

The background of the entire page is a black and white photograph of a city street. In the center, the Indiana State Capitol building is visible, featuring a large dome and classical architectural elements. The street is lined with various buildings, including modern high-rises and older brick structures. Several cars are parked along the sides of the street, and the ground is paved with cobblestones.

INDOT, Consultants and Contractors Collaboration Study

Final Deliverable Document

April 2019

INDOT, ICI, and ACEC came together in November 2018 to identify opportunities to collectively improve how they serve the citizens of Indiana

Background

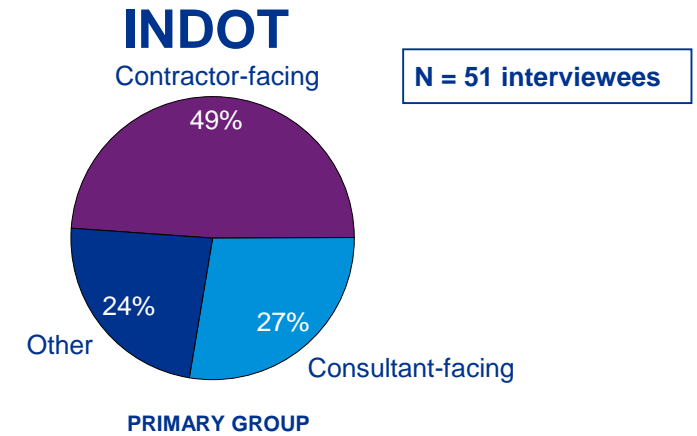
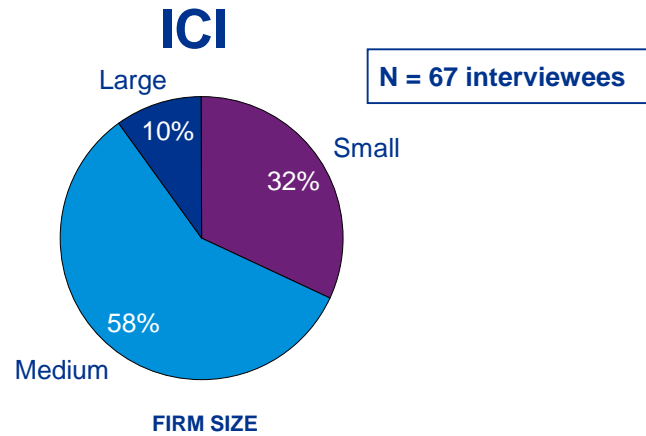
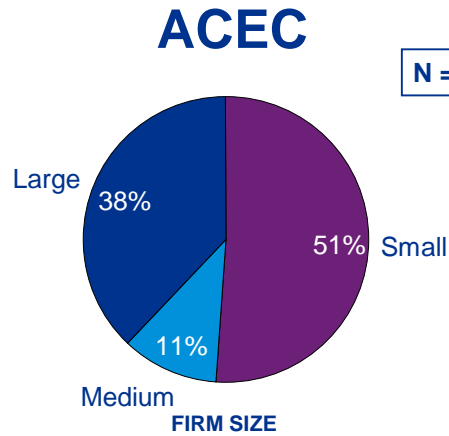
- Over the last several decades there have been major changes affecting all of the key parties that impact the success of transportation projects in Indiana.
- Recently, industry growth and opportunities have improved, resulting in a future market that looks very healthy.
- Given the speed of this growth and increasing complexity, engagement between INDOT, the American Council of Engineering Companies, Inc. (ACEC) and Indiana Constructors, Inc. (ICI), does not always function optimally.
- All parties agreed that current ways of engaging one another are not always as constructive as they could be, offering several areas for improvement.
- KPMG was brought in to engage with INDOT, ACEC, and ICI through surveys and interviews to surface prevailing challenges and highlight potential solutions for improving the working relationships across all parties.

Observations

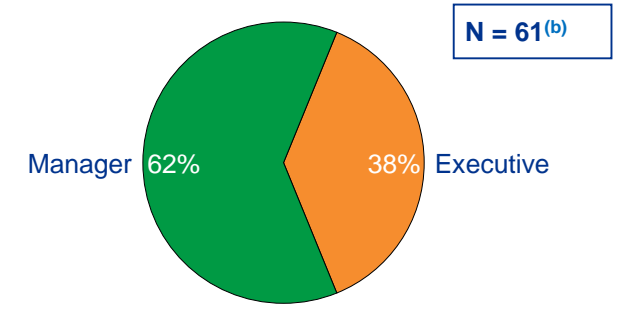
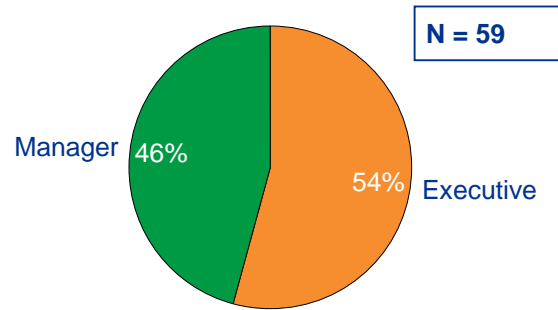
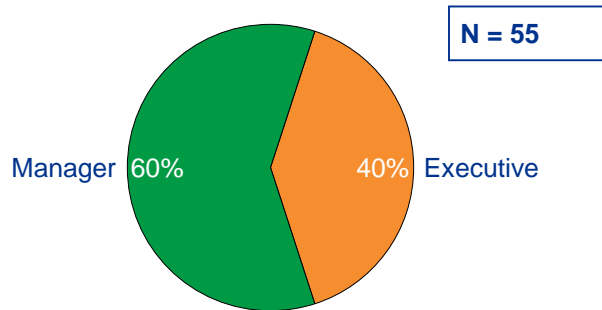
- There was a sense of shared optimism around the state of Indiana and its economic prospects. It was clear that everyone we spoke with cares immensely about improving life for all Hoosiers.
- It was clear that there was uniform support and enthusiasm to enhance the way things are done today. Everyone we spoke with truly wanted to fix working relationships across all parties.
- Surprisingly, participant groups were equally introspective about the challenges facing their own firms and industries, and how each has contributed to issues today.
- Most improvement suggestions were framed positively; and there was a shared belief that more could be done (and faster) with better communication across all parties.

KPMG conducted a broad study comprised of both interviews and a survey

Interview
(N=181)^(a)



Survey
(N=175)



Please Note: All of the findings contained herein were provided by INDOT, ICI, and ACEC participants through interviews and survey. This presentation offers no KPMG view or recommendation on any matter of public policy and is not intended to be used in such an advocacy context.

(a) A total of 90 interviews were conducted (30 across each entity). The counts represented herein reflect the *number of interviewees* across each entity.
 (b) Firm size (# of employees): Small: 0-49, Medium: 50-99, Large: 100+ (b) Executive classification includes ELT and CO / District Level Directors

Initial discussions clearly highlighted the importance of context: INDOT and its partners are in a very dynamic environment

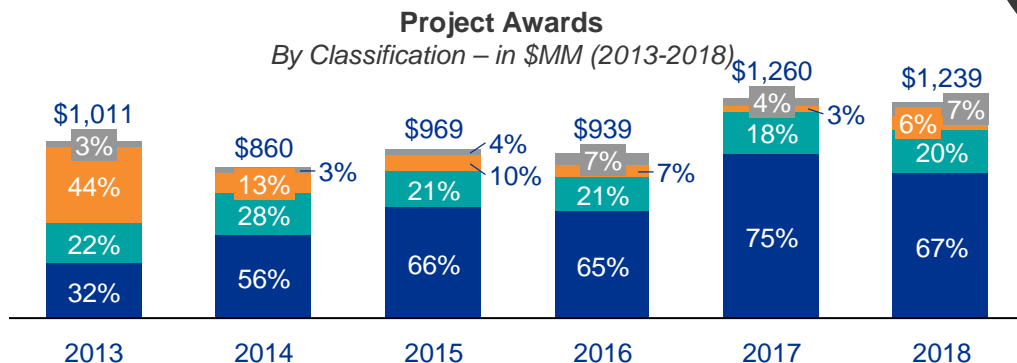
Funding Unlocked by HB1002

Up to **\$1.2B** in new dollars beginning in 2024

Tight Labor Markets

Occupation	2016 employment	2026 employment forecast	% change 2016–2026
Construction Laborers	22294	24694	11%
Accountants and Auditors	21735	24120	11%
Lawyers	10496	11528	10%
Computer Systems Analysts	8589	9510	11%
Operating Engineers and Other Construction Equipment Operators	8373	9082	9%
Network and Computer Systems Administrators	7698	8229	7%
Construction Managers	6616	7373	11%
Computer and Information Systems Managers	4743	5316	12%
Architectural and Engineering Managers	3841	4174	9%
Civil Engineers	3070	3499	14%

Shift to Preservation Projects



Advancements in Innovation and Technology



Survey and interview feedback was synthesized into 8 issue themes

Major Challenge Themes

Process Issues

Challenges related to overall project design and delivery processes (e.g., constructability, utilities)



Contracts & Policy

Challenges related to the bidding, procurement, and contracting of services (e.g., bundling)



Inconsistencies

Challenges associated with lack of standards and inconsistencies across firms, districts, and personnel



Subjectivity

Challenges related to processes that are more subjective in nature (e.g., performance scoring)



Decision-making

Challenges associated with delays or inability to make decisions



Communications

Challenges related to lack of effective communication



Performance Management

Challenges associated with metrics and incentives



Dispute Resolution

Challenges associated with existing or lack of effective dispute resolution mechanisms or forums



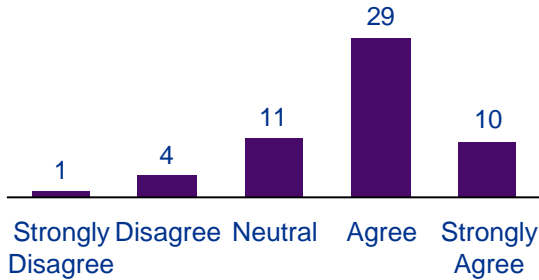


Process Issues

Survey Results

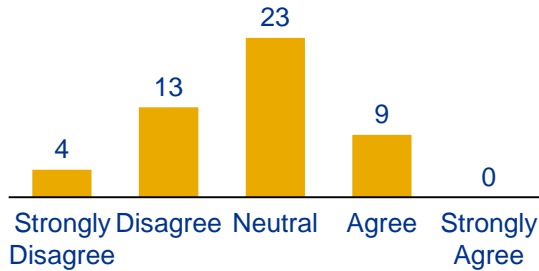
ACEC

There are steps/deliverables in the project delivery process that have proven to be of little value/unnecessary...



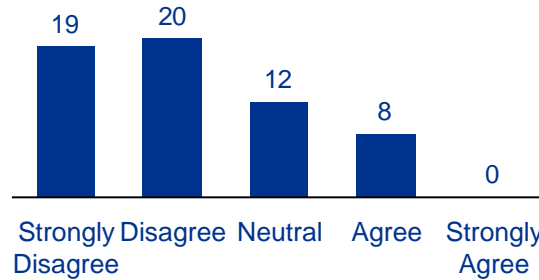
INDOT (ACEC-focused)

Delivery related requirements (e.g. document reviews) overly impact the ability to meet cost and schedule commitments.



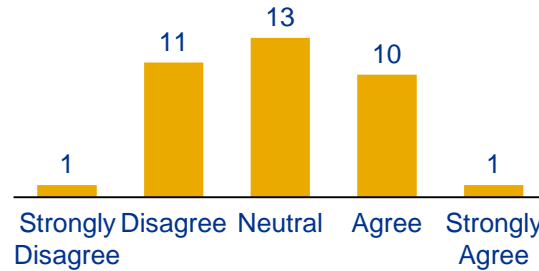
ICI

Current safety policies and procedures are adequate to protect everyone involved on a job.



INDOT (ICI-focused)^(a)

Contractors often find innovative ways to save time and costs on projects.



Note: (a) Contains 1 N/A response

ACEC ICI INDOT

Interview Feedback

"I admit, engineering firms should spend **more time on safety** designs."

"There is **no effective feedback loop** to us on the constructability of designs and how we can improve...if we hear anything it is in the context of a claim."

"The **constructability of designs** has **deteriorated** creating downstream issues for us...it seems some consultants are overly using Google Earth instead of visiting sites and doing needed in-person studies."

"We **do not get paid on time** if **quantities** aren't in the system in time, which happens quite often."

"It seems like most contractors are **slow to accept** that the future will involve a lot more **preservation type projects** than new builds...I worry that they are sitting on the wrong **type of equipment**"

"One of the **biggest challenges** for consultants is planning for things that are **out of our control**, like Utilities, weather, etc."

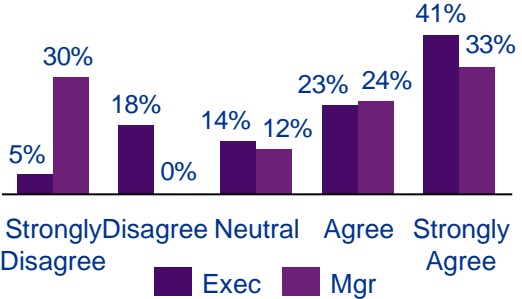


Contracts / Policy

Survey Results

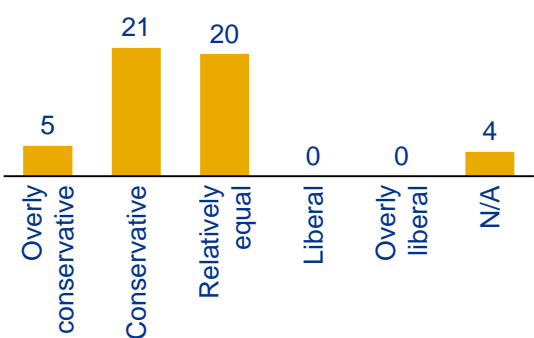
ACEC

Letters of Interest (LOI's) are an overly exhaustive, comprehensive, and time consuming component of procurement...



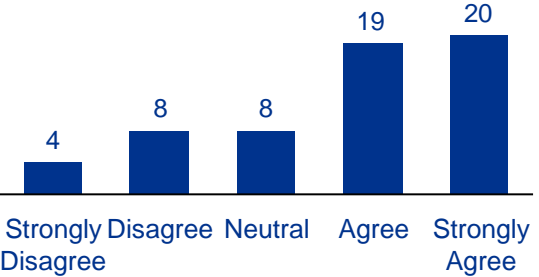
INDOT (ACEC-focused)

When compared to other DOTs, INDOT's interpretation and enforcement of certain federal requirements (e.g. FHWA, NEPA, etc.) is:



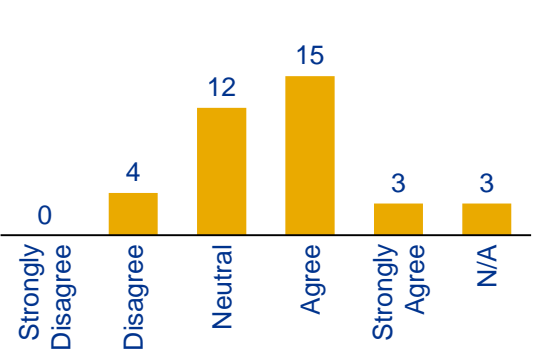
ICI

For Contractors, bundling multiple projects under a single procurement creates increased complexity



INDOT (ICI-focused)

INDOT's project selection process is fair



ACEC ICI INDOT

Interview Feedback

"Pulling together **LOIs** is **time consuming and cumbersome**, and involves a lot of upfront scoping work that should be part of the project"

"We prefer Lump Sum contracts over variable... ECI labor and profit caps create unintended consequences where we cannot optimize staffing of our projects"

"**Bundling is better** now that projects are in **closer geographies** and more **similar in nature** in terms of bidding and contracting, but there are challenges when asked to allocate shared project costs in progress reports"

"INDOT doesn't always answer all the questions we submit, and sometimes they **issue answers so close to bid deadlines** that we don't have time to incorporate"

"A **low bid contracting** environment **creates distrust** when we get a lot of change orders... especially when contractors show up to pre-construction meetings with list of changes"

"Everything about procurement and bidding is online, but we still often get asked **questions about the process**... it doesn't seem all of our vendors take the time to research the process"



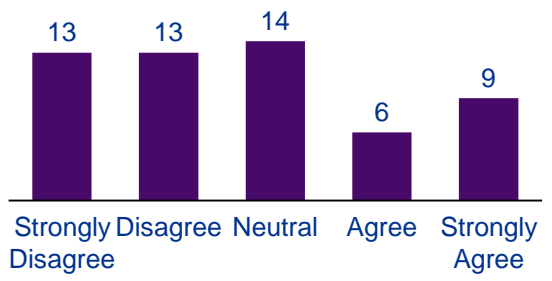


Inconsistencies

Survey Results

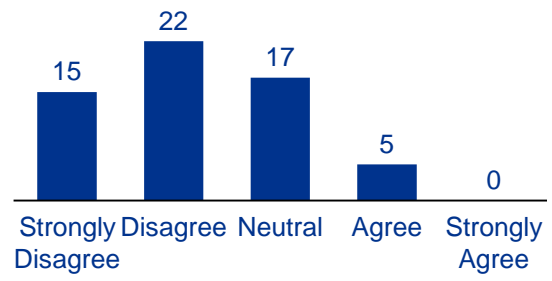
ACEC

The process for procuring consultants is consistently followed across districts



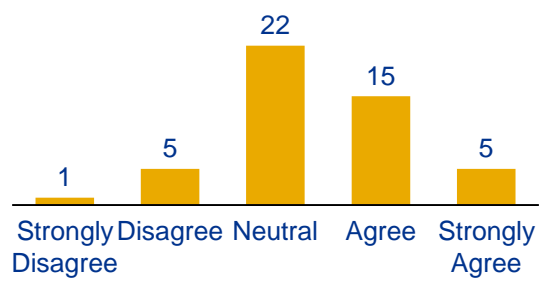
ICI

Specifications are interpreted and enforced uniformly between INDOT at the Contractor-level



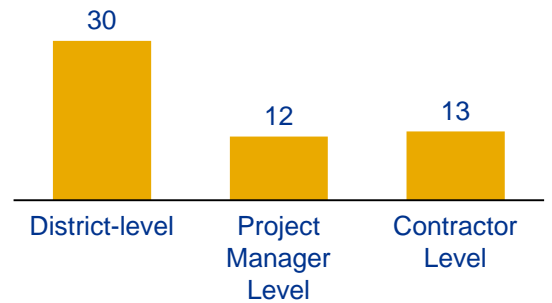
INDOT (ACEC-focused)^(a)

Proposal scoring seems to vary across Districts and/or specific personnel performing the exercise



INDOT (ICI-focused)

Specifications are interpreted and enforced uniformly at the:



Note: (a) Contains 2 N/A responses

ACEC ICI INDOT

Interview Feedback

“Each district is very different from each other, all with different protocols...one district we work with will meet with us periodically so can build a relationship, whereas another won’t entertain any contact outside of formal process”

“Proposal scoring is too inconsistent...on a recent submission we were scored in top 3 by two of the scorers, and in the bottom 3 by the last scorer. How could that be?”

“We will change our *bid based on who the Area Engineer and Project Engineer will be*, as some are more costly than others”

“The biggest *inconsistency is between Area Engineers*, as they all have different personalities and apply the spec book differently”

“Contractors *don’t always know the spec book*, or adhere to it. It’s obvious at times they haven’t read it”

“Maintaining a *consistent quality of staff* is a big challenge for consultants, as well as for INDOT and contractors...we’re all struggling here.”





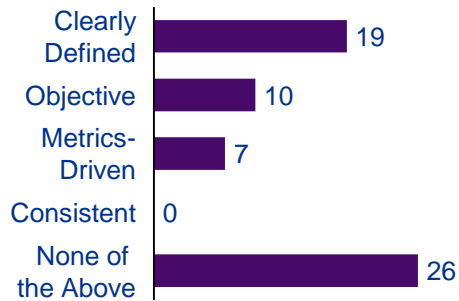
Subjectivity

Survey Results

Interview Feedback

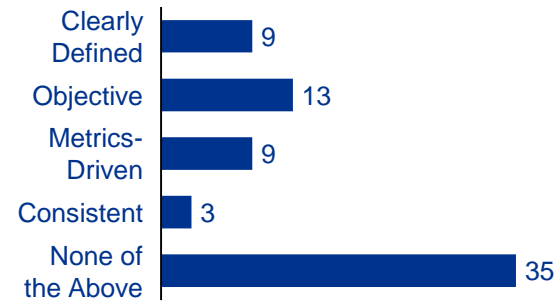
ACEC

INDOT's process for evaluating performance is: (select all that apply)



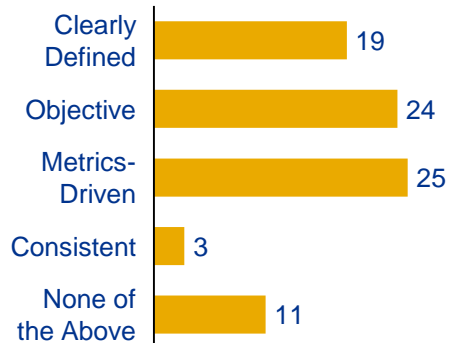
ICI

INDOT's process for evaluating my firm's performance is: (select all that apply)



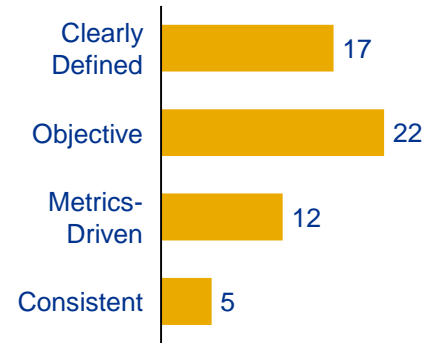
INDOT (ACEC-focused)

INDOT's process for evaluating performance is: (select all that apply)



INDOT (ICI-focused)

INDOT's process for evaluating firm performance is: (select all that apply)



ACEC ICI INDOT

"Most of the questions in the **project performance scoring are subjective**, resulting in scores depending on personality and mood of the project manager rather than an objective view"

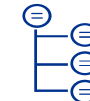
"Many of the **changes** that we make **are picky** – would be better if there were better tailored paths for 'minor' changes like wording"

"It is a conflict of interest when an **engineering firm also serves as the Project Engineer** on a project they designed. This is mostly on Local Planning Authority projects, and not sure if INDOT has any control over this."

"**Materials testing is very confusing** now, whether its different means of testing, or just trying to figure out which state they sent the samples to and how long will take to get results back"

"We are in a situation now where perceptions and **one-off analogs quickly become viewed as universal truths**. We need to look at and accept the facts."

"**Procurements**, in particular, do introduce some **subjectivity** that could be fixed with more training and a better streamlined process (e.g., limit pages for LOIs)"

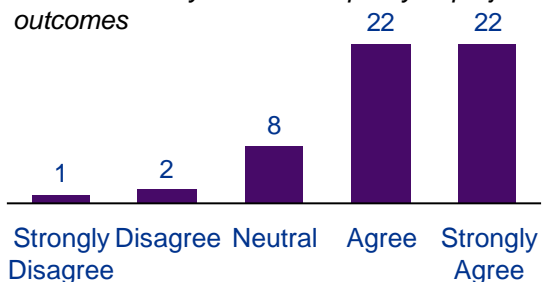


Decision-making

Survey Results

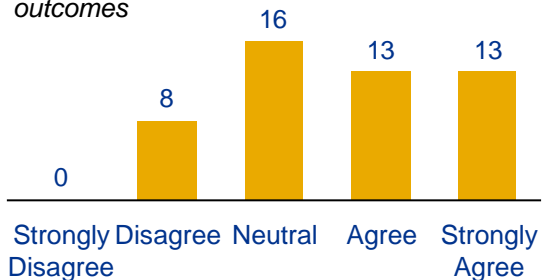
ACEC

INDOT Project Managers are spread thinly across too many projects at any given time, which adversely affects the quality of project outcomes



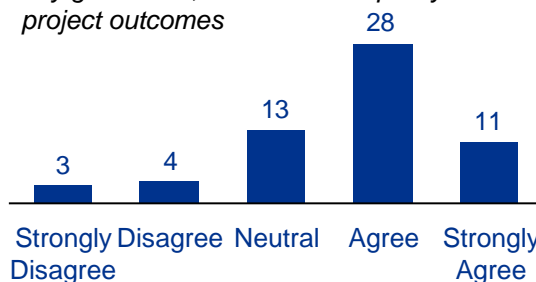
INDOT (ACEC-focused)

INDOT Project Managers are spread thinly across too many projects at any given time, which adversely affects the quality of project outcomes



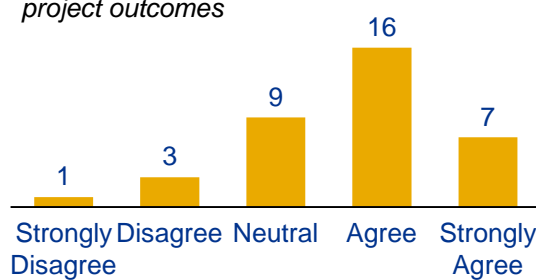
ICI

INDOT Project Engineers/Supervisors are spread thinly across too many projects at any given time, which affects quality of project outcomes



INDOT (ICI-focused)^(a)

INDOT Project Engineers/Supervisors are spread thinly across too many projects at any given time, which affects quality of project outcomes



Note: (a) Contains 1 N/A response

ACEC ICI INDOT

Interview Feedback

“PM’s decisions are often delayed due to being overworked...all of the **Project Managers are stretched too thin** to be responsive”

“One of the issues we have is within our own consultant community...we have a difficult time **coming together and aligning** around a decision”

“Project Engineers are making significantly **fewer decisions in the field** than in the past...everything now gets run up the chain”

“**INDOT’s chain of command is unclear** to us, and each of the districts is structured differently so it is difficult”

“The reality is that we, like our partners, all have **less experienced workers on projects**. So we actually do want more decisions run up the chain so can have a second pair of eyes and confidence in our decisions”

“We used to have a **partnering process** that helped with decision making, maybe something we should consider reinstating... without all the rah rah parts”

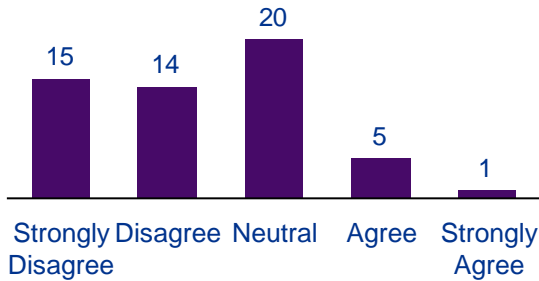


Communications

Survey Results

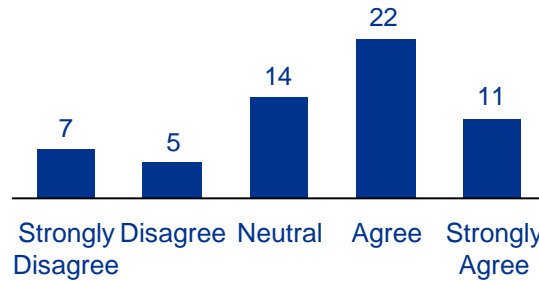
ACEC

I understand the INDOT HA 1002 20-year Asset Management Plan



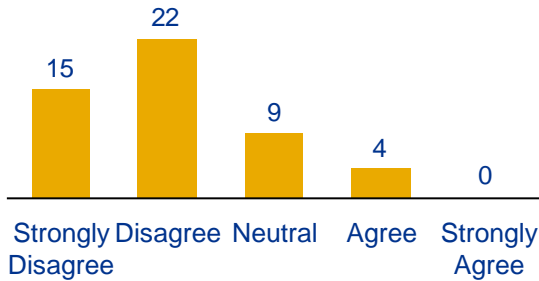
ICI

Reinstatement of a formal partnering process would improve the working relationship with INDOT



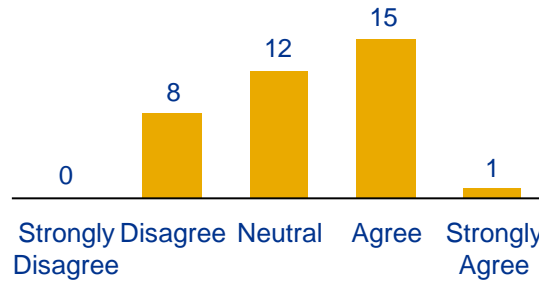
INDOT (ACEC-focused)

Consultants do not have adequate access to INDOT staff



INDOT (ICI-focused)^(a)

Quality communication is often lacking between and among project partners



Note: (a) Contains 1 N/A response

ACEC ICI INDOT

Interview Feedback

"There is **no effective feedback loop** between us and ICI"

"Across Districts, there is a **wide spectrum of communication styles** and quality, which impacts effective partnering. District-wide training could help to improve things."

"Need to **commit to a civil, practical partnering model** and practice it until it becomes second nature"

"Weekly progress meetings should be a requirement, and **shouldn't just focus on problems** but on the entirety of the project."

"Consultant and contractor firms **are not as forthcoming and upfront** about issues they are facing as they could be. It would help if they were more transparent"

"There are issues with communications between construction, Capital Project Management staff, and designers – we **sometimes don't communicate enough** to really get critical buy-in"

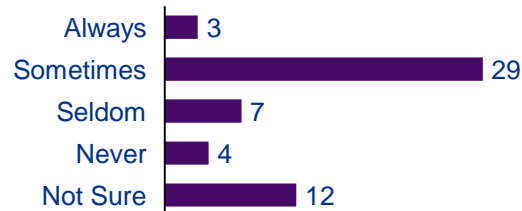


Performance Management

Survey Results

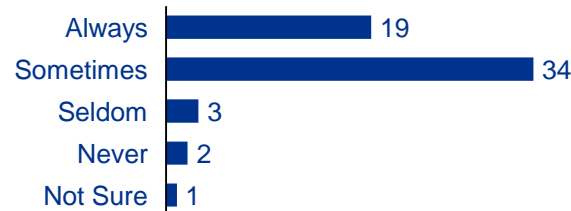
ACEC

I feel that INDOT Project Managers focus more on meeting personal performance metrics than what's best or most reasonable for the project



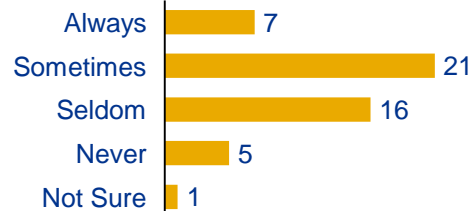
ICI

I feel that INDOT Project Engineers/Supervisors focus more on meeting personal performance metrics than what's best or most reasonable for the project



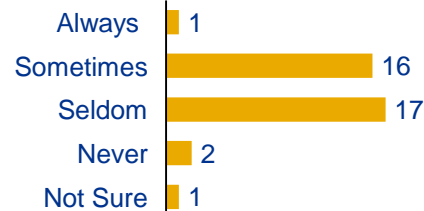
INDOT (ACEC-focused)

I feel that INDOT Project Managers focus more on meeting personal performance metrics than what's best or most reasonable for the project



INDOT (ICI-focused)

I feel that INDOT Project Engineers/Supervisors focus more on meeting personal performance metrics than what's best or most reasonable for the project



Interview Feedback

"Performance evaluations should **never be done by our competitors**, and should be more objective in general"

"There **aren't good ways of measuring 'adjusted' performance**, when unforeseen circumstances are the real driver of project delays/overruns"

"INDOT's Project Engineers and Area Engineers are held to **a time and cost metric that prevents common sense solutions** in the field. There is so much out of a Project Engineers control not sure is even an appropriate metric"

"INDOT should **add "on time payment" as a key metric** instead of time and cost, as that is something they control which is falling behind"

"Sometimes we spend resources **updating metrics that don't even significantly impact project delivery** (e.g., Scheduling Project Management System level of detail)"

"There need to be **additional evaluations** that focus on **field implications of designs** – currently these happen too early and do not follow the project lifecycle."

ACEC ICI INDOT



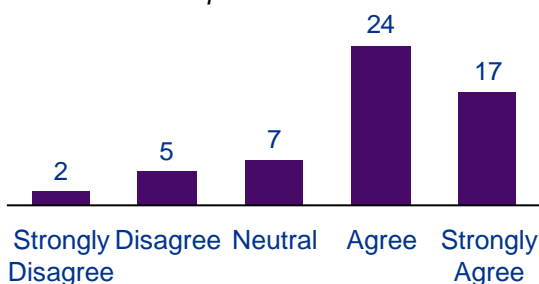


Dispute Resolutions

Survey Results

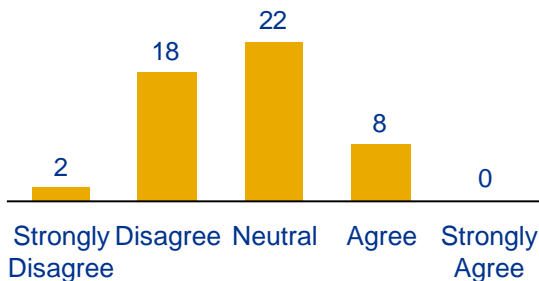
ACEC

Consultants should be contacted on any issue(s) encountered by Contractors during the construction phase



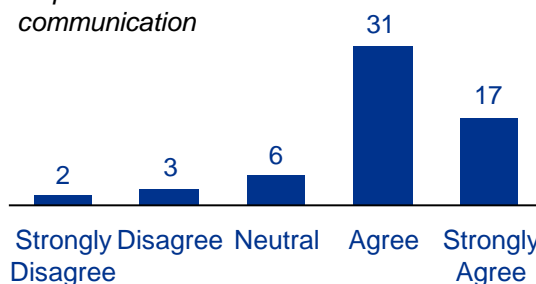
INDOT (ACEC-focused)

Consulting firms sufficiently consider and anticipate construction realities in their designs.



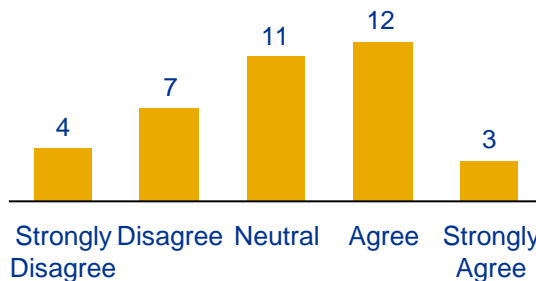
ICI

More formal rules of engagement, consistently applied across Districts, would help resolve issues of trust and communication



INDOT (ICI-focused)

Contractors are held accountable for their work (e.g. formal reviews, dispute resolutions).



ACEC ICI INDOT

Interview Feedback

"There should be a **way to dispute project performance scoring**, especially considering it is so subjective...maybe a review board"

"There is a clear feeling that **if you speak** up there **could be retribution**, so problems get bigger faster than they could otherwise"

"We are **so litigious now**, it seems that every change order or disagreement results in a claim...everyone wants to point fingers instead of solving the problem"

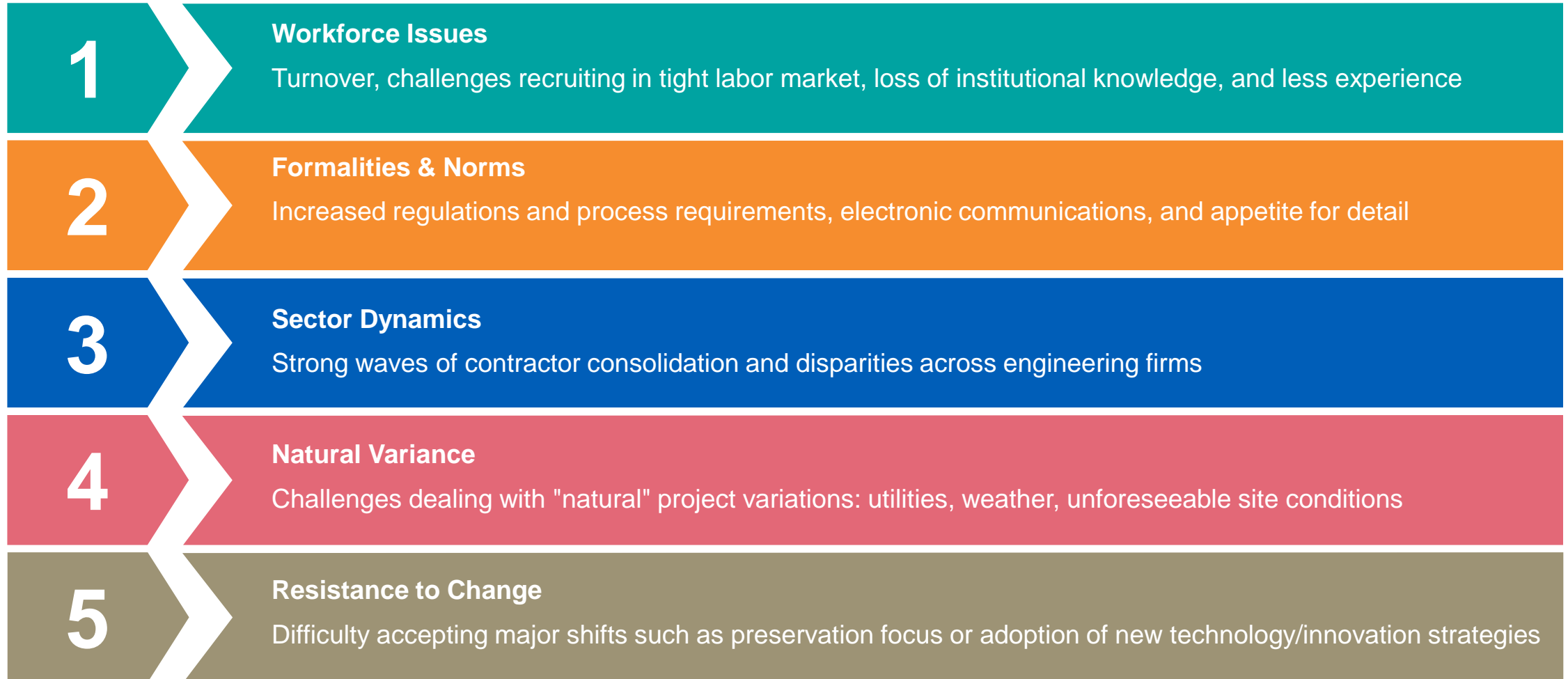
"**Certain pay items** seem to have **repeat disputes** – shouldn't these be more closely analyzed and the root causes identified?"

"**ACEC and ICI** firms no **longer respect the chain of command** because they don't trust it, so they now just immediately go straight to the **top of our organization**...this is a sign of disrespect for the manager level folks at INDOT"

"**Better participation** in existing **forums** like on-site Technical Services meetings could head off many of these issues earlier."

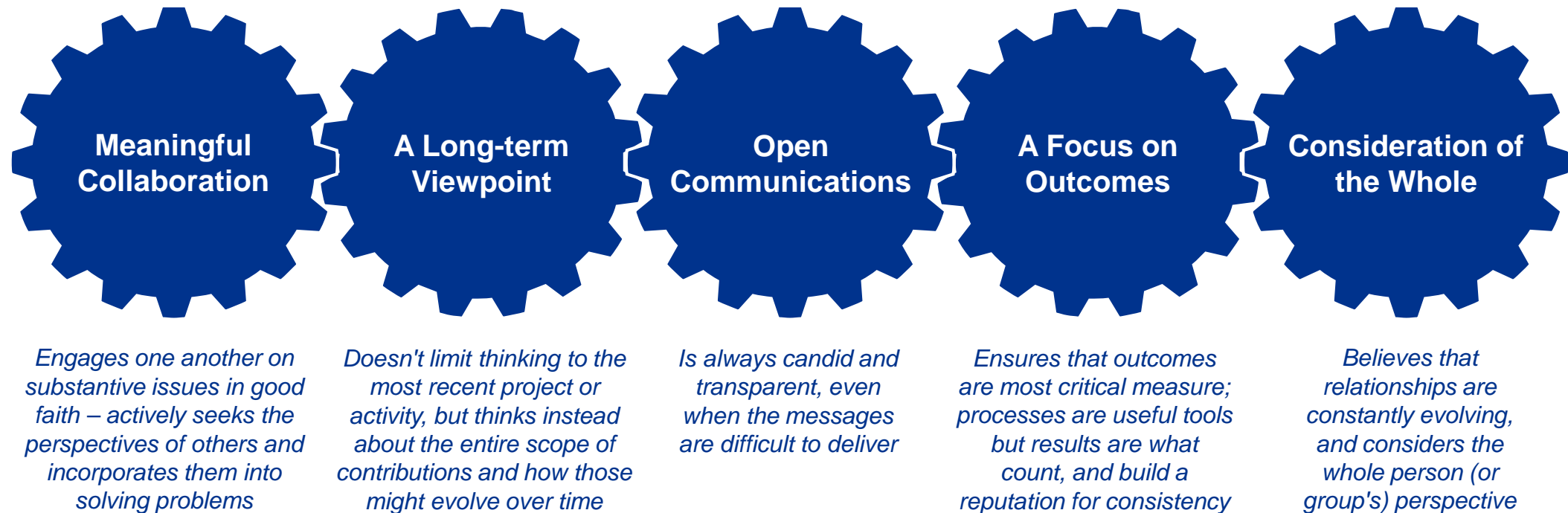
We identified 5 root causes that are propagating these challenges

Root Causes



Each of these is exacerbated by a prevailing lack of trust that is undermining the ability to engage constructively

Elements of Trust



Below are some Quick win solutions that address prevailing challenges and root causes (1 of 3)

Category	Solution	Description	Difficulty (H/M/L)	Impact (H/M/L)	Involvement		
					INDOT	ACEC	ICI
Quick Wins	<i>Renew Trust</i>	Hold a meeting specifically for all parties to agree on need for a fresh start and what shared norms would look like moving forward	L	H	X	X	X
	<i>Reinstate Modified Partnering Process</i>	Outline a revised partnering process with clear, tangible requirements on specific meetings, dispute resolution paths, etc.	L	H	X	X	X
	<i>Conflict of Interest Mitigation</i>	Re-establish clear roles and responsibilities of INDOT Area Manager as pertains to dispute resolution in cases where engineering firms also serve as PE or inspector on a project	L	M	X	X	
	<i>Enhance Cross-training</i>	Develop training programs to align consultants, contractors, and INDOT staff on basics around the project lifecycle and how to appropriately integrate with one another for the best results	M	M	X	X	X
	<i>Provide Timely Q&A</i>	INDOT adopts a policy to answer all Q&A from vendors in a timely manner, and if delays then adjust letting due date	L	L	X		
	<i>Formalize Decision Rights</i>	Agreement to abide by specific decision-rights: the employee with delegation of authority should be the one contacted with questions/changes (i.e., learn and respect chain of command)	M	M		X	X
	<i>Clarify Spec Interpretation</i>	Standards on how to apply spec interpretations should be established and made clear to AEs, PEs, and the contractors they work with	M	M	X	X	X
	<i>Increased Interactions</i>	Establish more frequent meetings between INDOT, ACEC, and ICI leadership, as well encourage more social interactions across staff	L	M	X	X	X

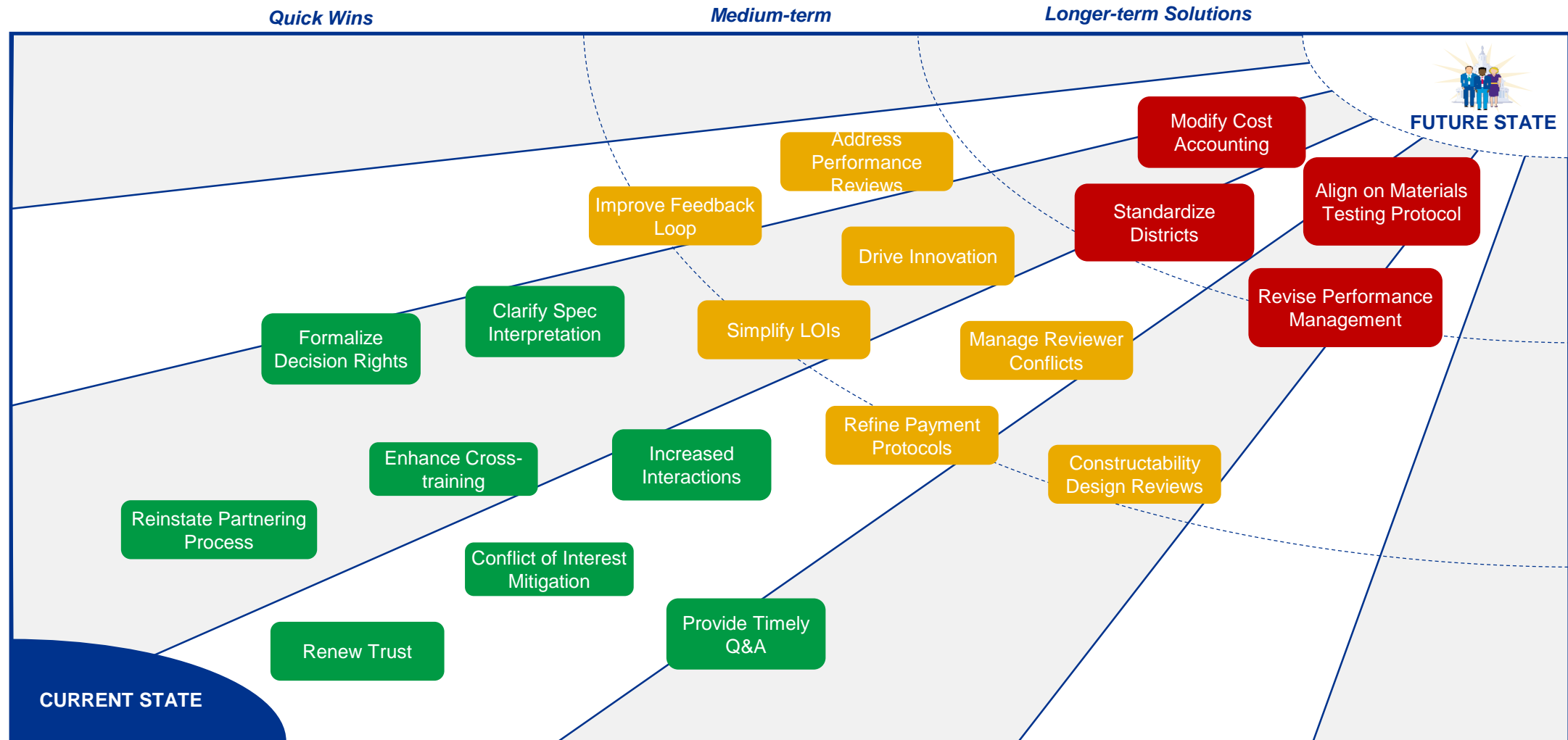
Below are some Medium Term solutions to consider (2 of 3)

Category	Solution	Description	Difficulty (H/M/L)	Impact (H/M/L)	Involvement		
					INDOT	ACEC	ICI
Medium Term	<i>Improve Feedback Loop</i>	Create a specific, non-claims feedback loop that includes work of both contractors and consultants	M	H	X	X	X
	<i>Constructability Design Reviews</i>	Hire construction firm to review design plans and point out obvious changes needed before putting out to letting (to minimize change orders)	M	H	X		X
	<i>Refine Payment Protocols</i>	Revisit payment policies to allow INDOT to pay contractors even if material counts are incomplete, with ability to "true up" on agreed-upon basis	M	H	X		X
	<i>Address Performance Reviews</i>	Make performance evaluations more objective, and create process for allowing rating "appeals"	M	M	X	X	X
	<i>Manage Reviewer Conflicts</i>	Consistently affirm that on-call/outsourced engineering staff tasked with reviewing peer firms are not impacting scoring outcomes	M	M	X		
	<i>Drive Innovation</i>	Stand up a collective innovation committee to drive innovation across project partners	M	H	X	X	X
	<i>Simplify LOIs</i>	Simplify requirements for LOIs while refocusing on the aspects that are most critical to awarding work (e.g. approach and not graphics)	M	H	X	X	

Below are some Longer term considerations that all parties might want to investigate further (3 of 3)

Category	Solution	Description	Difficulty (H/M/L)	Impact (H/M/L)	Involvement		
					INDOT	ACEC	ICI
Longer Term	<i>Standardize Districts / Roles</i>	INDOT should look at processes, engagement models, etc. across districts and roles (e.g., Area Engineers) and determine where there remains a need for greater standardization	H	H	X		
	<i>Modify Cost Accounting</i>	Revisit how costs are tracked for bundled projects: current allocation methods are time consuming	H	M	X		
	<i>Revise Performance Management</i>	Modify PE/S & AE metrics to better reflect items in their direct control and allow for ranges; enhance common sense decision-making	H	H	X	X	X
	<i>Align on Materials Testing Protocol</i>	Commission working group to determine satisfactory materials testing protocols and practical solutions for managing compliance	H	H	X		X

Three waves of priority would allow stakeholders to prioritize and direct efforts, advancing the most critical initiatives in a coordinated way





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