



Digital Delivery Initiative RoadMap 2021-2022





“What is Digital Delivery”

Digital Delivery

➤ *BIM*

▪ *Building Information Modeling*

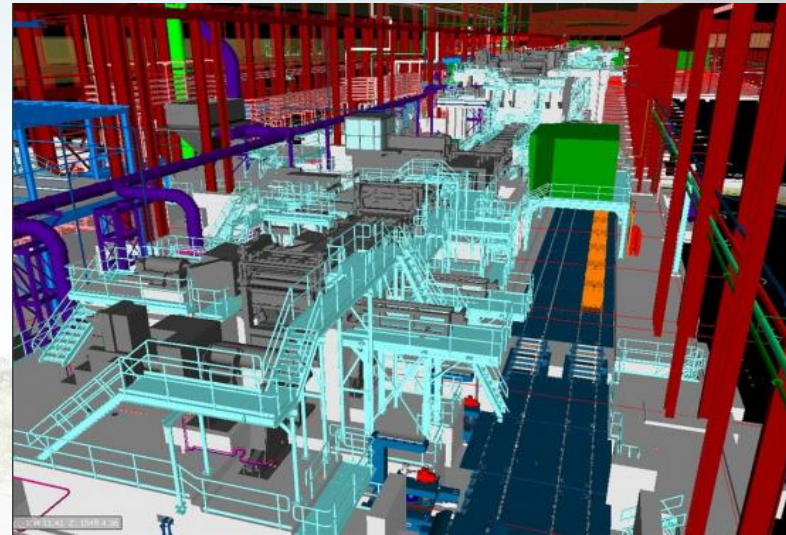
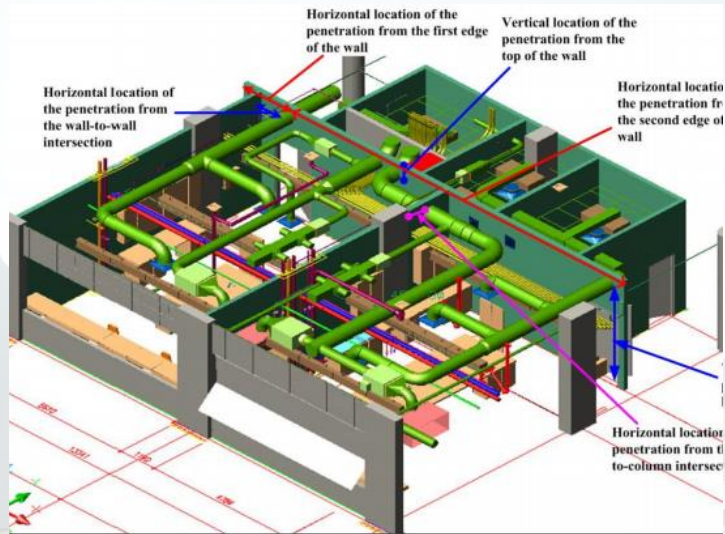


Digital Delivery (BIM)

– Brief History

- *Concept started in the late 1970's early 1980's for the Building Industry (Vertical Construction)*
- *Purpose was to ensure appropriate information was created in a suitable format, at the correct time, so better decisions could be made throughout design, construction and the operation of as-builts*
- *Architects, Designers, Steel Workers, Electricians, Plumbers, HVAC personnel etc. began collaborating utilizing this data and information to evolve the process of designing, building and operations. This resulted in creating a better product, faster, safer, and under budget*

Digital Delivery (BIM)



- BIM has evolved over the previous decades in the building industry through
 - Technology (CADD Systems and other digital applications and tools)
 - Enhanced Workflows
 - Enhanced Design and Construct Processes
 - Virtual Realtime design and construct collaboration

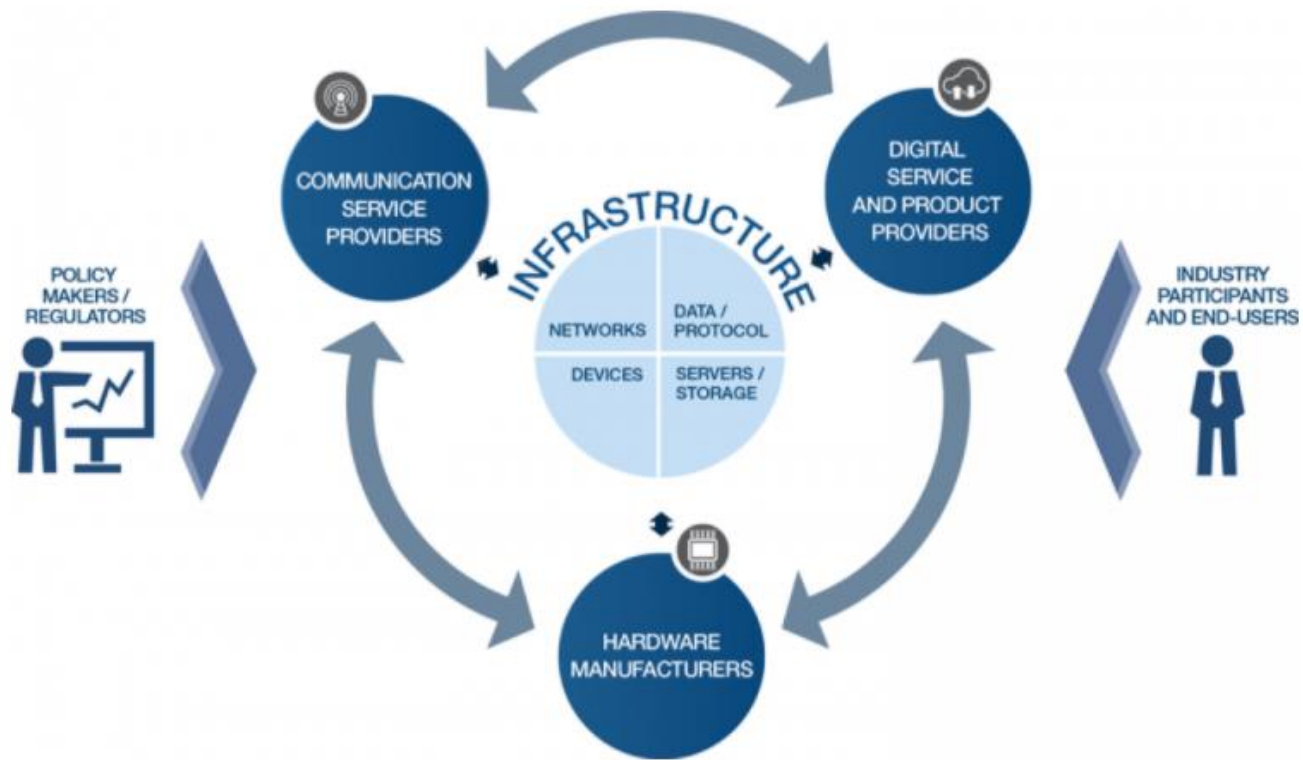
Digital Delivery

➤ *CIM*

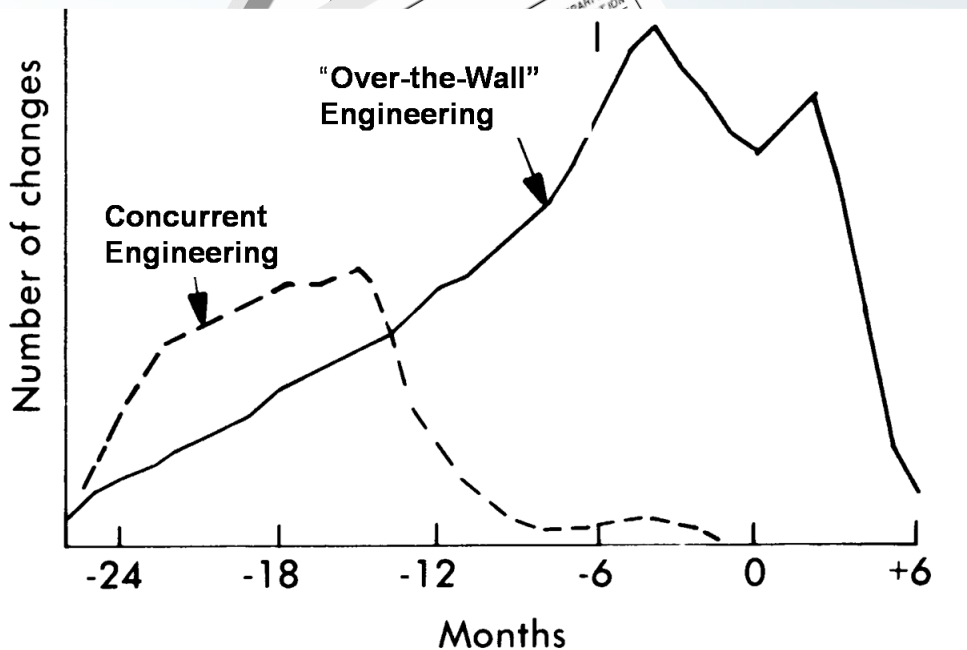
■ *Civil Information Modeling*

“Civil Information Modeling”. Very similar to BIM, however it focuses more on civil engineering.
(Horizontal Construction)

Digital Delivery Infrastructure



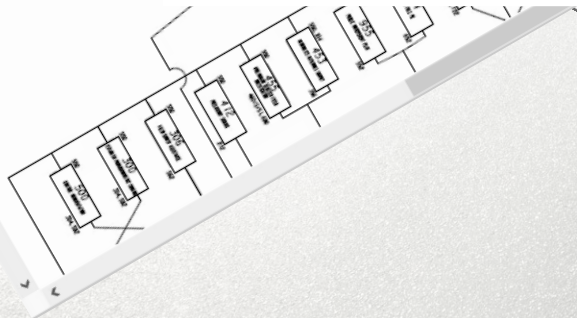
2D vs. 3D Discussion



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DESIGNED BY	M. DYDAHL
DRAWN BY	M. BEATTY
CHECKED BY	HELINA BRIDGE TN
APPROVED BY	J. WALTHER / B

BRIDGE REPLACEMENT
 FLOWCHART



13 DRAWINGS
 SHOWN (REVISION NO.)
 13000
 2004

SLAB DETAILS - SHEET 1	
SLAB DETAILS - SHEET 2	
SLAB DETAILS - SHEET 3	
SLAB DETAILS - SHEET 4	
SLAB DETAILS - SHEET 5	
SLAB DETAILS - SHEET 6	
SLAB DETAILS - SHEET 7	
SLAB DETAILS - SHEET 8	
SLAB DETAILS - SHEET 9	
SLAB DETAILS - SHEET 10	
SLAB DETAILS - SHEET 11	
SLAB DETAILS - SHEET 12	
SLAB DETAILS - SHEET 13	

SECTION

TITLE

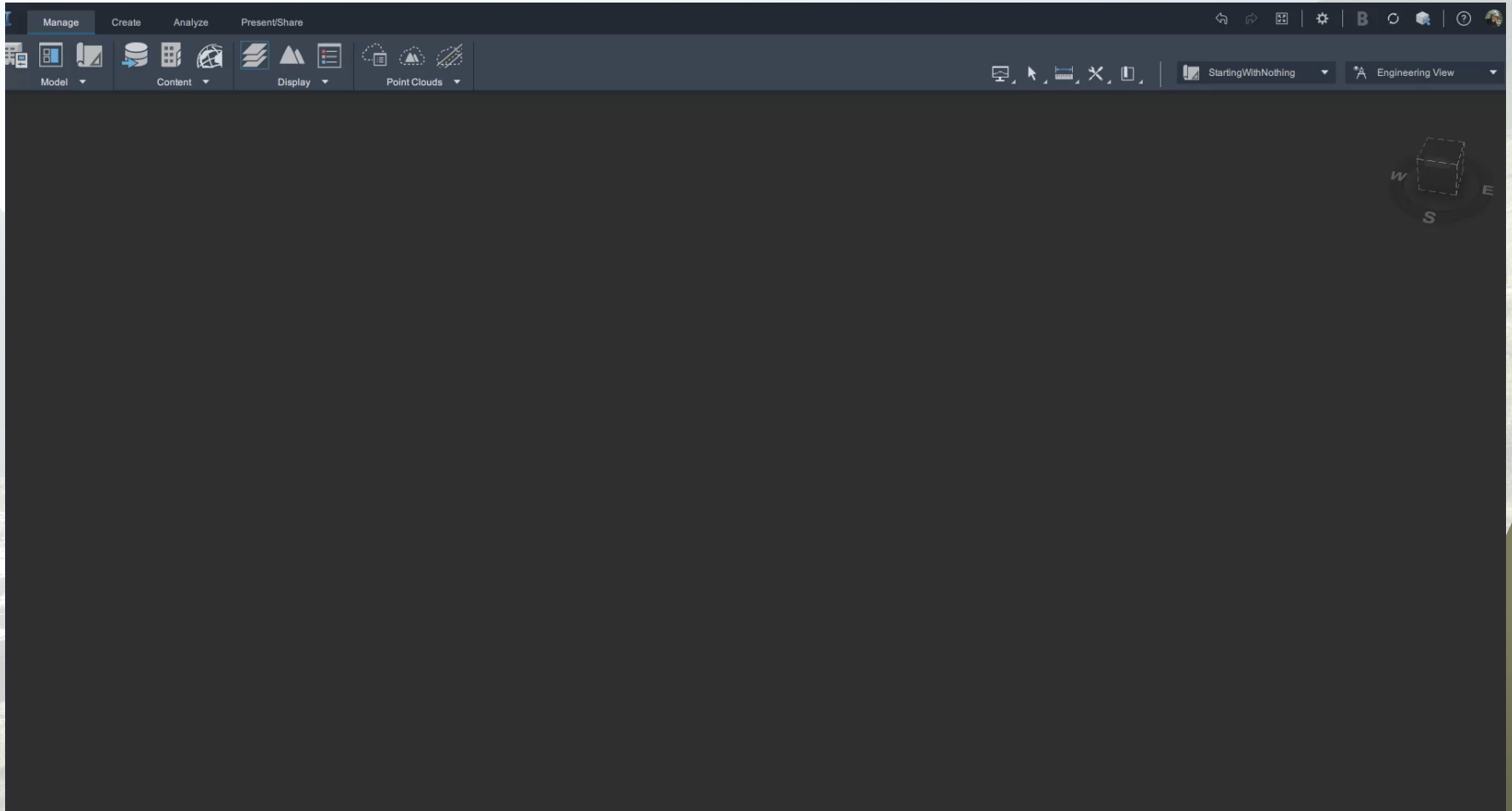
LIST OF DRAWINGS

MDTA

STANDARD BRIDGE FOR TYPE 16000
 STANDARD BRIDGE FOR TYPE 16000
 STANDARD BRIDGE FOR TYPE 16000



Digital Delivery -



Digital Delivery -





MDT Digital Delivery Roadmap Purpose

*“To bridge the gap between strategy
and execution”*

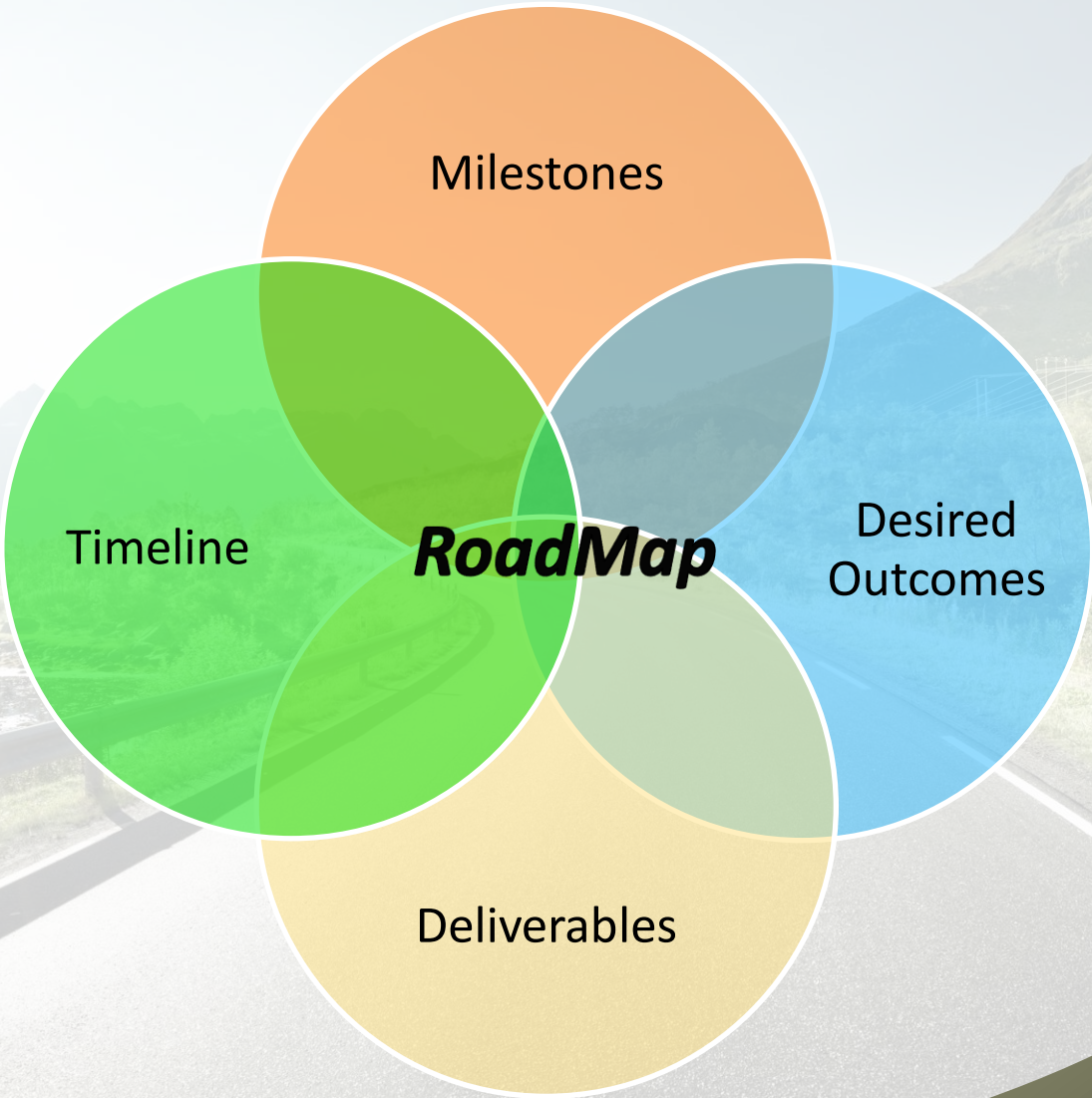
RoadMap – Objectives

Target program deliverables

Identify MDT desired outcomes

Communicate a timeline

List specific & required milestones



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Digital Delivery - Deliverables

Digital Media	Digital Collaboration	3D Digital Model	Implementation	Lifecycle
<ul style="list-style-type: none"> • Web Portal • Advanced PI Model Review 	<ul style="list-style-type: none"> • Digital Workflows • Collaborations Best Practices • Digital Design Standards • 3D Survey Request Process 	<ul style="list-style-type: none"> • 3D Model (Design and Analysis) • 2D Plan Sheets – Data Exported from Model • Geospatial (Asset and Data Referencing) • Digital Signatures • 3D Survey Deliverable 	<ul style="list-style-type: none"> • 3D Model Delivery • AMG Operability • Digital Inspection Methods • Asset Management Process 	<ul style="list-style-type: none"> • Electronic As-Builts • Collaboration on New Construction • Asset Management Data

- In progress – To be enhanced/matured/refined
- Focused Deliverables – define and deliver
- Deliverables – forecasted beyond 2022 (Workflows/Processes will be started)

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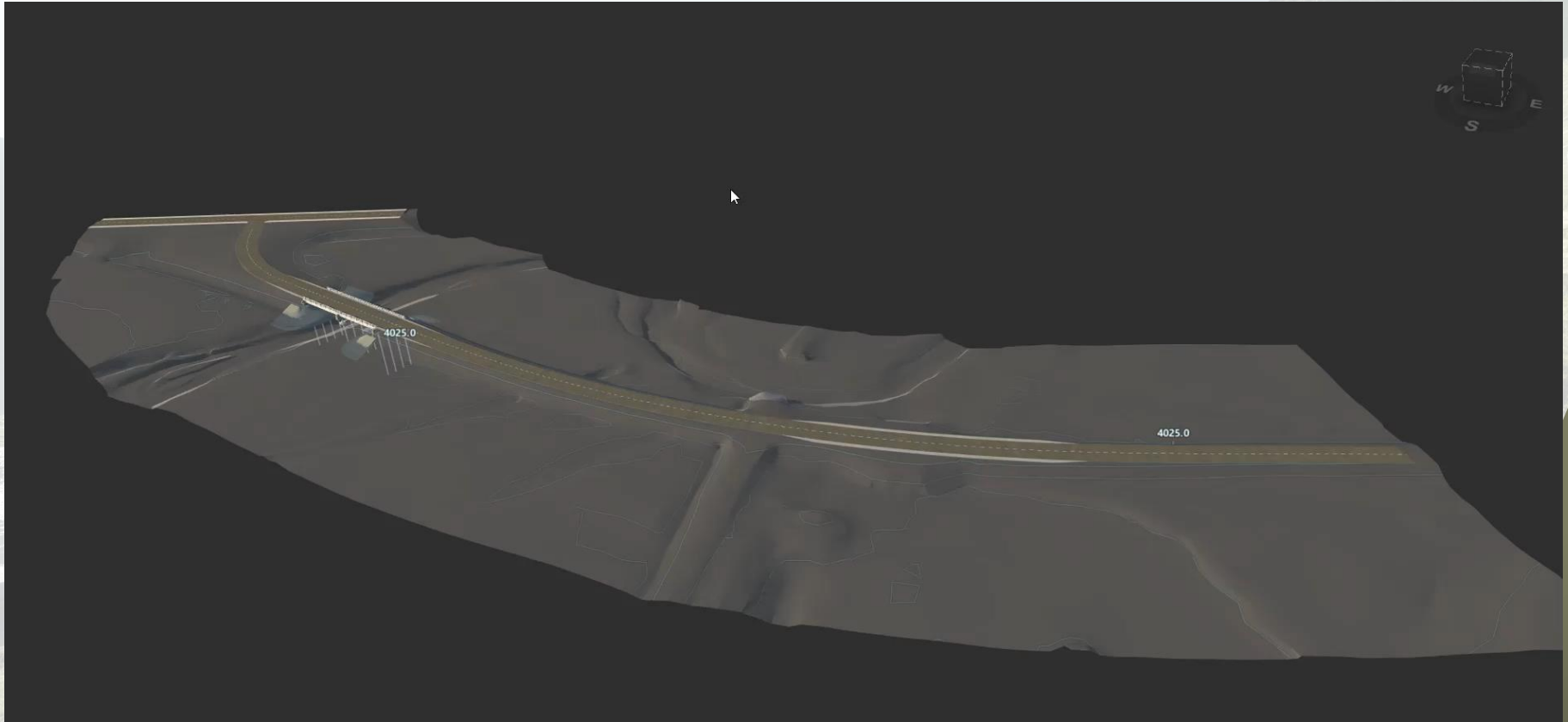
Communicate a timeline

List specific & required milestones

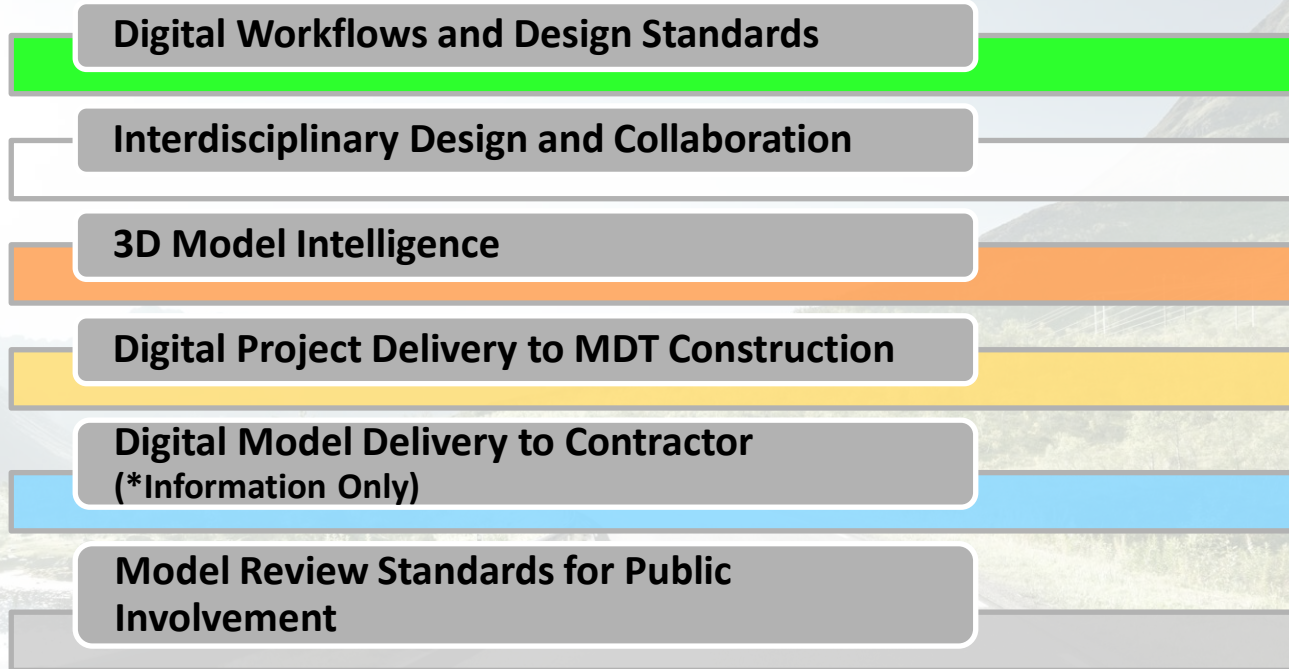
Digital Delivery - Desired Outcomes



3D Model Intelligence

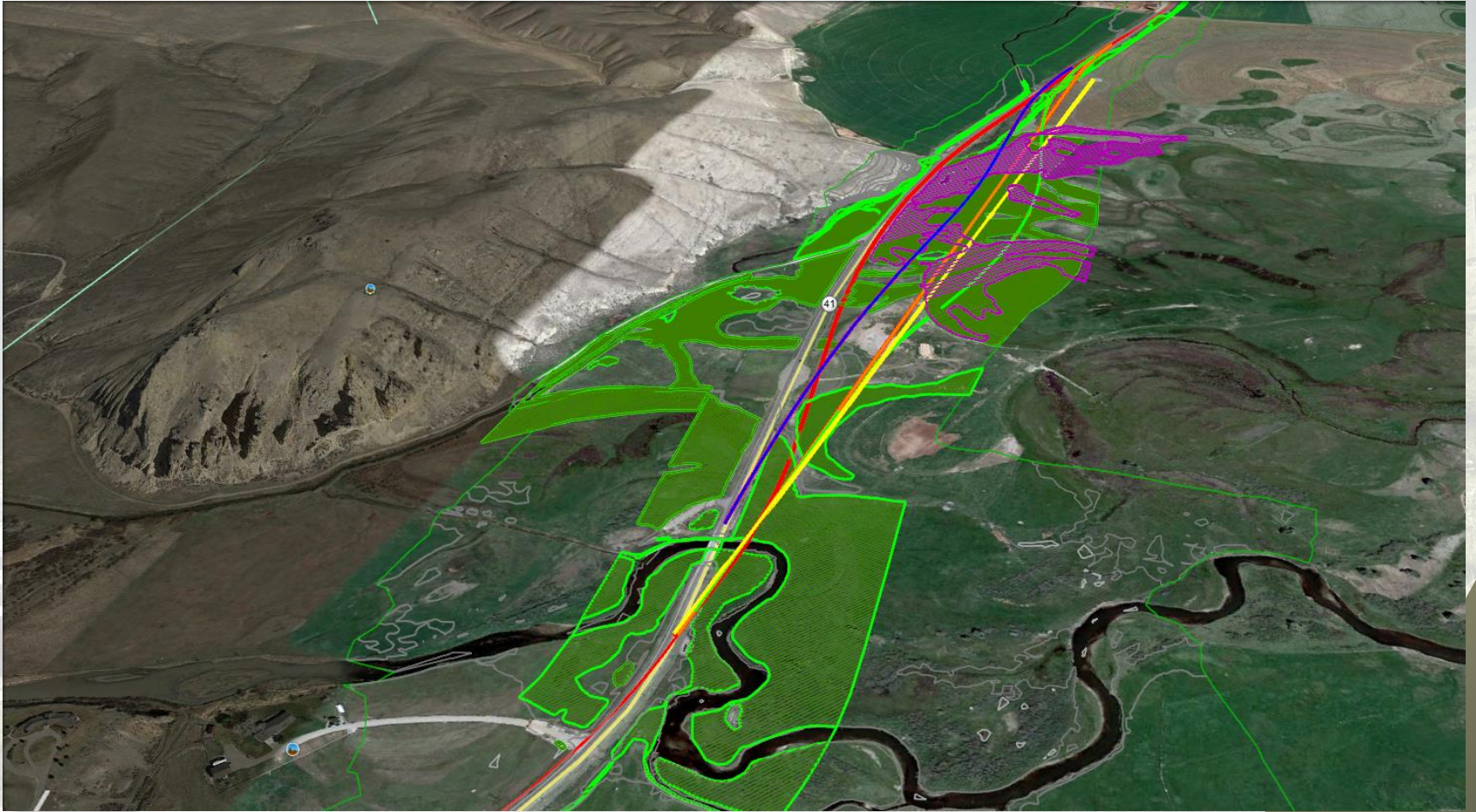


Digital Delivery - Desired Outcomes



Model Review Standards for Public Involvement

Model Review Standards for Public Involvement



RoadMap – Objectives

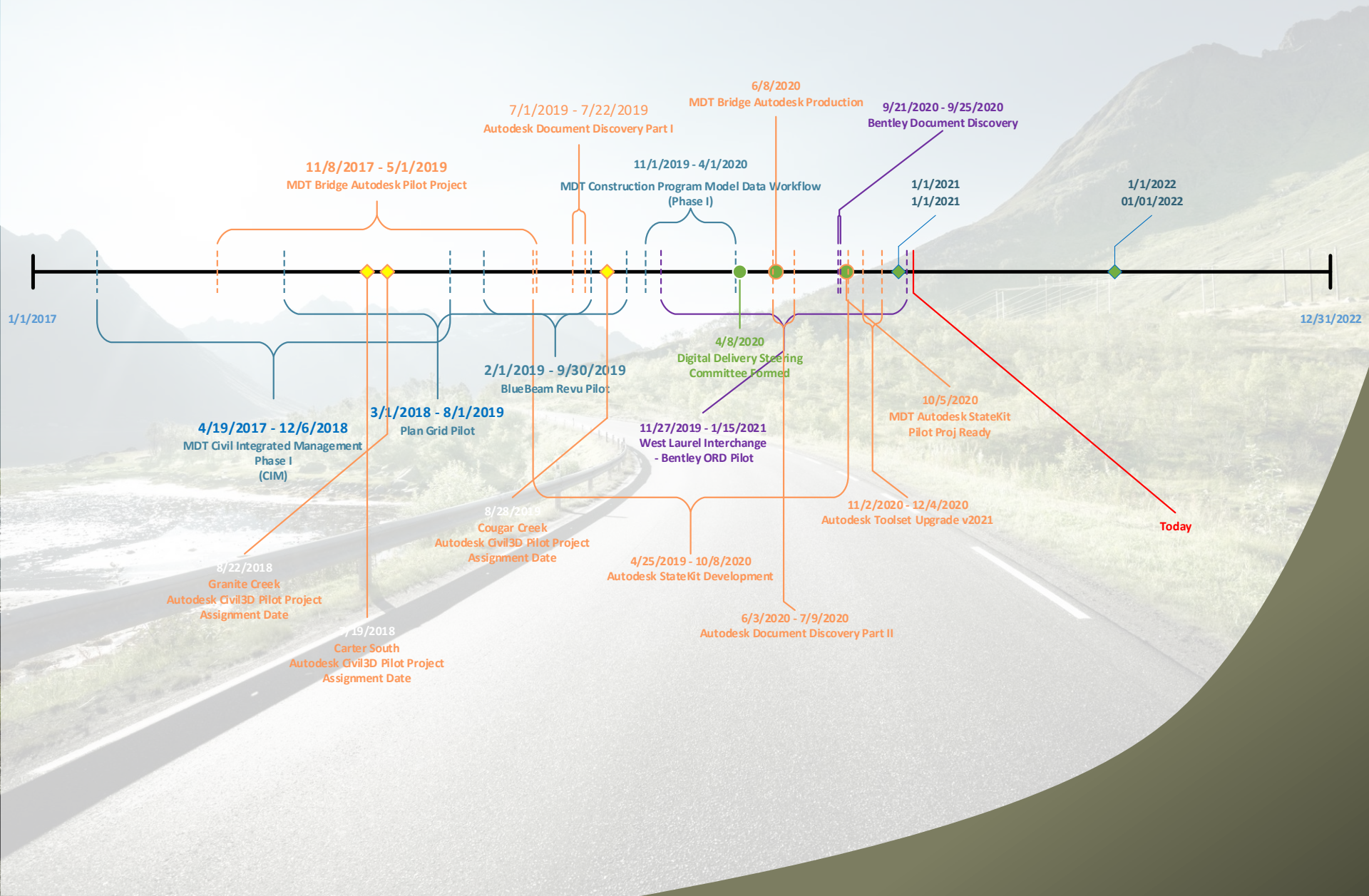
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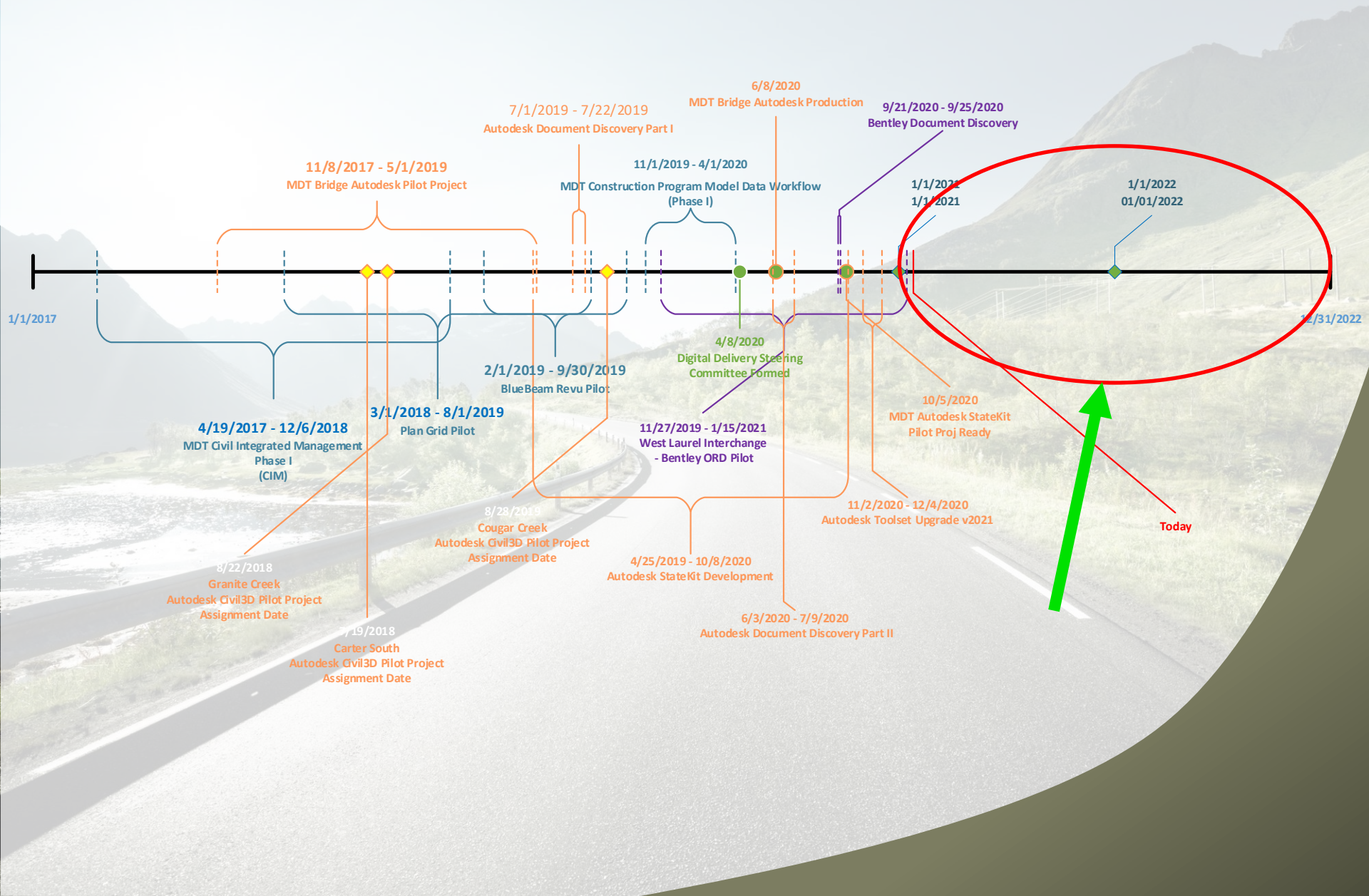
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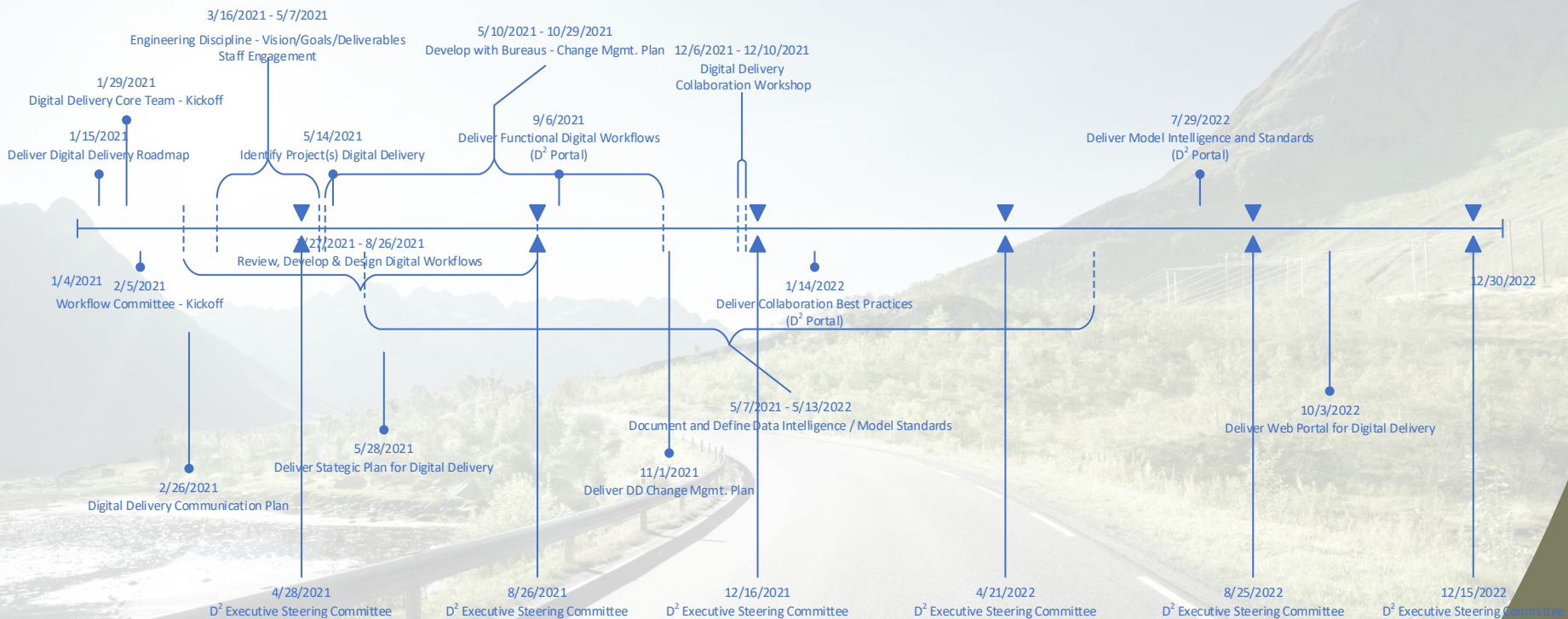
Timeline



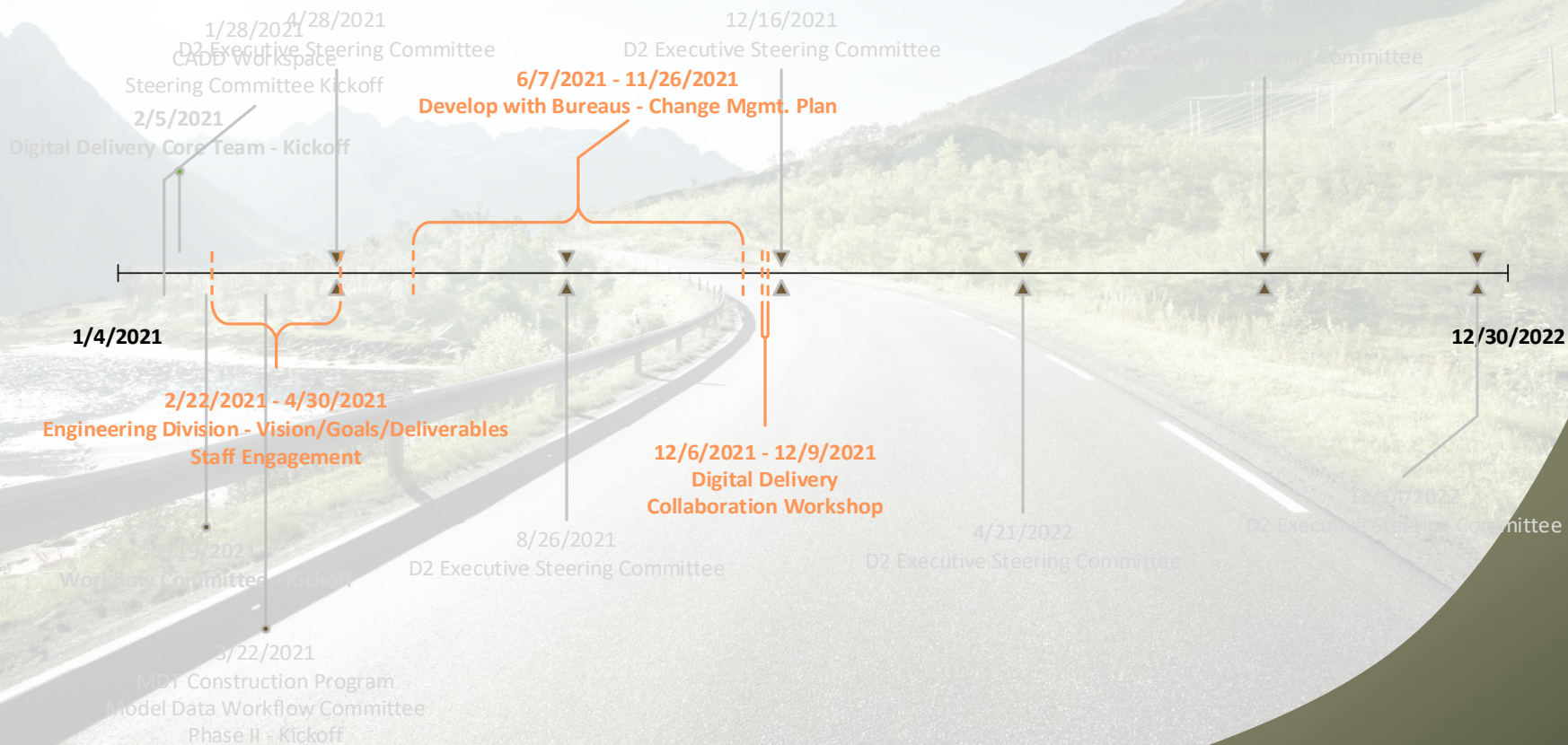
Timeline



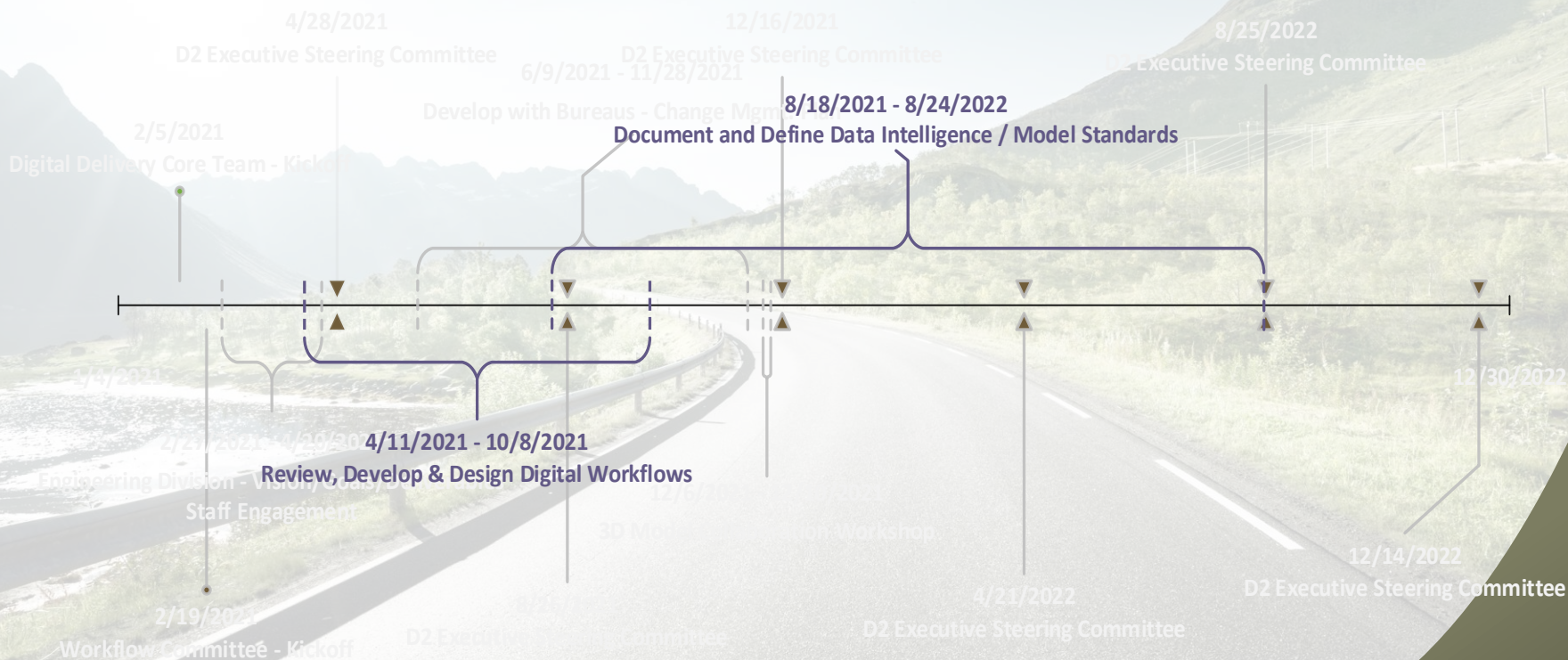
Timeline



- Engineering Staff
 - Digital Delivery Committee to reach out to all staff
 - Individual discipline strategic plans for Digital Delivery
 - Ownership and Participation
 - Collaboration
 - 3D Model Collaboration Workshop



- Staff Engagement - Involvement
 - Workflows
 - Process
 - Standards



RoadMap – Objectives

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Digital Delivery - Milestones


- RoadMap Delivery
- Communication Plan*
- Engineering Workflow Committee & Subcommittee Charter
- Project Submission for Digital Delivery
- Strategic Plan*
- Functional Workflows
- Collaboration Best Practices
- Model Intelligence and Standards
- Change Management Plan*
- Web Portal

RISKS



Roadmap Risk

- ✓ Continued Executive Support, Guidance and Commitment
- ✓ Competing Projects and Timelines
- ✓ RFP (CADD Platform)
- ✓ Knowledge Gap (2D Drafting to 3D Modeling)
- ✓ Financial Commitment (Technology growth = Expense growth)
- ✓ Continued Employee Buy-In and Support
- ✓ Data Workflow Integrity
- ✓ Standards
- ✓ Repeatable Process
- ✓ Communication

- 
- A scenic landscape featuring a winding asphalt road that curves through a valley. To the left, a metal guardrail runs along the edge of the road, with a rocky riverbed and sparse vegetation below. In the background, a range of mountains is visible under a clear sky. To the right, a grassy hillside rises, with a power line tower and its cables visible. The overall scene is bright and clear, suggesting a sunny day.
- Questions
 - Feedback
 - Comments