



# **NORTH CAROLINA**

## Department of Transportation



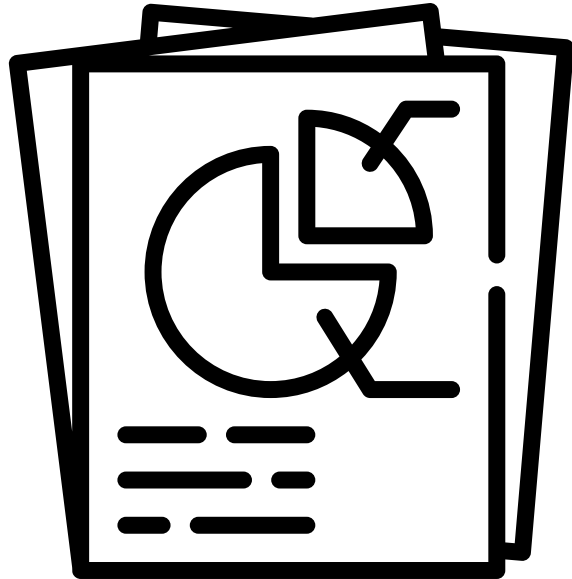
# **NCDOT ORD IMPLEMENTATION (DRAFT)**

Roger Kluckman, PE

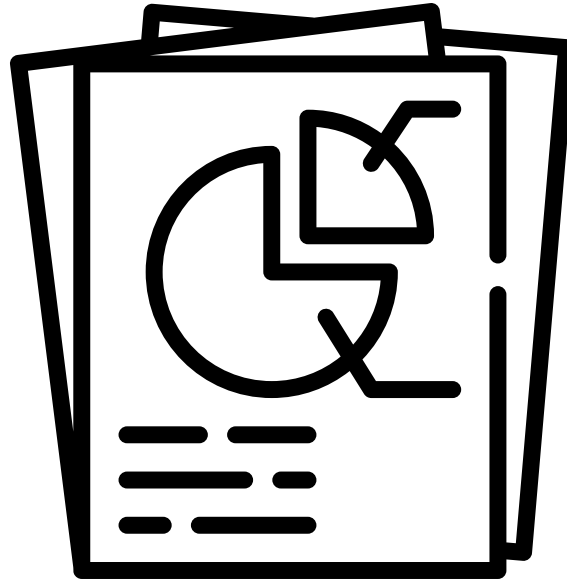
December 2019

Roadway Design Unit

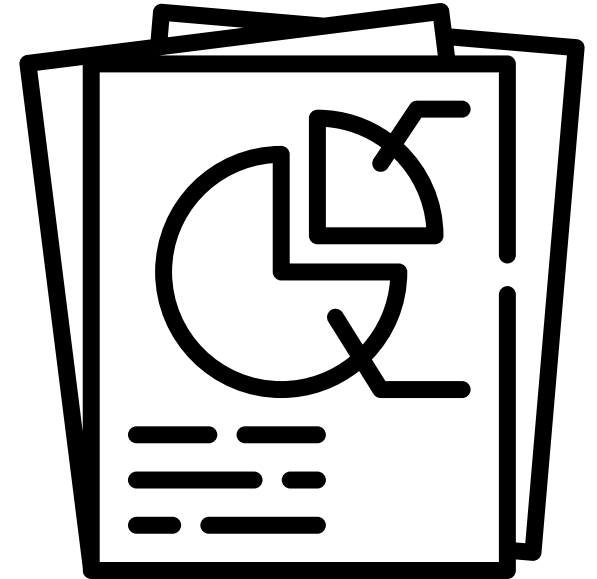
# NCDOT ORD Implementation Plan



PART I  
**Readiness  
Assessment**



PART II  
**Department-Wide  
Migration  
Plan**



PART III  
**Unit-Specific  
Migration  
Recommendations**

# **NCDOT Readiness Assessments**

Units Already Interviewed for Readiness Assessment

Hydraulics

Roadway Design

Feasibility Studies

Structures Management

Utilities

ITS and Signals

Geotechnical Engineering

Location and Surveys

Photogrammetry

Signing and Delineation

Work Zone Traffic Control

CADD Services

Plans and Standards Management

Roadside Environmental

# NCDOT Readiness Assessments

**Awareness**



**Planning**



**Implementing**



**Understanding**



**Testing/Training**



# NCDOT Readiness Assessments



## **HARDWARE & SOFTWARE**

It is important to understanding what current software applications are being used in order to establish a transition plan. It is also important to understand what hardware is currently being used to ensure that it is compatible with ORD.



## **WORKFLOW**

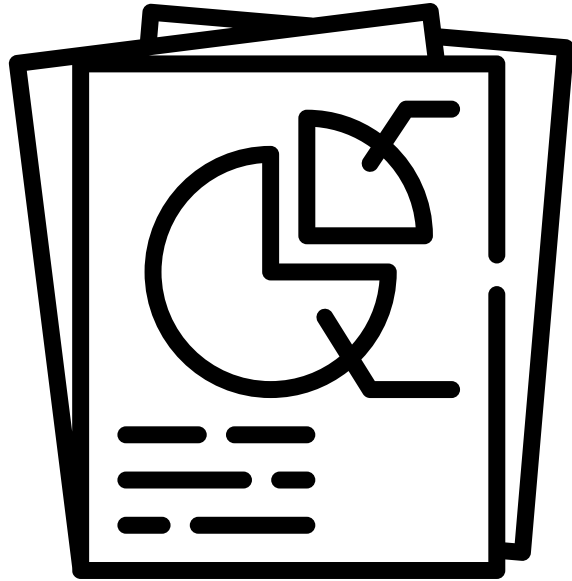
Each unit has specific processes and workflows that are regularly used to get your work done. It is possible that the shift to ORD will require some of these processes to be reexamined.



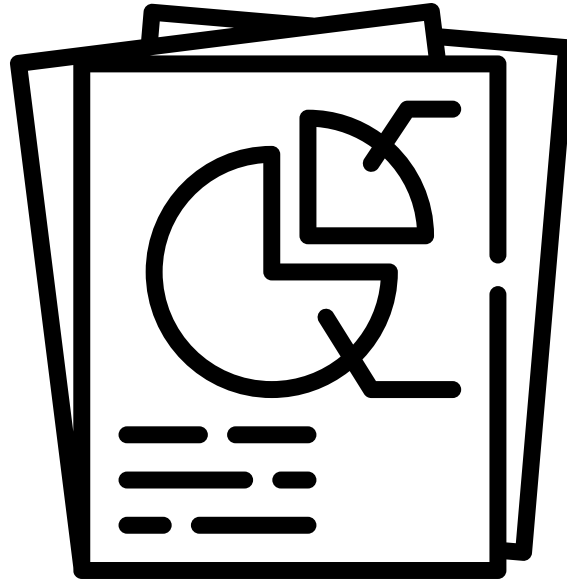
## **PERSONNEL**

The team members within each unit are at the core of the NCDOT's work. It is important to ensure that personnel understands what this ORD transition means for them. ORD education or training will be needed at various levels within the unit, ranging from production staff to management staff.

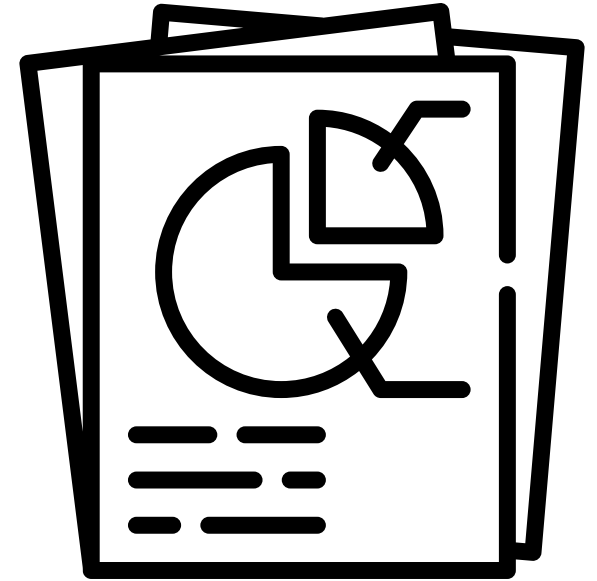
# NCDOT ORD Implementation Plan



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# Implementation vs Migration

## Implementation Approach

Finite Schedule / Focus on single date

All disciplines transition at same time

All projects, all sizes transition at once

All milestones set at beginning of process



## Migration Approach

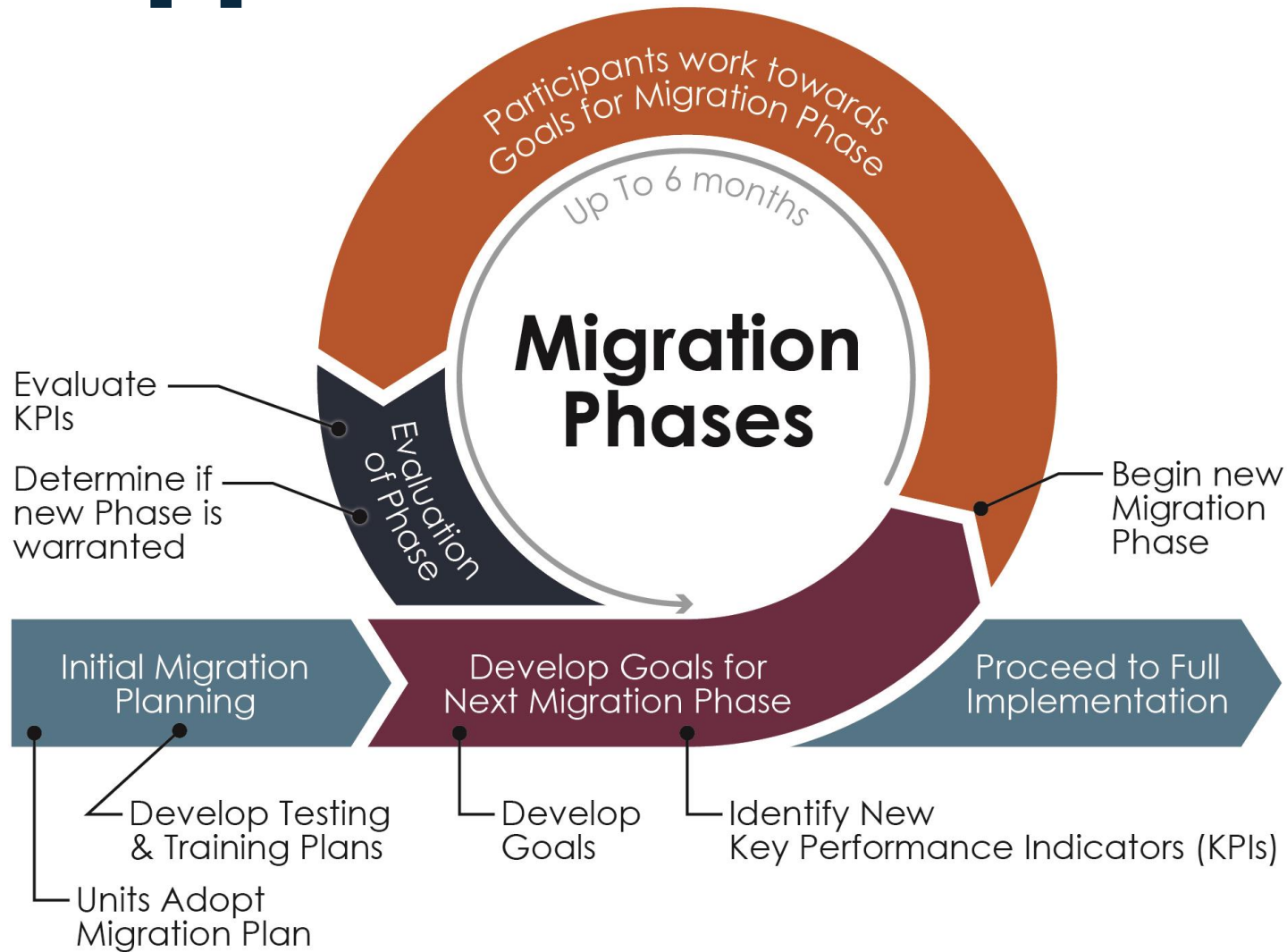
Flexibility in Schedule / Focus on regular cycle

Units/Disciplines can transition at varying paces

Certain types of projects may advance before others

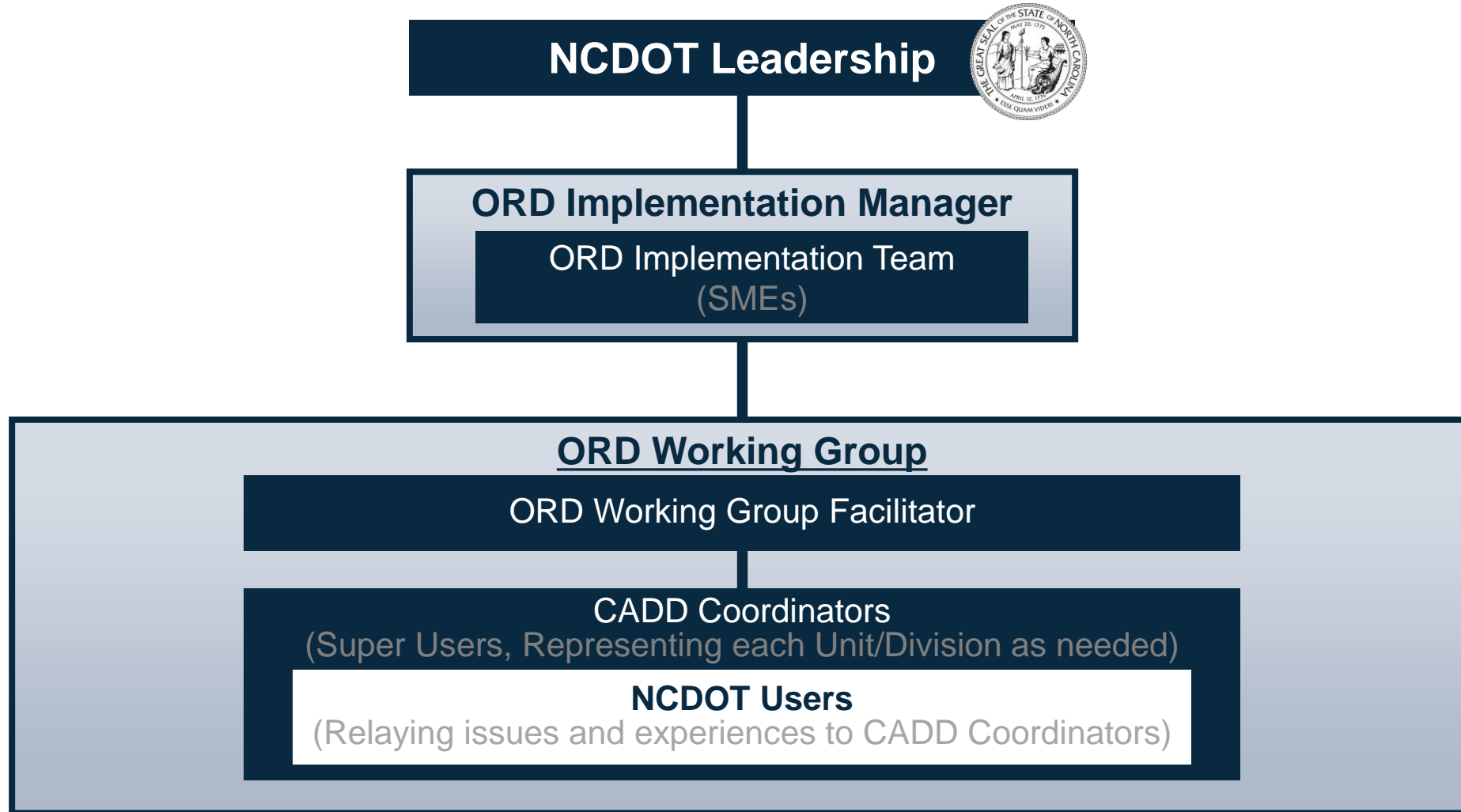
Intermediate milestones set along the way

# Phased Migration Approach





# ORD Migration Roles



# Role of the Working Group

**Coordination  
and  
Communication**

**Disseminate  
technical  
information**

**Discuss  
challenges  
and barriers**

**Collect  
feedback**

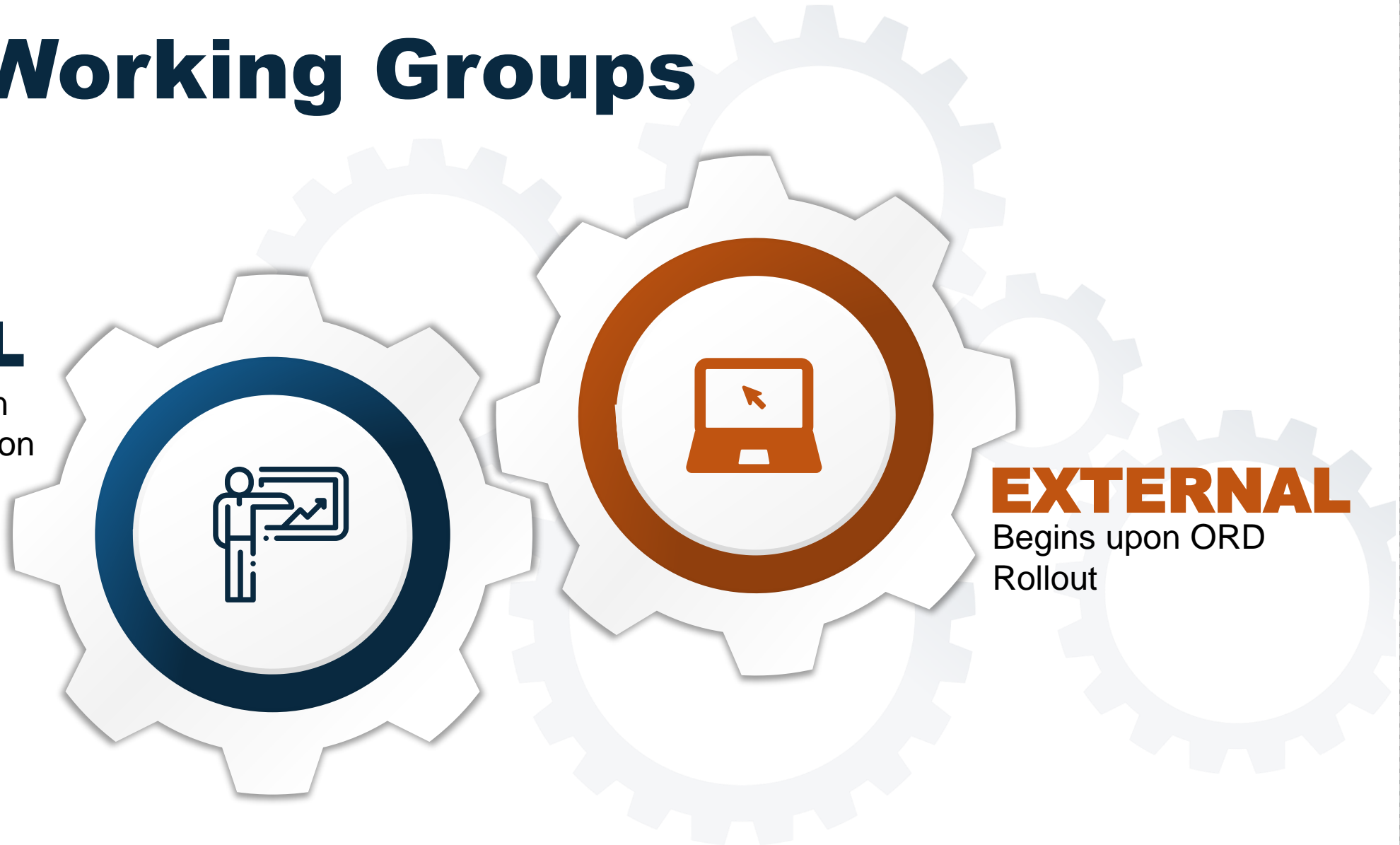
**Track progress of  
development updates**



# ORD Working Groups

## **INTERNAL**

Begins upon adoption  
of ORD Implementation  
Plan

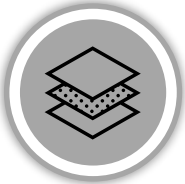


## **EXTERNAL**

Begins upon ORD  
Rollout

Anticipated Frequency: Monthly

# ORD Training Plan



## Training Levels

- General Training – basic tasks, accessible to anyone, navigation and familiarity
- Focused Training – discipline specific, more detailed



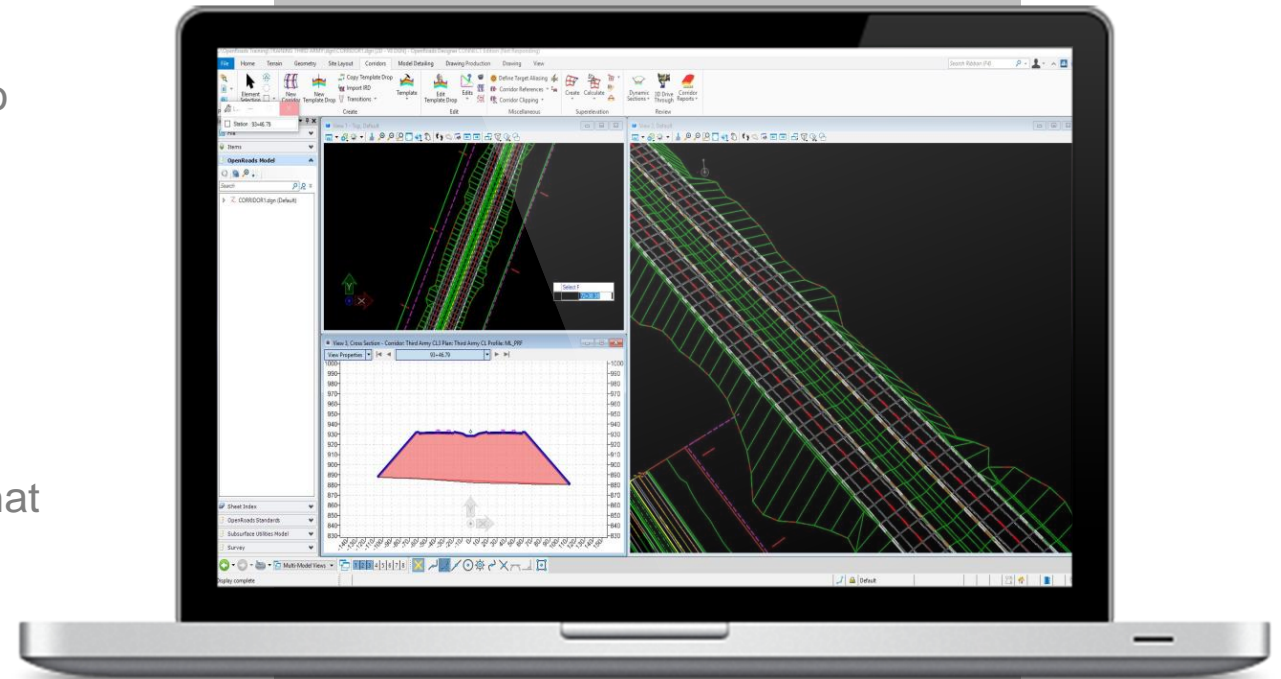
## Unit Training

Units will identify who they need to train and what focused training they will need



## Internal vs. External Training

The training plan will describe the approaches that will be used for NCDOT staff and external consultants based on trainees needs.



# ORD Training Plan



# ORD Testing Process



## Pilot Projects

- Already Underway
- Completed 25% Design
- Tangible Results
- Constrained to Project Schedule



## Testing

- Dependent on Bentley ORD Update Releases
- Full Regression Testing
- Hardware and Software Testing

# Draft ORD Communications Plan

## Potential Methods of Communication

Monthly Digital  
Newsletter

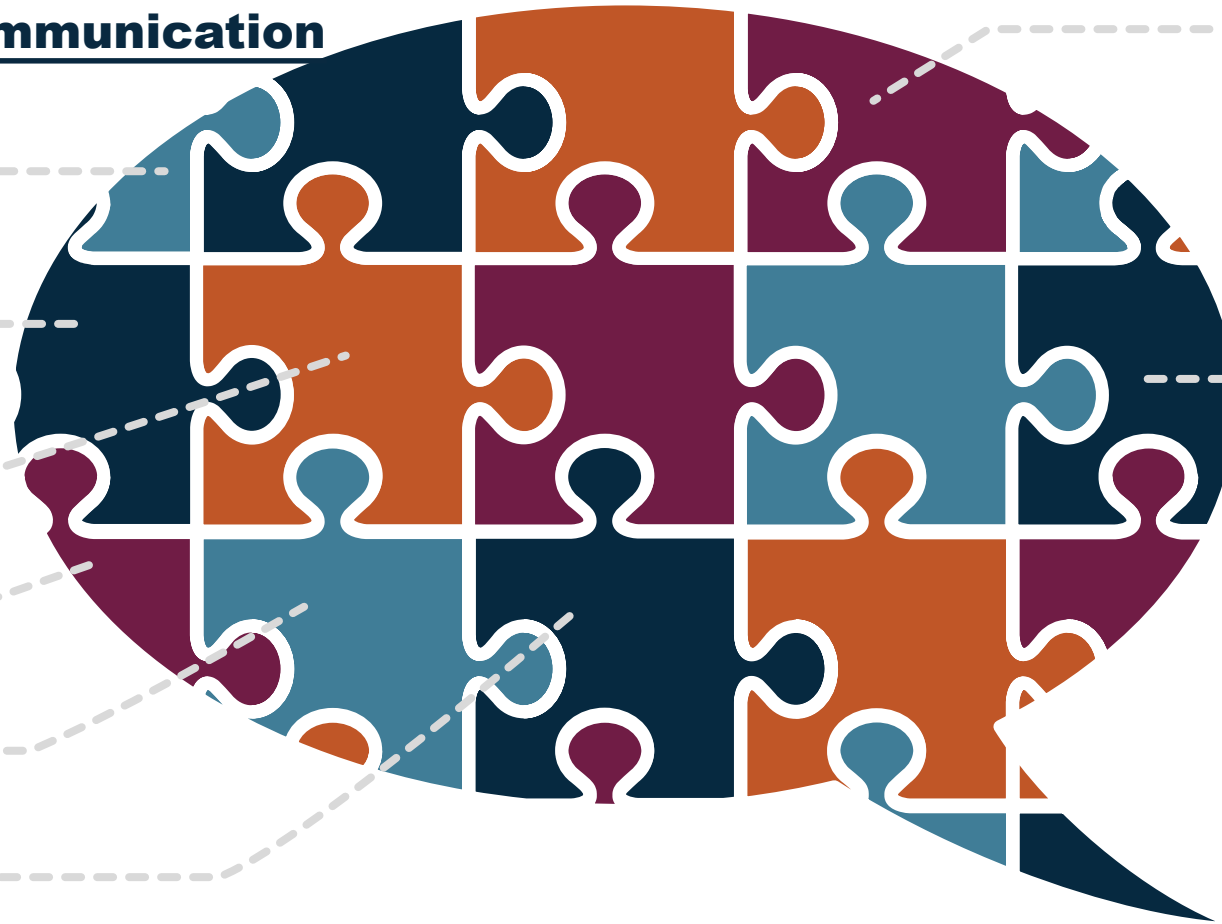
Progress Reports to  
Senior Management

Fact Sheets

Memos

Presentations

Coordination Meetings



**Internal  
Communications**

**External  
Communications**

# ORD Workspaces

## Complete or Nearing Completion

- Roadway
- Structures
- Hydraulics
- Geotechnical
- Traffic Control
- Signing
- ITS and Signals
- Photogrammetry
- Location

## Under Construction

- Erosion Control
- Rail
- Environmental Analysis
- Utilities





# Soft Rollout



Completely Voluntary



Vetted through NCDOT Project Manager and ORD Implementation Team



Anticipated Soft Rollout Date: July 2020

# THANK YOU

