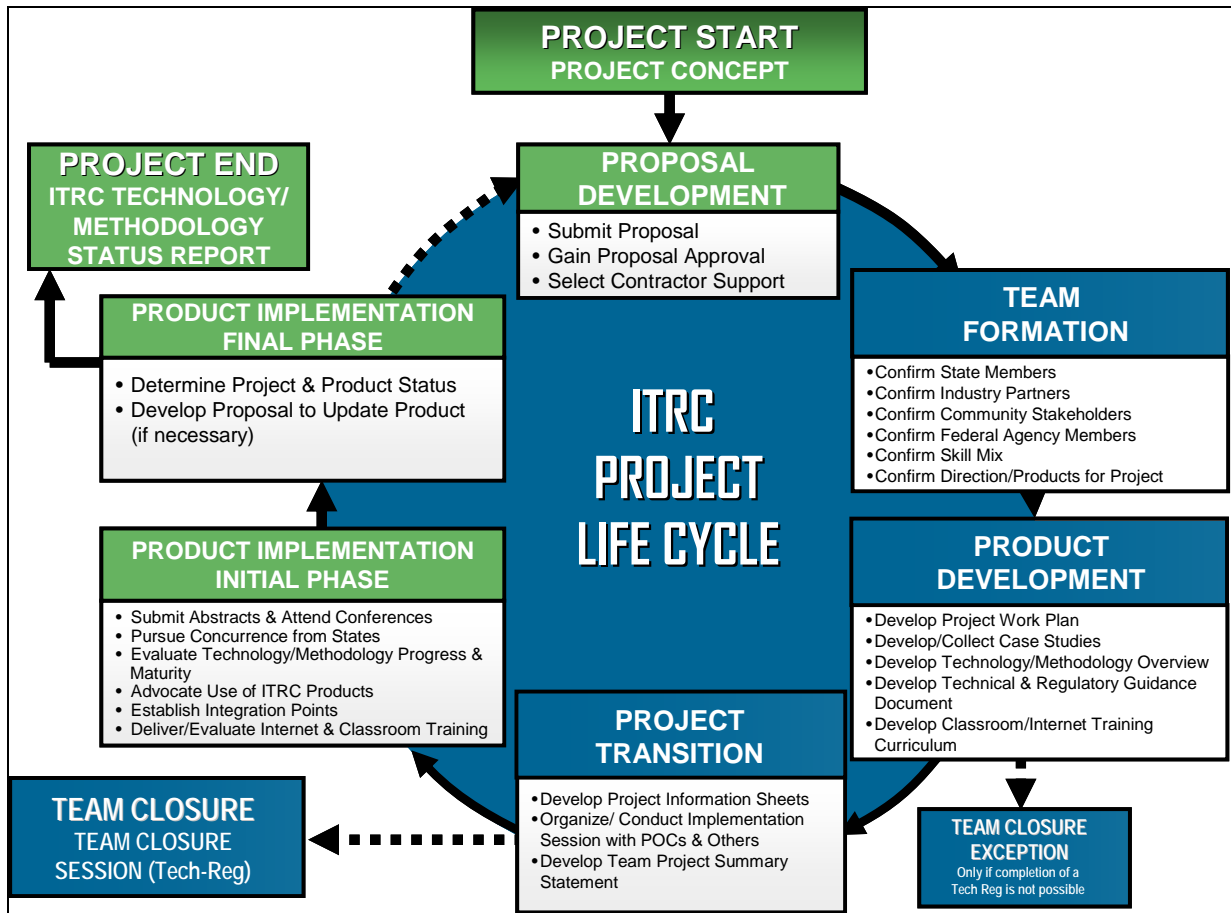
- **Team Leaders—**
 - Define project goals
 - Build the team
 - Provide an implementation strategy to resolve the problem
 - Use the various perspectives of the team members to complete specific projects for the team and accomplish project goal(s)
 - Maintain project direction and product quality (e.g., tech-reg and associated internet-based training)
 - Establish performance metrics for project goals
 - Participate, if necessary, in the implementation phase of the products and lead evaluation of progress
 - Adhere to the ITRC Code of Conduct ([www.itrcweb.org/Documents/TeamResources_TeamLeadRoles/ITRC Code of Conduct Presentation.ppt](http://www.itrcweb.org/Documents/TeamResources_TeamLeadRoles/ITRC%20Code%20of%20Conduct%20Presentation.ppt))

- **Team members—**
 - Are resources the TL uses to collect information, compile the information, and develop a product
 - Are resources from which IBT and classroom training instructors/alternates are selected
 - Participate in ITRC team meetings and conference calls
 - May change from project to project within the strategy of the team

- **Teams exist to—**
 - Become the core experts on the topic
 - Offer the TL various perspectives when developing the product
 - Question other team members' perspectives when developing products
 - Develop consensus-based products that can be used by the environmental community
 - Provide written material, case studies, and data used to define the status and performance of a technology or methodology
 - Provide internal review of all written and graphical material for the team product(s)

Project Life Cycle Overview

The graphic below displays an overview of the project life cycle, which has six distinct phases. During each phase, work is focused on a particular outcome.



Phase I. Proposal Development. The cycle begins with the identification of a problem in the environmental industry. The focus of the proposal development phase is to create a proposal that describes a path to a solution for the problem and to gain approval for a project to focus on the problem and develop products to help solve the problem. This phase is initiated and led by the TL, a POC, or anyone who defines the problem in the form of a proposal.

Phase II. Team Formation. Once the project has been approved and contractor support identified, the TL and Program Advisor (PA) enter the team formation phase. The focus of this phase is to recruit team members that offer a diverse set of perspectives and have the appropriate skill mix required to develop the products associated with the technology/methodology. Establishment of the project's direction and definition of products also occurs during this phase.

Phase III. Product Development. This is the core phase where the team works together to develop a work plan, conduct research, and develop ITRC products.

Phase IV. Project Transition. Once the products have been developed, the team develops *Information Sheets* to assist POCs and other customers (e.g., federal agencies, industry, etc.) in leading implementation activities for the products that have been developed. If necessary, TLs organize an *Implementation Session* to help transition the project to the states and others and document actions to be taken by all parties to forward the use of the product(s) developed. Furthermore, the team develops a *Team Project Summary Statement* that summarizes and documents the team's efforts and accomplishments; key learning gained from the project; and the current state of the technology, methodology, or problem area.

In conjunction with or after the development of the Team Project Summary Statement and/or the Implementation Session, the team organizes a *Team Closure Session* to officially disband the team and process individual learning and action plans. From this point, team members no longer receive ITRC resources and are no longer members of ITRC unless they are redeployed to another ITRC team.

Phase V. Product Implementation—Initial Phase. *(for those projects that either have produced a tech-reg guidance document or otherwise have Board approval to advance to the implementation phase)* The focus of this phase is getting environmental professionals in the states and elsewhere to use the team's products. Key to this phase is gaining concurrence from the states, promoting use of the product, and tracking usage and value of ITRC products.

Phase VI. Product Implementation—Final Phase. The focus of this phase is to determine the status of the project (a secondary focus is to continue to get environmental professionals in the states and elsewhere to use the team's products, as in Phase IV). Team Leader(s), with input from the POCs, complete an evaluation of the project and product status and issue an *ITRC Technology/Methodology Status Report*.

- The report determines whether a project update is necessary or if the tech-reg guidance is up to date and reflects the current state of the project.
- If an update is necessary, a proposal to reconvene the team is submitted for approval.
- If the tech-reg guidance does not require further updates, the TL develops a technology/ methodology status statement acknowledging the tech-reg guidance's contributions to the technology, methodology, or problem area. At this point, ITRC may decide to stop all activities on the subject and consider it self-sustaining.

Project Life Cycle—Detailed Description

The elements above are applied in the following order and define life-cycle planning for an ITRC project.

Phase 1: Proposal Development			
Task	Role	Activity	ITRC Cost Elements
Proposal Submission	TL, POCs, or anyone defining the problem in the form of a proposal	Using the ITRC proposal templates and associated process, develop the general problem statement and supporting documentation describing the need for the project and value ITRC can add to the solution.	<ul style="list-style-type: none"> • In kind POCs/others • SEP contract support • Board contract support • ECOS support
Proposal Approval	Board	Considering a variety of factors, the Board must approve the multiyear proposal. The proposal should include at least five state commitments to the project and recommended state TL(s).	<ul style="list-style-type: none"> • In kind POCs • SEP contract support • In kind Board • Board contract support • ECOS support
Contractor Support Selection	TL, ECOS	Considering qualifications, ECOS and the Board selects contract support through a competitive Request for Proposals process or uses existing PAs if appropriate.	<ul style="list-style-type: none"> • In kind Board • ECOS support
Phase II: Team Formation – Year 1 (the membership process is reinitiated every subsequent year)			
Task	Role	Activity	ITRC Cost Elements
Team Membership Development	TL, PA	<ul style="list-style-type: none"> • Confirm five state members for the team. • Confirm private-sector members (Industry Affiliates Program [IAP]). • Confirm academic and public/tribal stakeholders. • Confirm appropriate federal agency members. • Confirm other skill mix required to refine a multiyear scope of work and collect the proper information, compile it, and analyze the results. 	<ul style="list-style-type: none"> • Travel costs • PA • Meeting planning support • Meeting facilities • Conference Calls, Publishing, and Misc Costs (CPM)
Team Membership Development	Outreach support, POCs	<ul style="list-style-type: none"> • Initiate annual membership drive. • POCs and others recruit team members. 	<ul style="list-style-type: none"> • In kind POCs • SEP support • Outreach contractor support • ECOS support

Phase III: Product Development – Year 1-2 and/or Year 3 if needed			
Task	Role	Activity	ITRC Cost Elements
Project Work Plan	TL, PA, and team	<ul style="list-style-type: none"> • Confirm direction/products for project. • Reconcile any uncertainties in the problem statement. • Define work products and develop project work plans for each product in preparation for the Review Committee. • Makes necessary modifications to work plan based on feedback received and discussed with the Review Committee. 	<ul style="list-style-type: none"> • Travel costs • PA • Meeting planning support • Meeting facilities • CPM
Information Collection ¹	Team	Case studies and other reference information are collected to establish that a technology/methodology has some field applications that demonstrate its proper application, expected performance, and reliability. The team uses the case studies or other reference information to evaluate whether there is enough information for a technology/methodology to be widely recommended to the environmental community for use. For technologies/methodologies that have adequate information and demonstrated application, a more detailed evaluation of performance can occur in the technology/methodology overview phase of the project (see next row). Teams should develop concise narrative and visual information to summarize the results of this phase of the project. The narrative may be part of a stand-alone document (Board approval needed) or part of the team's technical regulatory guidance document.	<ul style="list-style-type: none"> • Travel costs • PA • Meeting planning support • Meeting facilities • CPM • Tech editing
Technology, Process, or Contaminant Overview ²	Team	Each technology/methodology is evaluated based on the team's criteria to determine whether the technology/methodology has a credible potential to achieve performance claims. Teams should develop concise narrative and visual information to summarize the results of this phase of the project. The narrative may be part of a stand-alone document (Board approval needed) or part of the team's technical regulatory guidance document.	<ul style="list-style-type: none"> • Travel costs • PA • Meeting planning support • Meeting facilities • CPM • Tech editing

¹ This may be a discrete product of case studies and other resources (Board approval needed), or it may be an appendix to a future product. This should be defined within the work plan if possible.

² This may be a discrete product or an appendix to a future product (Board approval needed). This should be defined within the work plan if possible.

Phase III: Product Development – Year 1-2 and/or Year 3 if needed			
Task	Role	Activity	ITRC Cost Elements
Technical and Regulatory Guidance Document	Team	<p>A technical and regulatory guidance document compiles the information from the case study and technology overview phase of the team’s research and prepares guidance describing to regulators and consultants the proper questions and criteria required to make supportable decisions when developing and reviewing applications for deployment. Every tech-reg guidance document requires the simultaneous development of Internet-based training for two specific purposes:</p> <ul style="list-style-type: none"> • inform State POCs of the use and usability of the guidance prior to concurrence review • teach general users how the guidance should be used <p>Teams should develop concise narrative and visual information to summarize the results of this phase of the project. Development of the tech-reg guidance is to be in accordance with the “Framework for Developing Quality ITRC Technical and Regulatory Guidance Documents”.</p>	<ul style="list-style-type: none"> • Travel costs • PA • Meeting planning support • Meeting facilities • CPM • Training support • In kind POCs/others (for reviews and dry run) • SEP support • Tech editing
Classroom Training Curriculum Development ³	Training team ⁴ , Training Program	Develop a classroom-style curriculum including practice sets and test it at least once at a dry run in a classroom setting in conjunction with Training Program.	<ul style="list-style-type: none"> • Travel costs • PA • Meeting planning support • Meeting facilities • CPM • Training support • In kind POCs/others (for reviews and dry run) • SEP support

³ Classroom training must be a separate proposal including a budget and schedule for development, coordinated with Training Program and approved by the Board.

⁴ This is a sub team of the full product development team coordinated with the classroom training program.

Phase IV: Project Transition – Year 2 or Year 3 (within three months of posting of the final product[s] on ITRC website)			
Task	Role	Activity	ITRC Cost Elements
Information Sheet Development, Implementation Session and Strategy	Team	<p>Once a team completes its products (i.e. they are published on the ITRC website), a Project Transition process occurs, which includes the following tasks:</p> <ul style="list-style-type: none"> • Develop Information Sheets for products produced for this project (with assistance from the team) • Organize an Implementation Session with the ITRC membership (POCs, IAP, public stakeholders, Federal Representatives and others) to: <ul style="list-style-type: none"> ▪ discuss implementation targets for products ▪ document actions to be taken by all parties to forward implementation of product ▪ review activities the TL will continue to be involved in ▪ conduct enhanced information exchange among ITRC members regarding the team's products • Prioritize implementation session activities based upon implementation session feedback; input those activities into project workplan 	<ul style="list-style-type: none"> • Travel costs • PA • Meeting planning support • Meeting facilities • CPM • In kind POCs/others • SEP support • Tech editing
Team Project Summary Statement	Team	<p>Develop a Team Project Summary Statement that summarizes and documents the team's efforts and accomplishments; key learning gained from the project; and the current state of the technology, methodology, or problem area.</p>	<ul style="list-style-type: none"> • Travel costs • PA • Meeting planning support • Meeting facilities • CPM • Tech editing
Team Closure ⁵ Process	Team	<p>In conjunction with completion of the Team Project Summary Statement, the team organizes a Team Closure Session to:</p> <ul style="list-style-type: none"> • celebrate team and individual accomplishments and successes • process individual learning and action plans • officially disband the team <p>After this session, the team is officially closed and no longer receives financial resources from ITRC with exception of Team Leader(s) being provided resources for implementation activities. Unless they join another team, join IAP, and/or become a State POC or a member of the Board, team members are no longer members of ITRC.</p>	<ul style="list-style-type: none"> • Travel costs • PA • Meeting planning support • Meeting facilities • CPM

⁵ This applies to any product and is not restricted to technology and regulatory guidance documents.

Phase IV: Product Implementation Initial Phase – Year 3 or Year 4			
Task	Role	Activity	ITRC Cost Elements
Implementation, Advocate use of products	Partnered among State Engagement, TL, Training, Outreach	<p>The focus of this phase is getting environmental professionals in the states and elsewhere to use the team’s products. TLs, in conjunction with POCs and others, work to deliver objectives outlined in implementation strategy. Other team members may assist the TL, but are not required to do so by ITRC. Some tasks of this phase include:</p> <ul style="list-style-type: none"> • Pursue concurrence from states on technical and regulatory guidance documents (coordinate with POCs) and work to reconcile any concurrence issues. • Submit abstracts and attend conferences to deliver information on the team products and success stories. • Establish integration points within other ITRC products and teams. • Deliver and evaluate Internet-based and classroom training (if applicable). • Evaluate the progress and maturity of the technology/ methodology by tracking use of the document/training and identifying success stories. 	<ul style="list-style-type: none"> • TL travel costs • PA (at reduced time) • CPM • In kind POCs/others • SEP support
Phase V: Product Implementation Final Phase – Year 4 or Year 5			
Task	Role	Activity	ITRC Cost Elements
Implementation, Advocate use of products, Determine project status via a Technology Methodology Status Report	Partnered among State Engagement, TL, Training, Outreach	<ul style="list-style-type: none"> • The focus of this phase is to determine the status of the project (a secondary focus is to continue to get environmental professionals in the states and elsewhere to use the team’s products, as in Phase IV). • The TL, in association with the ITRC membership, determines whether the team’s technical regulatory guidance document does or does not accurately reflects the current state of knowledge and if the tecg-reg guidance is still helping to remove regulatory barriers to the use of the technology or methodology. The TLs should assess whether new discoveries, research, or case studies would improve the tech-reg guidance. The TLs then develop a Technology/Methodology Status Report, as a statement describing their professional and expert opinion on the status of the technology, methodology, or problem area. • If the TLs decide that the tech-reg guidance needs to be updated, a proposal to update the tech-reg guidance should be submitted to the Board as part of the regular proposal process. The TLs also determine at this time whether or not to recommend that ITRC is finished with this topic area due to the maturity of the technology or approach. 	<ul style="list-style-type: none"> • TL travel • PA (at reduced time) • Tech editing • In kind ITRC membership

Glossary of Terms and Acronyms	
Term / Acronym	Definition
CPM	Calls, Publishing and Miscellaneous Costs
ECOS	Environmental Council of the States
IAP	Industry Affiliates Program
IBT	Internet-Based Training
ITRC	Interstate Technology & Regulatory Council
PA	Program Advisor
POC	State Point of Contact
Product	A product is a published/printed ITRC document or a classroom training curriculum that informs, educates, or guides the environmental industry how to progressively overcome a particular problem or issue
SEP	State Engagement Program
Team	A team is convened or formed to provide the necessary resources to prepare a product. When the product is completed and the project is transitioned to implementation, the team is closed out unless another project is funding under the existing team.
Tech-Reg	Technical and Regulatory Guidance Document
TL	Team Leader