

National CP Road Map Program

“Building a Framework for Collaboration”

CP ROAD MAP
shaping the future of **concrete pavement**



it's your move!

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Executive Summary

The CP Road Map was developed through a collaborative process that actively involved input from the Federal Highway Administration (FHWA), state and local departments of transportation, all sectors of the concrete pavement industry, and the transportation research community.

The CP Road Map Plan is a vision of collaboration between all major concrete pavement stakeholders—comparing and where feasible synthesizing priorities, leveraging investments to fund joint projects, sharing findings regionally and nationally, and public and private sectors working together to accelerate implementation.

Collaboration goes beyond normal cooperation and coordination. It calls for “co-labor” to accomplish the goals of the Road Map. Collaboration entails accepting common goals, joint planning, shared resources and shared resource management. Collaboration will only happen if there is shared understanding of the issue, open communication, mutual trust and tolerance of differing points of view.

For collaboration to occur, the CP Road Map Executive Committee supports key implementation efforts, including:

- Working with the FHWA to develop an overall collaboration program.
- Working with CEO’s of private sector organizations to develop mutual trust and a common collaborative vision.
- Linking academia together, both research scientists and engineers as well as research managers.
- Developing creative funding agreements to enhance collaboration
- Developing administrative ways to link the community together.
- Developing formal collaboration agreements.

To accomplish these goals, the CP Road Map Administrative Groups recommends the development a Collaboration Center to promote organizational and researcher interaction that will lead to formal partnerships for conducting research and technology initiatives that meet the overall goals of the CP Road Map. The objective is to reach the goals of the CP Road Map sooner, more economically with more champions than would be possible if done conventionally.

The Center would have three key units of work:

- Connection Task that helps management and researchers to connect to one another through innovative collaboration strategies and agreements.
- Marketing and Communication Task that provides information to all parties via websites, help desks, newsletters, and progress reports.
- Database Management Task that keeps the CP Road Map up-to-date and easily accessible.

The CP Road Map has developed a seven step action plan for the Executive Committee to consider. The steps include:

1. Develop a short mission statement for Executive Committee approval.
2. Develop an organizational chart for staffing the Center, including staff manager, software specialist, data input specialist, and marketing/communication services.
3. Develop a cost estimate for running the Center on a yearly basis for not less than five years
4. Develop MOU to establish partnerships with organizations.
5. Develop MOU to establish partnerships with individual researchers
6. Develop comprehensive operations plan.
7. Adopt and implement.

Introduction

The Collaborative Vision and Necessity of the CP Road Map

The CP Road Map was developed through a collaborative process that actively involved input from the Federal Highway Administration (FHWA), state and local departments of transportation, all sectors of the concrete pavement industry, and the transportation research community.

The CP Road Map plan is a vision of collaboration between all major concrete pavement stakeholders—comparing and where feasible synthesizing priorities, leveraging investments to fund joint projects, sharing findings regionally and nationally, and public and private sectors working together to accelerate implementation.

The CP Road Map includes 12 major research tracks and a recommended \$250 million of research investments over 10 years. No single organization has the funds, expertise, or political capital to carry out a program of this magnitude. The CP Road Map is thus collaborative both by definition and by necessity.

Chapter 1. Defining Collaboration—Beyond Cooperation and Coordination

The terms “cooperate” or “coordinate” are commonly used in transportation research.

For example, in the National Cooperative Highway Research Program (NCHRP), American Association of State Highway and Transportation Officials (AASHTO) members agree to cooperate by combining resources according to a funding formula, by having the AASHTO identify specific research projects, and having the National Academy of Sciences manage the program.

The FHWA’s nationally coordinated research and technology program is a little less structured. FHWA helps set the agenda by leading in the development of road maps.

Another example of cooperation is the Transportation Pooled Fund Program. The states, FHWA, and in some cases industry contribute resources to support various research studies.

Collaboration takes cooperation and coordination a step further. Just what is collaboration?

Dennis Judycki, Associate Administrator of Research and Technology at FHWA, stated that the real question inside FHWA is not what to do for the agency, but for the nation. Collaboration begins when the agenda is set, not afterward. How that agenda is determined is the first measure of true collaboration.

The following definition of collaboration is fitting with the philosophy of the CP Road Map: “Collaboration is a mutually beneficial, *well-defined relationship* entered into by two or more organizations to achieve common goals. Collaboration is the process of various individuals, groups, or systems working together, but at a significantly higher degree than through coordination or cooperation. Collaboration typically involves joint planning, shared resources, and shared resource management. Collaboration occurs through shared understanding of the

issues, open communication, mutual trust, and tolerance of differing points of view. To collaborate is to ‘co-labor.’” (<http://www.nceev.org/resources/terms.html>).

Dan Turner, Director of the University Transportation Center in Alabama, noted at the Transportation Research Board (TRB) 2007 Annual Meeting that collaboration is a marriage in which partners need to know not just what each is doing, but also what needs to be done. “The key question is whether collaboration will be done shotgun style or by careful, well-structured cooperation,” he suggested.

Collaboration takes real patience and perseverance, according to Wes Lum, Chief, National Liaison for CalTrans. It takes meeting after meeting to understand each other before you can even get close to collaboration.

What would drive an organization to go beyond cooperation and move toward collaboration? Where organizations agree on a common purpose, common perspective, and common perception of the problems, the major driver is that more can be accomplished collectively than individually, and things can be accomplished more cost effectively (i.e., with less duplication of effort and conflicting results). One benefit is that there would be more than one champion for each idea. Another benefit is that partners would be actually engaged and go beyond the narrow needs and interest of their individual organizations.

Commitment to Collaboration Needed

Building trust among various concrete pavement organizations is an important early challenge for the CP Road Map program. Trust is earned over time. Many of the organizations involved in CP Road Map have worked together and know each other fairly well. However, much of their trust has been stopped at the cooperation and coordination level in the past. We need for them to move to the next level—the collaboration level—for the CP Road Map to work and for its objectives to be realized.

Trust can be built several ways. One is by each group making an effort to understand the culture of the partnering organizations and the institutional issues each organization faces. As we attempt to build trust, we need to translate that into ways organizations can coordinate administratively without violating their own codes or regulatory requirements.

Understanding the culture and goals of the individual organizations must start with the highest level of management. The effort will not succeed if it is limited to mid-level researchers. These researchers must convey the importance of the work and their willingness to collaborate, but for major understanding of culture and partnering agreements, the top executives must communicate with one another.

When will we know that organizations are beginning to trust one another? This will come when CEOs make it organizational policy that no research or technology initiative will be funded without addressing collaboration and partnering.

The following challenges are submitted to the CP Road Map Executive Committee for consideration:

- Link the CEOs of organizations together to develop the mutual trust that will lead to collaboration strategies.*
- Develop a white paper on collaboration examples that have worked in other disciplines.*
- Develop a collaboration policy for all interested organizations.*
- Identify and support ways that funding organizations can form innovative and creative partnering agreements.*
- Develop creative ways to commingle funds, going beyond pooled funds. The major area to address is private and public funds.
- Establish a system in which organizations share their work plans and scopes of work, call for peer review of their work, and attempt to link their work to the broader goals of the CP Road Map.

- Develop a concrete pavement-related area for the TRB Innovations Deserving Exploratory Analysis (IDEA) program or Highways for Life that promotes collaboration among sponsoring organizations.
- Identify and support ways to promote outreach, with continuous affirmation of the CP Road Map goals. Promote innovative ways to connect the community.
- Conduct a national video or web conference for research managers to explain the CP Road Map and collaboration opportunities.
- Develop methods of reaching out and coordinating with the academic research community at large, such as through workshops or video conferences to brief researchers across the country on the CP Road Map and the direction of the Executive Committee.*
- Link cities and counties that have a culture open to concrete pavements.
- Develop formal collaboration strategies among industry associations, including the National Ready Mixed Concrete Association (NRMCA), Portland Cement Association (PCA), American Concrete Pavement Association (ACPA), and Concrete Reinforcing Steel Institute (CRSI).*

The asterisks (*) identify several items that the CP Road Map administrative support group is developing under the National Center for Concrete Pavement Technology–FHWA contract. The rest depend on the interest of the Executive Committee and seeing if an organization is willing to fund the work.

Each of the collaborative relationships and efforts developed will constitute the CP Road Map’s standard-setting collaborative framework.

Chapter 2. Road Map Collaboration Concept

In March 2007, the CP Road Map Executive Committee met for the first time. An important part of the agenda was to discuss collaboration by the Road Map partners. They fully supported the promotion of collaboration but also identified an implementation strategy that should go into effect as a precursor to more assertive collaborative effort.

Collaboration Center Concept

The concept proposed was to develop the CP Road Map Collaboration Center as part of the CP Road Administration function. The overall mission statement might be something like:

- The mission of the Collaboration Center is to promote organizational and researcher interaction that will lead to formal partnerships for conducting research and technology initiatives that meet the overall goals of the CP Road Map.

The objective of the Collaboration Center is to reach the goals of the CP Road Map sooner, more economically with more champions than would be possible if done conventionally.

Connection Task

- Help organizers and researchers to connect with one another on common subjects and concerns.
- Help researchers understand how their work might be integrated with other researchers.
- Develop generic collaboration strategies.
- Collect and share case studies on collaboration examples.

Marketing and Communication Task

- Develop and execute a marketing plan that promotes the CP Road Map.
- Staff and manage a help desk to explain the Road Map.
- Develop newsletter for both executive and technical personnel.
- Provide progress reports on Track accomplishment and needs.

Database Management Task

- Maintain and update the Database of critical research and technology.
- Maintain and update a directory of concrete pavement organizations and individuals that support the goals of the CP Road Map.

Collaboration Center Management

Who and where should the Collaboration Center be organized? The sentiment was that the Collaboration Center should come under the Administrative Support Group, under National Center – FHWA contract.

The National Center could put together an estimate of what it would take to run the Collaboration Center. Points to be examined should include:

- Staffing to manage the collaboration center.
- Marketing /Communication specialist to develop and implement a plan.
- Programming services to update the current database web software.
- Data specialist to collect and update the database.

Collaboration Center Users

The Collaboration Center should eventually be used by all those interested and involved in concrete pavement research and technology. However, the Executive Committee discussed a process whereby an organization would formally agree to cooperate with the center and set up a two-way communication.

An Agreement or Memorandum of Understanding between the Collaboration Center and key organizations would validate the commitment of those organizations to:

- Support the CP Road Map and its objectives.
- Post emerging research needs with the Clearinghouse.
- Seek research partners through the Clearinghouse.
- Provide research project and updates for input to the database.
- Seek out potential collaboration partners prior to initiating research.
- Promote peer review of ongoing work that fits Track needs.
- Promote CP Road Map with other research organizations with goal of having them sign MOU.

- Suggest candidates to participate on various Track committees and expert groups.

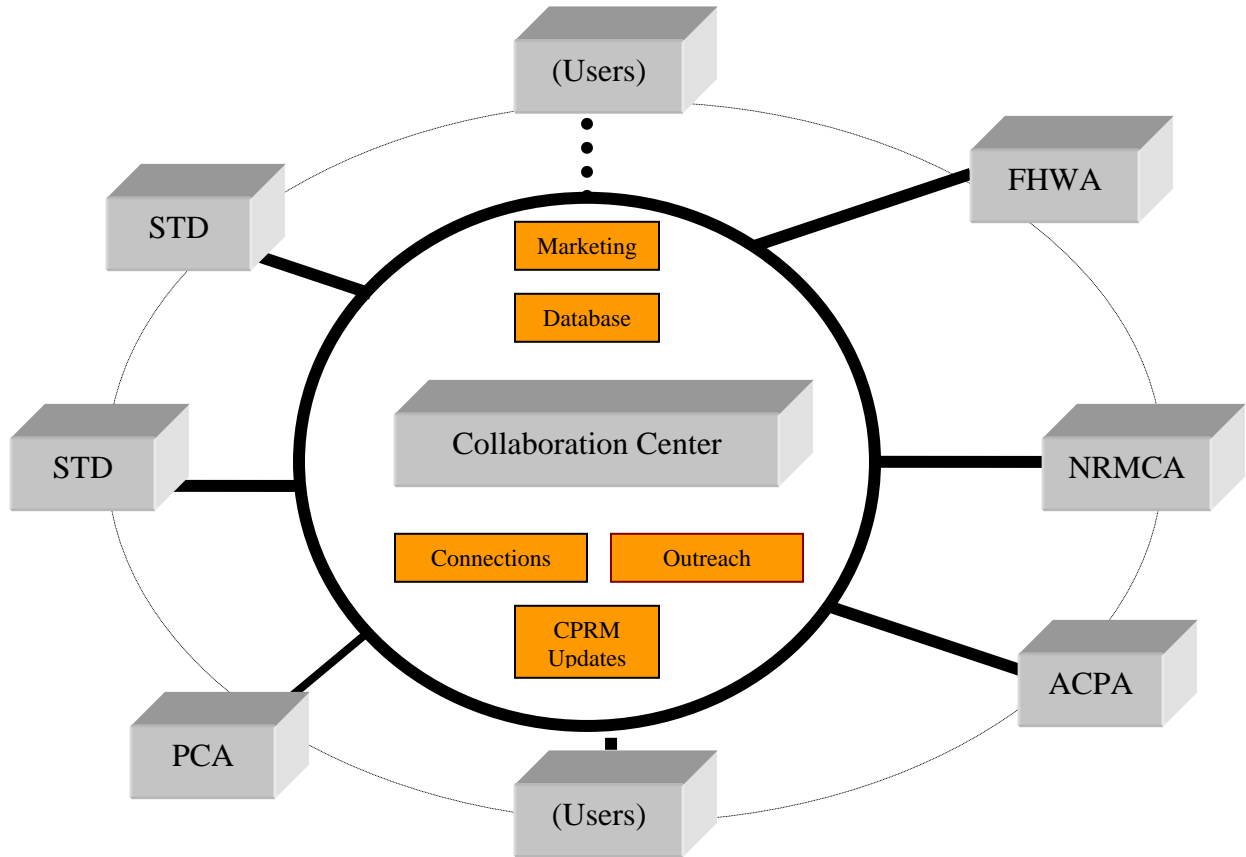
The Collaboration Center would help individual researcher answer the following questions:

- Where can I find another researcher or organization wanting to do research in a specific area of the CP Road Map?
- Can the Center help me establish a peer review process of the work I want to accomplish?
- Can the Center link me with funding sources to match my funds to accomplish a task?
- Can the Center help to me to identify gaps in the various Tracks so that I can better focus my research?

Action Plan Steps

1. Develop a short mission statement for Executive Committee approval.
2. Develop an organizational chart for staffing the Center, including staff manager, software specialist, data input specialist, and marketing/communication services.
3. Develop a cost estimate for running the Center on a yearly basis for five years
4. Develop MOU to establish partnerships with organizations.
5. Develop MOU to establish partnerships with individual researchers
6. Develop comprehensive operations plan.
7. Adopt and implement.

Figure 1 diagrammatically shows the concept of Collaboration Center and Users.



Closing Statement

The Collaboration Center truly is the vehicle to make the CP Road Map a viable and visible research map. By connecting the community together in a spirit of partnership and trust., more, if not all of the goals can be accomplished.

Appendix 1. Expansion of Action Plan

Action Plan Steps

1. Develop a short mission statement for Executive Committee approval.

The mission of the Collaboration Center is to promote organizational and researcher interaction that will lead to formal partnerships for conducting research and technology initiatives that meet the overall goals of the CP Road Map.

2. Develop an organizational chart for staffing the Center, including staff manager, software specialist, data input specialist, and marketing/communication services.
3. Develop a cost estimate for running the Center on a yearly basis for not less than five years.
4. Develop Collaboration Agreement to establish partnerships with organizations.