



Moving Tribal Construction Programs into the Digital Age

Presented by Andy Quetone, Gina Merseal,
JJ Vanwinkle, Michael Lynn, Shana Scott

Tuesday, August 27, 2024

Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the Author(s) and do not necessarily reflect the view of the Federal Highway Administration.



Introductions



GW29 DBP
CHEROKEE NATION®



Michael Lynn
Executive Director,
Department of
Transportation and
Infrastructure
Cherokee Nation



Andy Quetone
Director Of
Transportation
Cherokee Nation



JJ Van Winkle
Sr. Account Specialist
Infotech



Shana Scott
Customer Success
Manager
Infotech



Gina Merseal
Senior Account
Manager
Infotech



GWYD DBF
CHEROKEE NATION®

Who is Cherokee Nation?

- 450,000 Tribal Citizens
- Reservation covers 14 Counties in Northeast Oklahoma
- First tribe in US to enter into a Self-Governance Compact with USDOT
- Nearly 4,000 Roadway Miles on TTP Inventory

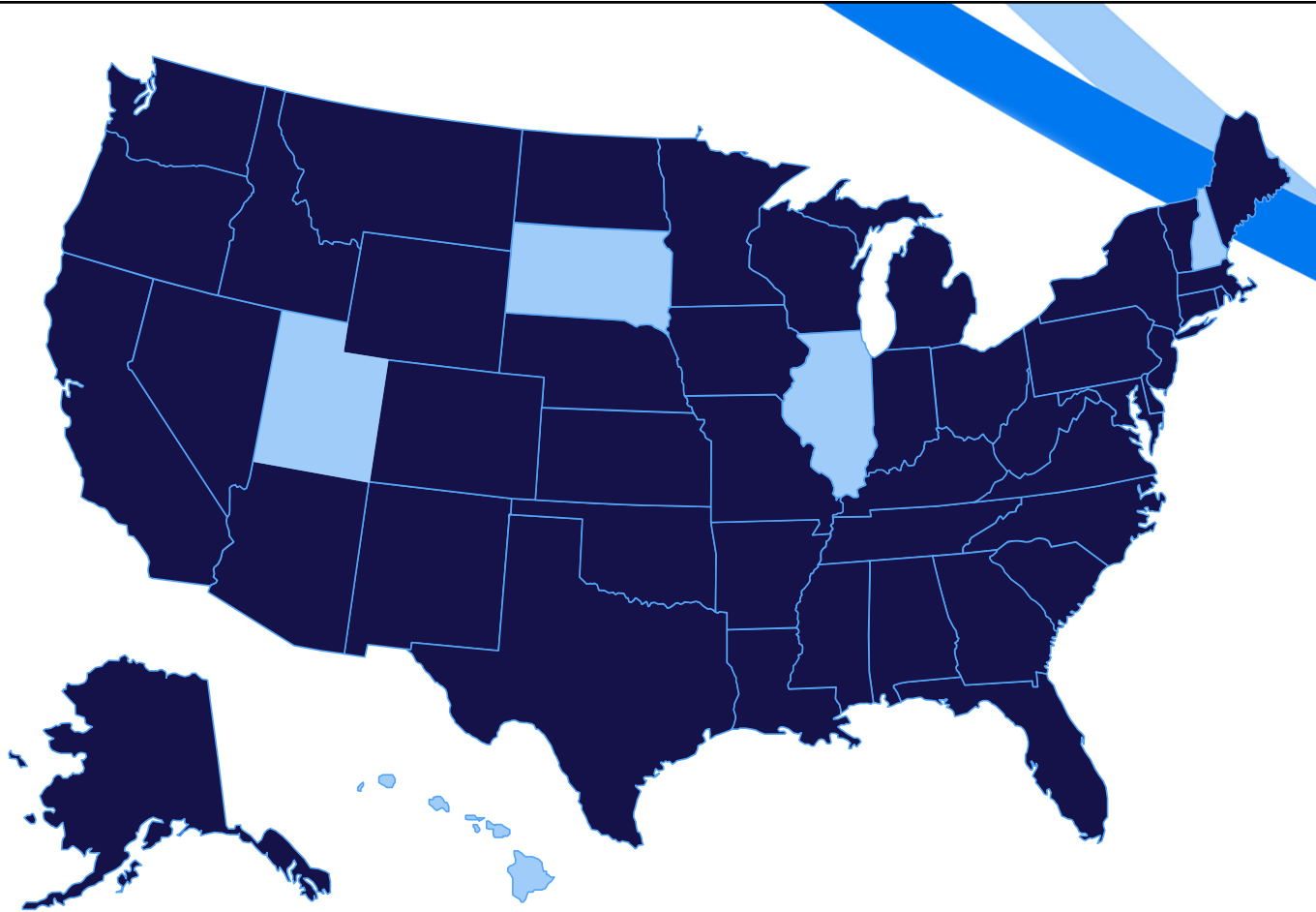
Who is Infotech?

Bridging innovation and integrity since 1977.

We've built an enduring reputation for using technology and data to bring transparency, integrity, and efficiency to everyone we serve.

Trusted AASHTOWare Project™ Contractor for over 30 Years

infotech.



44

State DOTs

300+

Municipalities

200+

AE Firms

Goals

Share best practices in bidding and construction contract administration and inspection

Hold a constructive Round Table discussion

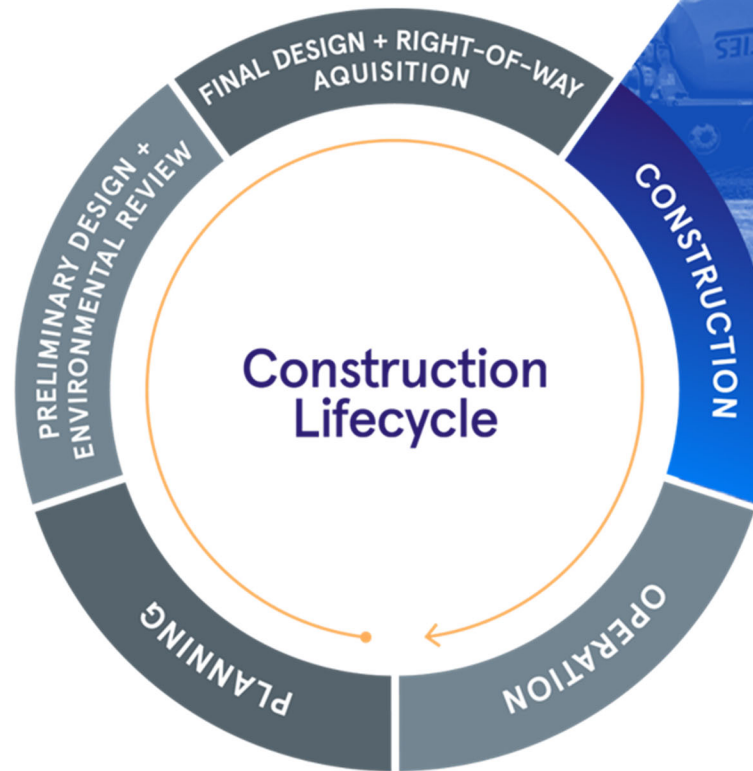
- e-Bidding
- e-Construction

Provide recommendations on how to research, procure, and get started on the path to digital project delivery

Agenda

- Life Cycle of a Construction Project
 - Electronic Advertising
 - Electronic Bidding
 - Contract Administration and Inspection
- e-Bidding and e-Construction Round Table
- Scalable Implementation of a Construction Management Program

What is the lifecycle of a Construction Contract?



- Electronic Advertising
- Electronic Bidding
- Contract Administration and Inspection





Question: With a show of hands, who has been a part of the following phases?

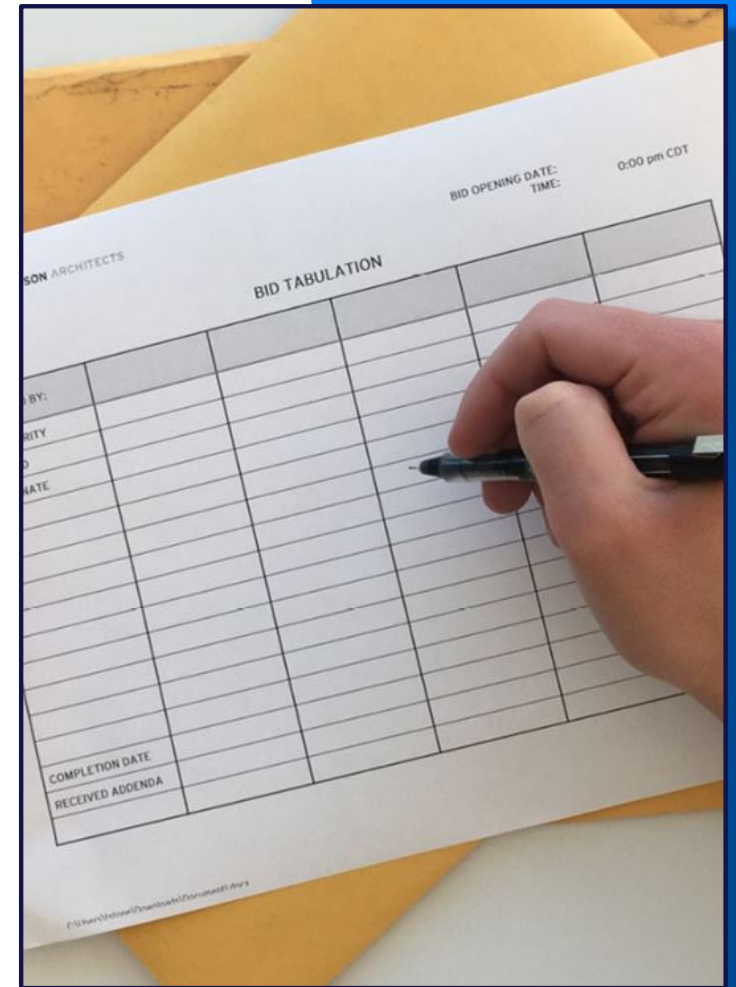
Advertising

Bidding

Contract Administration and/or Inspection



Project Bidding in Construction



Construction Administration & Inspection

- Daily Inspections
- Overall Progress tracking
- Submittals (e.g., materials certifications), Pay estimates

Example 1
Inspector's Daily Report

North Carolina Department of Transportation
INSPECTOR'S DAILY REPORT

Construction
03/07

Contract No.: C222121	T.I.P. Number: U-1234	Inspector: I. M. Gadget	Day: Thursday	Date: 10/16/2003									
High Temp: 68	AM Conditions: Cloudy		PM Conditions: Mostly Sunny										
Low Temp: 49													
Affects of Weather on Items of Work													
Items of Work	No Affect All Day	Affected Less Than 50% of Work Day	Affected More Than 50% of Work Day	No Work All Day	Remarks								
Deck Pour	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
Accidents (Check One): <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes					See Accident Report Dated:								
Visitors: A. B. Engineer, M. T. Concrete-Technician			Engineering Staff: I.M. Resident, I.M. Assistant, J. Roberts, S. Wilson, J. Baker, A. Greene, P. Childs										
Contractor(s) and Personnel													
No.	Name	Type	#	Hrs	Type	#	Hrs	Type	#	Hrs	Type	#	Hrs
1.	Prime	Supt			Foreman			Operators			Laborers		
2.	SUB/Utility Bridge Builders	Supt	2	8	Foreman	1	8	Operators	2	8	Laborers	20	8
3.	SUB/Utility	Supt			Foreman			Operators			Laborers		
Contractor(s) Equipment (Active or Idle)													
Contr/ Sub No.	Description										Number of Pieces	Number Used	Total Hours Used
2	Link-Belt HSP-8022 Cranes										2	1	6
2	Work Bridges										2	2	10.5
2	Bidwell Screed										1	1	5
2	trailer										1		
2	Case 590 backhoe										1	1	7
2	pick-up trucks										6	6	10.5
2	Olin 5410-140/130 concrete pump										1	1	5

A Call for Change



- USDOT Audit on Federally Funded *LPA* Projects:
 - [Report](#) Findings
 - Lack of Documentation
 - Project bidding/contractor selection/unbalanced bid analysis
 - Project reporting and tracking
 - Construction pay quantities and progress payments
 - Change orders and claims
 - Lack of or improper material certifications
 - Non-conforming inspection frequency
 - Unsupported Construction Costs

A Call for Change

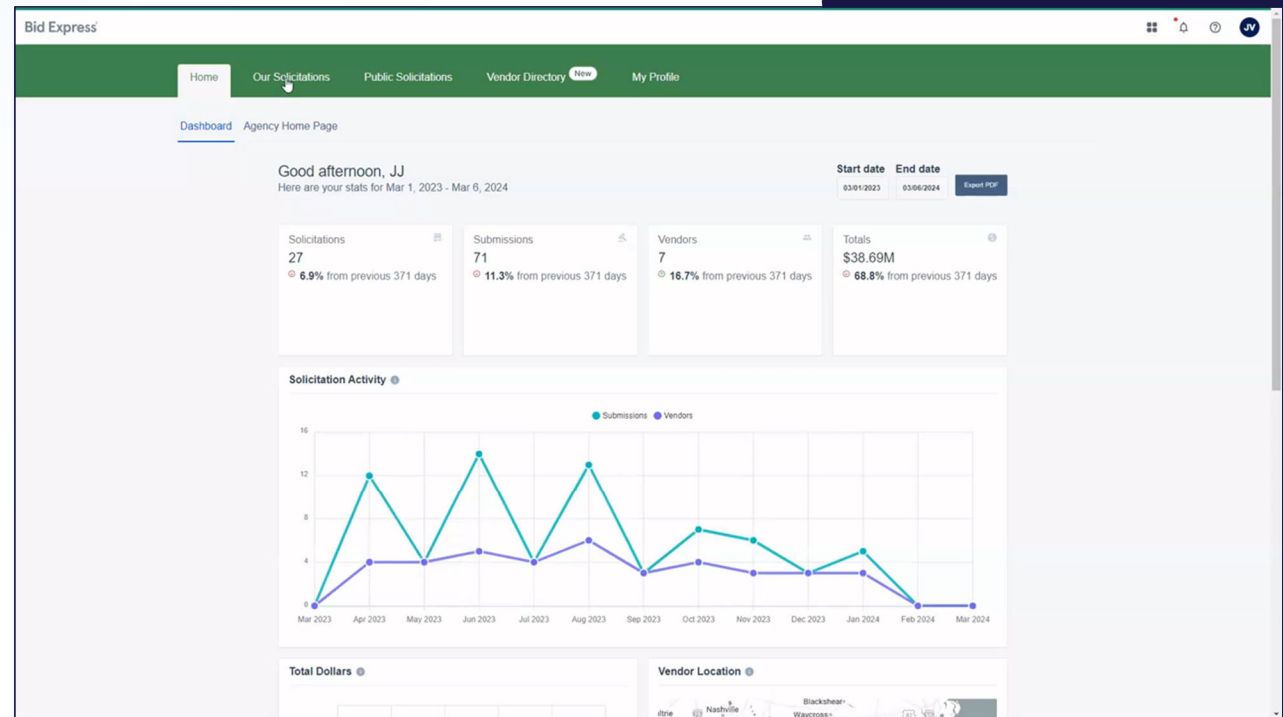
- FHWA Order [5020.2](#)
 - Help STA's establish uniform oversight procedures
- Local Resources
 - Federal-Essentials for LPAs: More Training & Oversight (LPA Order)
 - FHWA Every Day Counts v3: e-Construction (2015-16)



Electronic Bidding

Key Aspects

- Easy to use tool to create and post solicitations
- Template system to build forms and proposal documents
- Secure system (electronic lockbox) ensures no party, other than the bidder, can access the bid prior to bid opening time



Electronic Bidding

Key Aspects (continued)

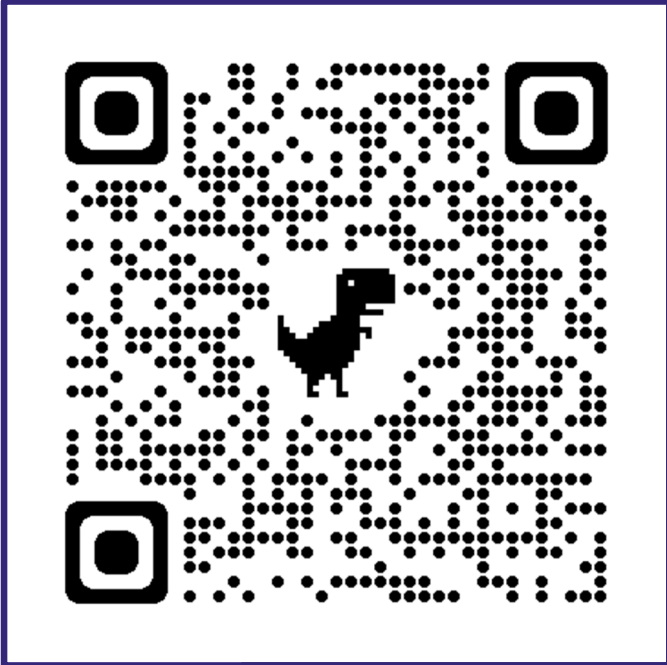
- Identity Verification
- Automated Error Checking
- Customer Support



Benefits of Electronic Bidding

Agency	Contractor
Reduce risk of non-responsive submissions	
Time and cost savings pre and post bid	Ability to submit bids early, revise, and resubmit
Automated bid tabulations for easy reporting	Avoid chances of missing a bid due to traffic, weather, or other events

Brings a network of contractors/bidders to one place.



Contract Administration and Inspection



Question: How do you document field inspection activities?

Question: How do you document material testing or certifications?



Question: How do you calculate progress estimates?

Key Topics & Demonstration

- Daily Activities
- Change Orders
- Estimate Payments
- Project Closeout

AN INFOTECH PARTNER

Mobile Inspector[®] + Trimble

Power up your survey-grade inspections through our integration with Trimble[®] Access[™] field software. Via the Mobile Inspector[®] Measure Service, your team can capture high-accuracy positioning and measurement data from Trimble rovers on your mobile device.

[LEARN MORE](#) →

infotech[®]

[VIDEO](#)

 Trimble[®]

e-Bidding & e-Construction Round Table

- **What were driving factors to start exploring e-Bidding and e-Construction?**
- **What assessment tasks were performed to implement a software solution?**
 - What decisions were made?
 - What were some of the main factors that weighed in the decision process?



e-Bidding & e-Construction Round Table

- **What are some of the biggest changes since implementing electronic bidding?**
- **Were there time savings?**
 - For example, time spent putting together bid documents and managing plan holders
- **How have the contractors adjusted to submitting electronically?**



e-Bidding & e-Construction Round Table

- **Does your organization receive bids on paper or in an electronic method?**
- **Are you hearing about challenges or priorities when it comes to finding work and preparing and submitting bids from your contractor community?**
- **What are some of the major impacts?**
- **Has anyone been looking into moving from a paper bid submission to a digital solution?**
- **What are examples of your bidding processes?**



Implementation of a Bidding and Construction Management Program

- **Question:** Who has implemented any type of digital/electronic system?

Implementation of a Scalable Bidding and Construction Management Program

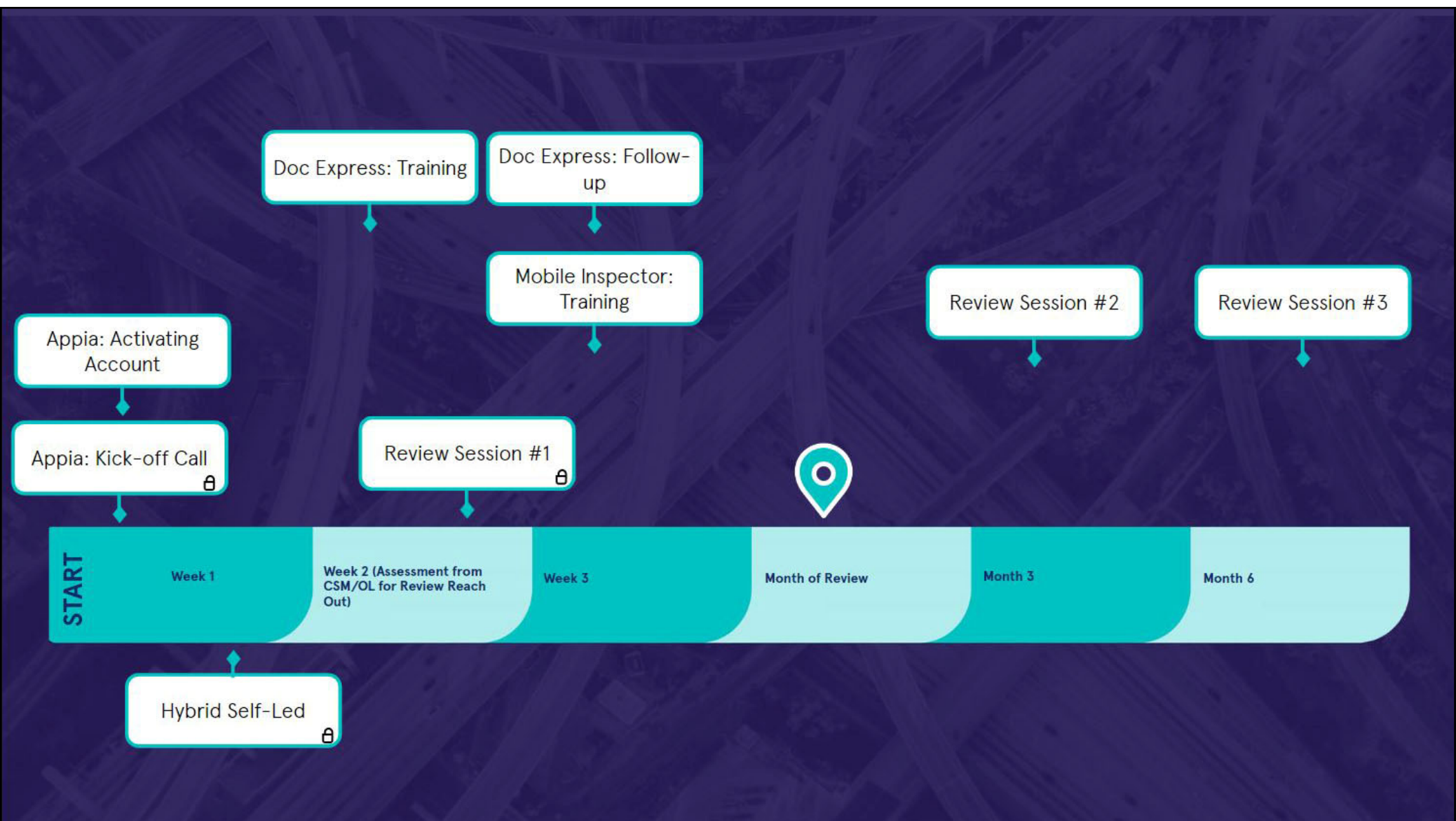
- Value Needs Assessment
 - What is important to your agency?
 - Prioritized List
- Project Management Team

'Scalable' Implementation Planning Checklist

- ❑ Stakeholder Analysis
- ❑ Change & Transition Management
 - Communication Plan
- ❑ Decision Hierarchy
- ❑ Hardware Equipment and Network Assessment
- ❑ Project Documentation Structure

'Scalable' Implementation Planning Checklist

- Implementation Personnel
- Kick-Off Plans
- Process Documentation
- Training & Support Plan
- Project Management Tools & Processes
- Testing Plan
- Production Roll Out Plan



Kick-Off and Training Session

- Implementation Workshop
- Administration Training and Setup
- Construction Inspection Training and Setup
- Production Placement

infotech.



Next Steps

- Assess your agency's current technology maturity
- Perform Value Needs Assessment & Prioritization
- Executive Management/Steering Committee
- Identify and review feasible improvement opportunities

Recap Goals

Shared best practices in bidding and construction contract administration and inspection?

Held a Round Table discussion on valuable questions

- ✓ e-Bidding
- ✓ e-Construction

Provided recommendations on how to research, procure, and get started on the path to digital project delivery?

Q&A

Please see us
at the
Southern TTAP
Booth

Kim Johnson
and Samantha
Shepherd's
location!

infotech

Infotechinc.org

