

Implementation Panel:
Where do we go from here?
How can we make things happen?

Track 2: Rehabilitating and Restoring
the Current System

Charge Given

- Implementing ideas from the meeting
- Think big and broadly
- Big ideas and opportunities to talk about how and why we should move these forward

Intentionally Design Infrastructure Elements for Durability/Service Life

- Currently we do a great job as an industry in designing structures, pavements, others for carrying load (historic concern)
- We need to move as an industry from 'hand-waiving' durability discussions to calculation of a durable and integrated service life
- We then need to link these calculations and LCA from an element to a project to the performance of large scale network asset modeling

Integrated Design for Durability/Service Life

- We need to make sure that this is based on sound fundamental principles and is data driven
- Example –
- Asphalt Materials that are designed not to rut but may have cracking
- Bridge Joint Issues – how to maintain, remove, or better deal with joints
- Concrete Bridge Deck Service Life Predictions – Integrating the understanding of all the factors
- Growing numbers of ‘new materials’

Current Silo Communities



- Are more cross cutting efforts needed

Quality Control and Processing

- Variability plays a major role in element and project based LCA
- Are we currently leveraging what we can to reduce variability
- Mining data is currently very time consuming and questions exist about quality of data
- Examining the Role of Automation – This can be distress collection but this can also be at time of acceptance as well as maintenance

Test Beds for Evaluating Material Performance in the Long Term

- Many materials are tested in the lab, demonstrated in the field, and forgotten
- Often we do not have all we need to track these properties over time
- Need to document lab and field trials and have a database where this can be maintained
- Need to have access to original materials used as new items develop
- Need to better sensing and testing

Implementing New Technologies

- Could we consider a more 'organized' path toward implementing new technologies
- For example – current system for internal curing has relied on proactive states and has led to many states 'repeating' work to get familiar ready.... Recently 'consultant PF'
- Maybe a 'champion group' with training tools, steering committee, data collection committee

Education

- Training and education is key for the future
- How do we deal with reducing time in the undergraduate curriculum on transportation systems and the increasing complexity of the issues faced in these systems
- Can 'some group(s)' develop examples for use in class or webinars directed to students
- Can we develop a 'skills list'

What Limits New Technology

- Industrial inertia or opposition
- Agency inertia or opposition
- Research 'over selling'

- Finding Champion to move this forward

- Fear of failure (implications)

- Is there a better method for a clearing house

Some Technologies

- ABC techniques for Bridges (UHPC)
- Internal Curing to reduce cracking and improve service life
- CAC patching materials
- Performance/Durability Design for Concrete (4 Stage, AASHTO PP-84)
- Sustainability and Recycling (CIP recycling 70% emission reduction from HMA; WMA; recycled concrete in elements)