



CREATIVE CONSTRUCTION™

Digital by Default

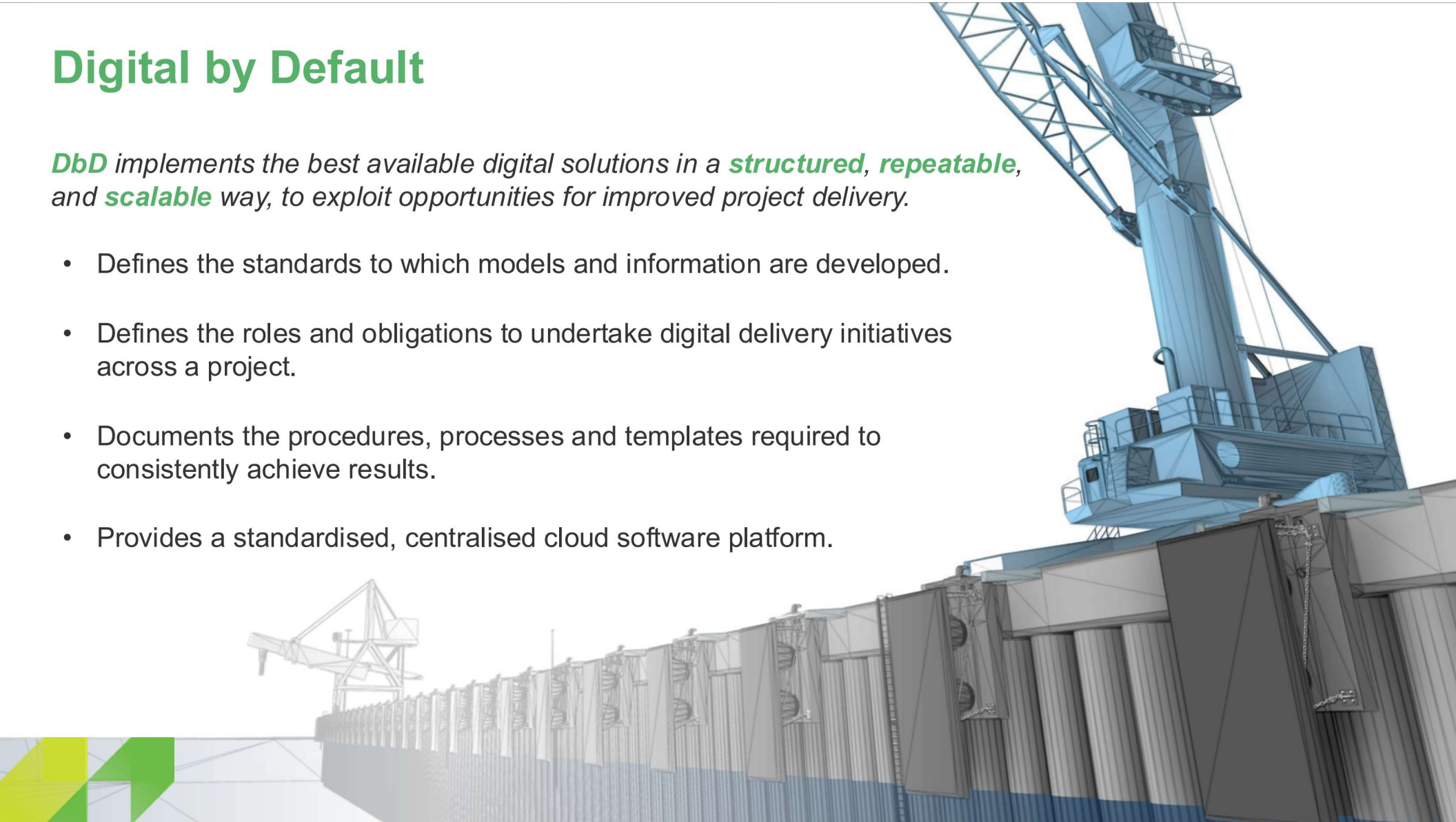
A digital engineering initiative for delivery
of marine infrastructure



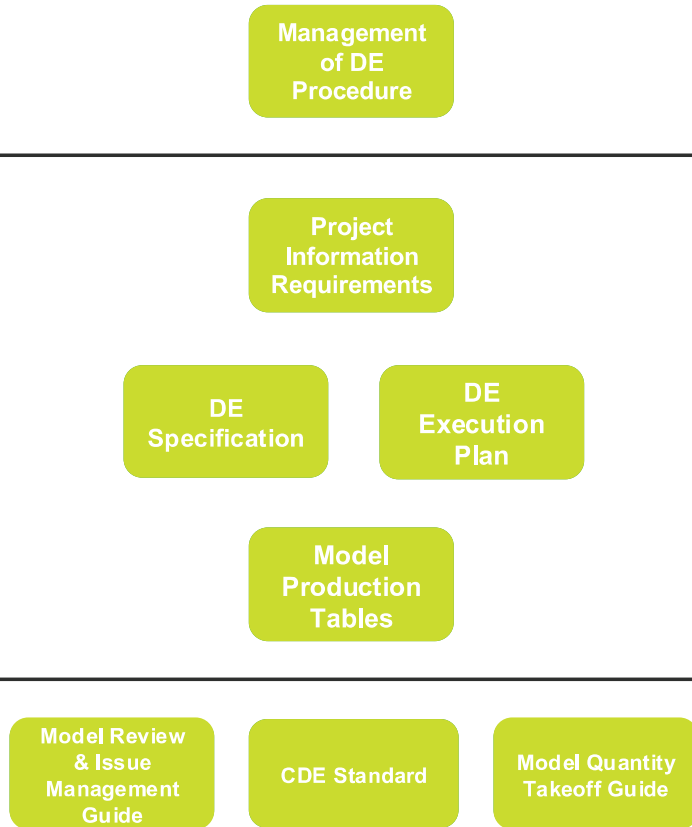
Digital by Default

*DbD implements the best available digital solutions in a **structured, repeatable,** and **scalable** way, to exploit opportunities for improved project delivery.*

- Defines the standards to which models and information are developed.
- Defines the roles and obligations to undertake digital delivery initiatives across a project.
- Documents the procedures, processes and templates required to consistently achieve results.
- Provides a standardised, centralised cloud software platform.

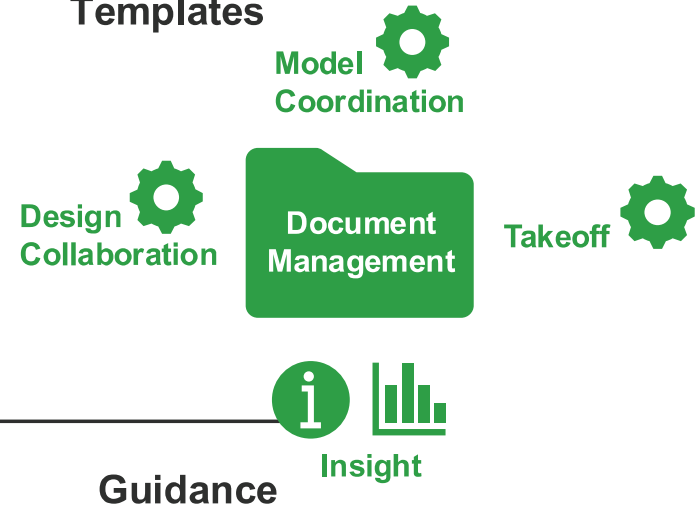


Digital by Default - System



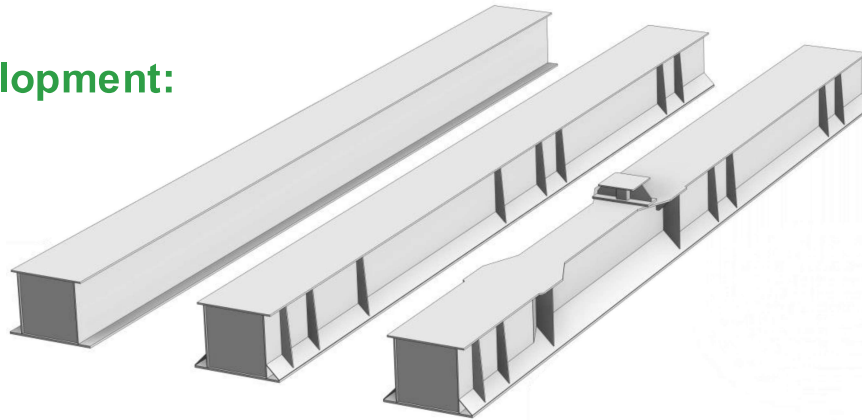
Management Framework Data Environment

Project Documents & Construction Cloud Templates

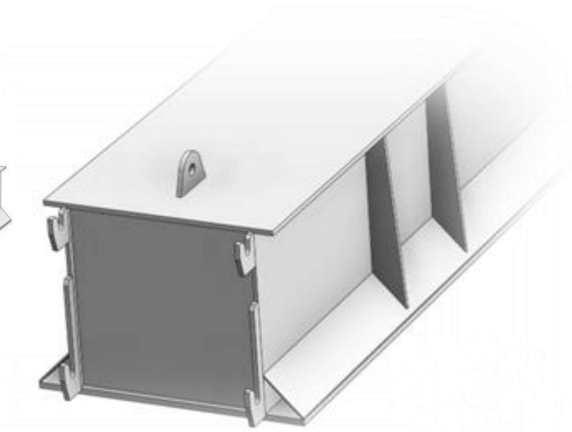
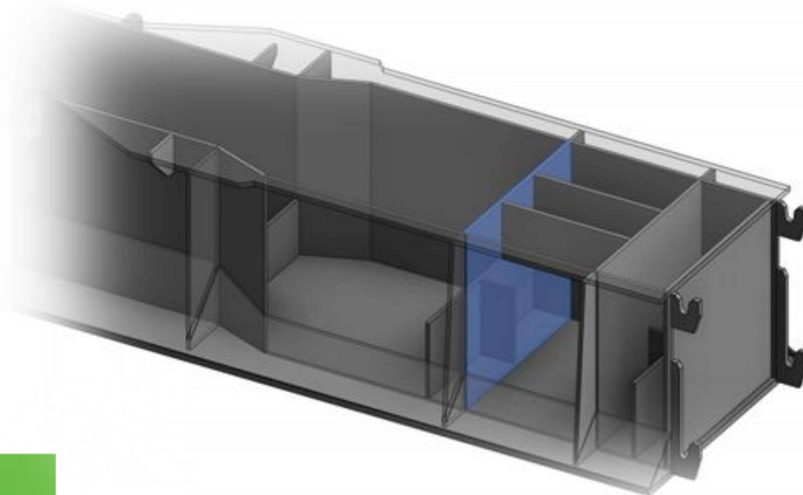


Key Information Outcomes

Level of Development:



Granularity:



Level of Information:

IFC Type	
IfcName [Type]	Plate Rectangular :20mm
IfcExportElementTypeAs	IfcPlateType
Dimensions	
Volume	0.018 m ³
Depth	0.943 m
Offset from host	0.000 m
Width	0.960 m
Mass	141.30 kg
Thickness	0.020 m



Model-Based Design Management

The screenshot displays the Autodesk software interface for Model-Based Design Management. The main view shows a 3D model of a building structure with various components highlighted in green and yellow. A 'Changes' panel is open, showing the following statistics:

Category	Count
Added	23
Removed	0
Modified	37

The 'Changes' panel also includes a 'Disciplines affected' section with a search filter and a 'Flat Result List' showing the following items:

- Lifting Lug Tapered Double [365669]
- Lifting Lug Tapered Double [365685]
- Lifting Lug Tapered Single [367012]
- Lifting Lug Tapered Single [367095]
- Plate Rectangular Perpendicular [371140]

An 'INFORMATION' panel is open for the selected object, 'Plate Rectangular Perpendicular [371140]'. It displays the following details:

Changes between Steelwork modelling example.rvt v1 & Steelwork modelling example.rvt v2

Property	Value
Thickness by	5.000 mm
Steelwork modelling example.rvt v2	20.000 mm
Steelwork modelling example.rvt v1	15.000 mm
Type Name to	20mm

The information panel also includes a red-bordered box with the text: 'The shape of this object has been changed' and a 'Show in model' button.

Project Delivery Outcomes

Coordination:

- Early visibility and input to design development.
- Constructability-driven coordination.
- Participation of more stakeholders.

Control:

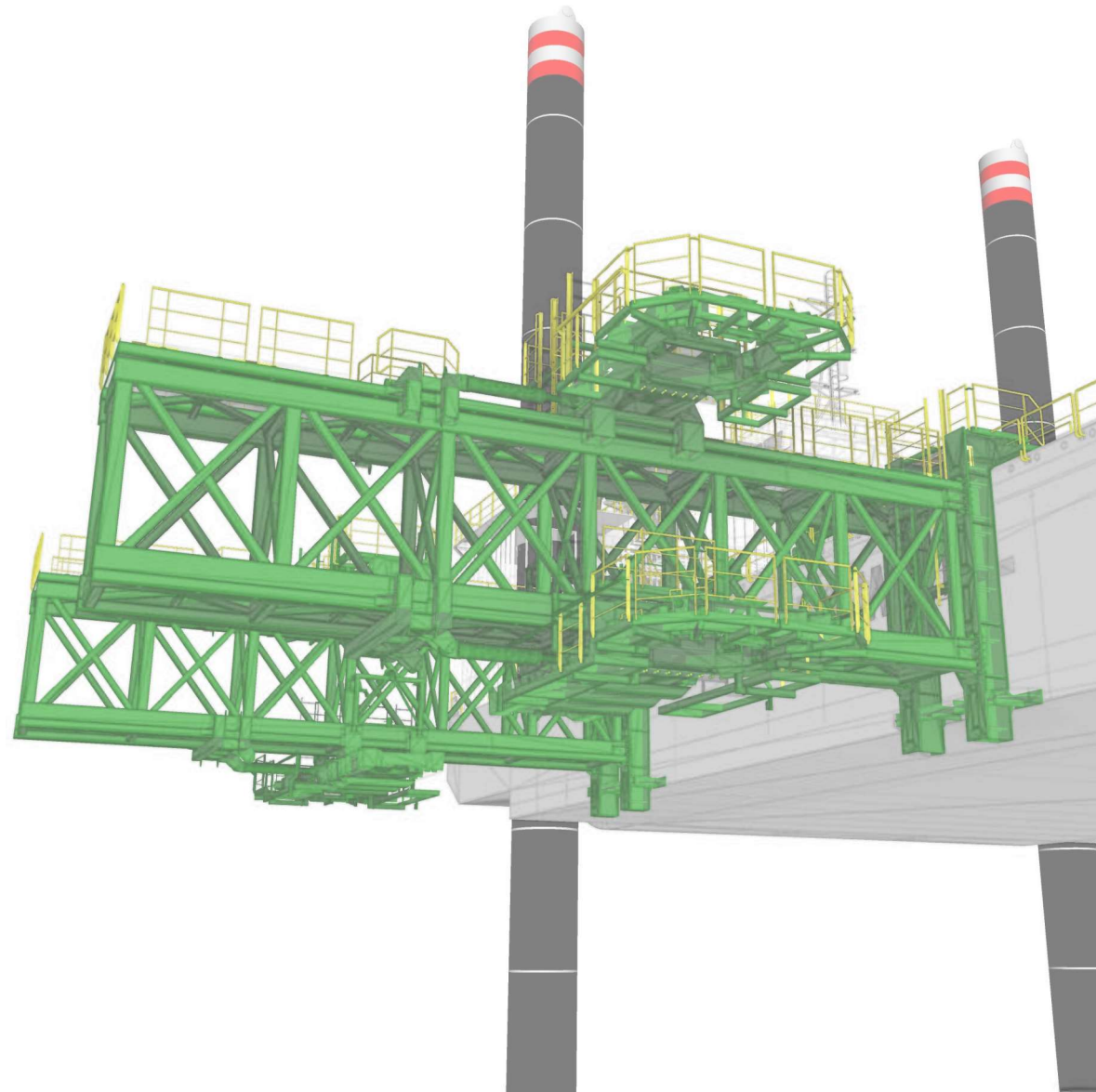
- Single source of truth.
- All issues identified and managed in one place.
- Automated and transparent reporting.

Change Management:

- Identify and understand change early.
- Assess impact on quantities.
- Less issues at stage gates.

Innovation:

- Standardised, quality models and data on which to build new tools and add value.



Tray Position

Body Rotation

Boom Angle

Boom Radius 42.426

Lifting Capacity 35.267

Show Hammer?

Hammer Offset

Show Marker?

Align to Pile?

Show Water?

Tide Level
1.89

Show Seabed?

Piles

Show Piles?

Pile Drive

Pile Radius 12000

Pile Length 40000

Outrigger 1 Angle P=-82.528 Y=-

Outrigger 2 Angle P=-81.225 Y=-

Pile Rake 1 in 3

Pile Angle

Barge

Legs

Outrigger 1

Outrigger 2



Clash List

Save / Load

Save Name Number Save View

Auto-Align

Current Pile

Select Outrigger

Lock Gates?

Lock Rotation to Gate

Scene State

Hide All Show All

Hide Design Hide Piles

Add State Name

Marine Plant

- 5m Piling Barge
- Jackup Barge
- Material Barge
- Roro Barge
- Tug Boat
- 65m Barge



Tray Position

Body Rotation

Boom Angle

Boom Radius 42.426

Lifting Capacity 35.267

Show Hammer?

Hammer Offset

Show Marker?

Align to Pile?

Show Water?

Tide Level
1.89

Show Seabed?

Piles

Show Piles?

Pile Drive

Pile Radius 12000

Pile Length 40000

Outrigger 1 Angle P=-82.528 Y=-

Outrigger 2 Angle P=-81.225 Y=-

Pile Rake 1 in 3

Pile Angle

Barge

Legs

Outrigger 1

Outrigger 2



Clash List

Empty list area

Save / Load

Save Name Number Save View

Auto-Align

Current Pile

Select Outrigger

Lock Gates?

Lock Rotation to Gate

Scene State

Hide All Show All

Hide Design Hide Piles

Add Stage2

Stage1

Stage2

Marine Plant

- 55m Piling Barge
- Jackup Barge
- Material Barge
- Roro Barge
- Tug Boat
- 65m Barge



Tray Position

Body Rotation

Boom Angle

Boom Radius 42.426

Lifting Capacity 35.267

Show Hammer?

Hammer Offset

Show Marker?

Align to Pile?

Show Water?

Tide Level
1.89

Show Seabed?

Piles

Show Piles?

Pile Drive

Pile Radius 12000

Pile Length 40000

Outrigger 1 Angle P=-82.528 Y=-

Outrigger 2 Angle P=-81.225 Y=-

Pile Rake 1 in 3

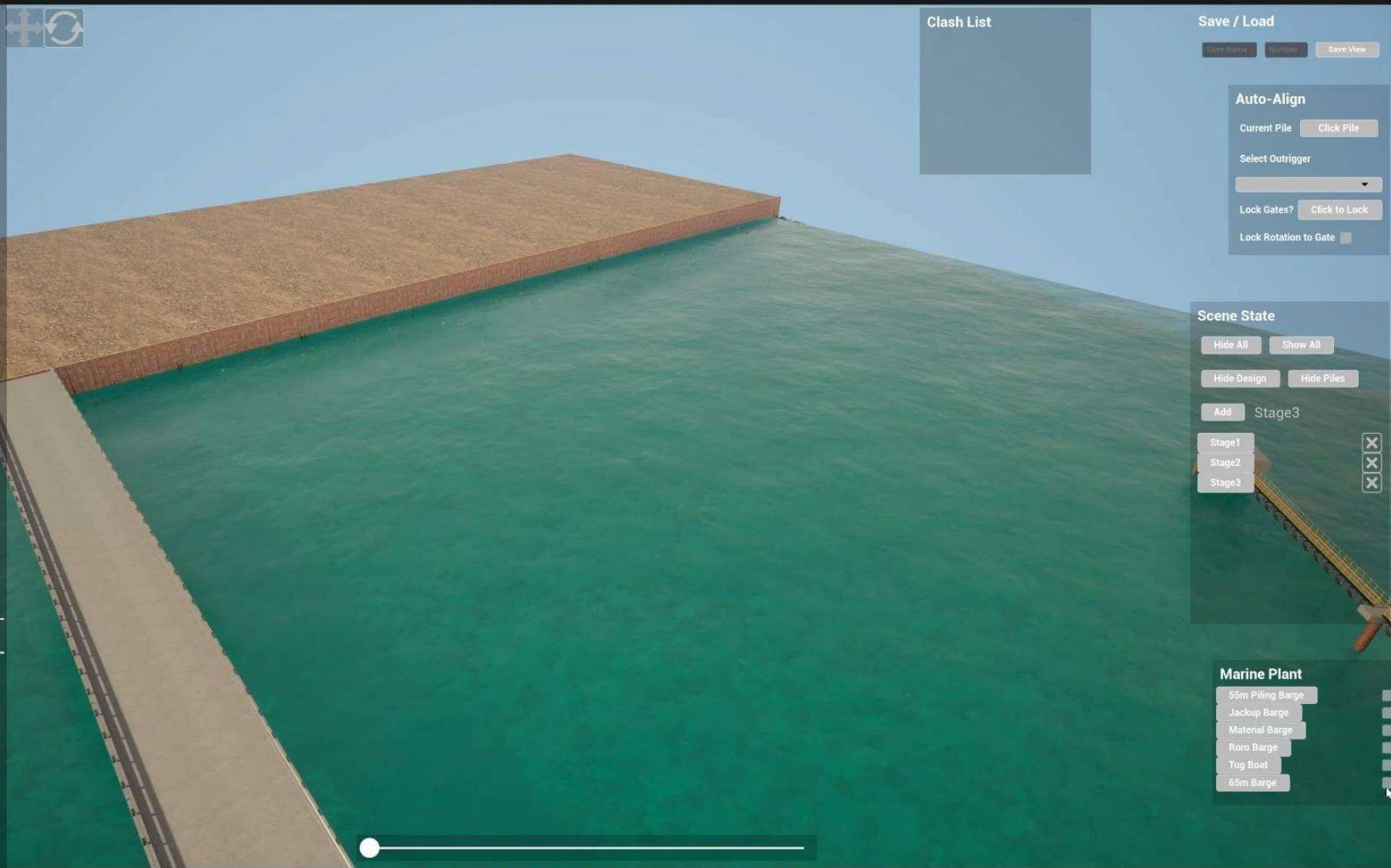
Pile Angle

Barge

Legs

Outrigger 1

Outrigger 2



Clash List

Save / Load

Save Name Number Save View

Auto-Align

Current Pile

Select Outrigger

Lock Gates?

Lock Rotation to Gate

Scene State

Hide All Show All

Hide Design Hide Piles

Add Stage3

Stage1

Stage2

Stage3

Marine Plant

- 55m Piling Barge
- Jackup Barge
- Material Barge
- Roro Barge
- Tug Boat
- 65m Barge

Tray Position

Body Rotation

Boom Angle

Boom Radius 42.426

Lifting Capacity 35.267

Show Hammer?

Hammer Offset

Show Marker?

Align to Pile?

Show Water?

Tide Level 1.89

Show Seabed?

Piles

Show Piles?

Pile Drive

Pile Radius 12000

Pile Length 40000

Outrigger 1 Angle P=-82.528 Y=-

Outrigger 2 Angle P=-81.225 Y=-

Pile Rake 1 in 3

Pile Angle

Barge

Legs

Outrigger 1

Outrigger 2



Clash List

Save / Load

Save Name Number Save View

Auto-Align

Current Pile

Select Outrigger

Lock Gates?

Lock Rotation to Gate

Scene State

Hide All Show All

Hide Design Hide Piles

Add State Name

Stage1

Stage2

Stage3

Marine Plant

- 55m Piling Barge
- Jackup Barge
- Material Barge
- Roro Barge
- Tug Boat
- 65m Barge

Tray Position

Body Rotation

Boom Angle

Boom Radius 31.549

Lifting Capacity 56.434

Show Hammer?

Hammer Offset

Show Marker?

Align to Pile?

Show Water?

Tide Level

1.89

Show Seabed?

Piles

Show Piles?

Pile Drive

Pile Radius 12000

Pile Length 40000

Outrigger 1 Angle P=-89.286 Y=-

Outrigger 2 Angle P=-81.225 Y=-

Pile Rake 1 in 3

Pile Angle

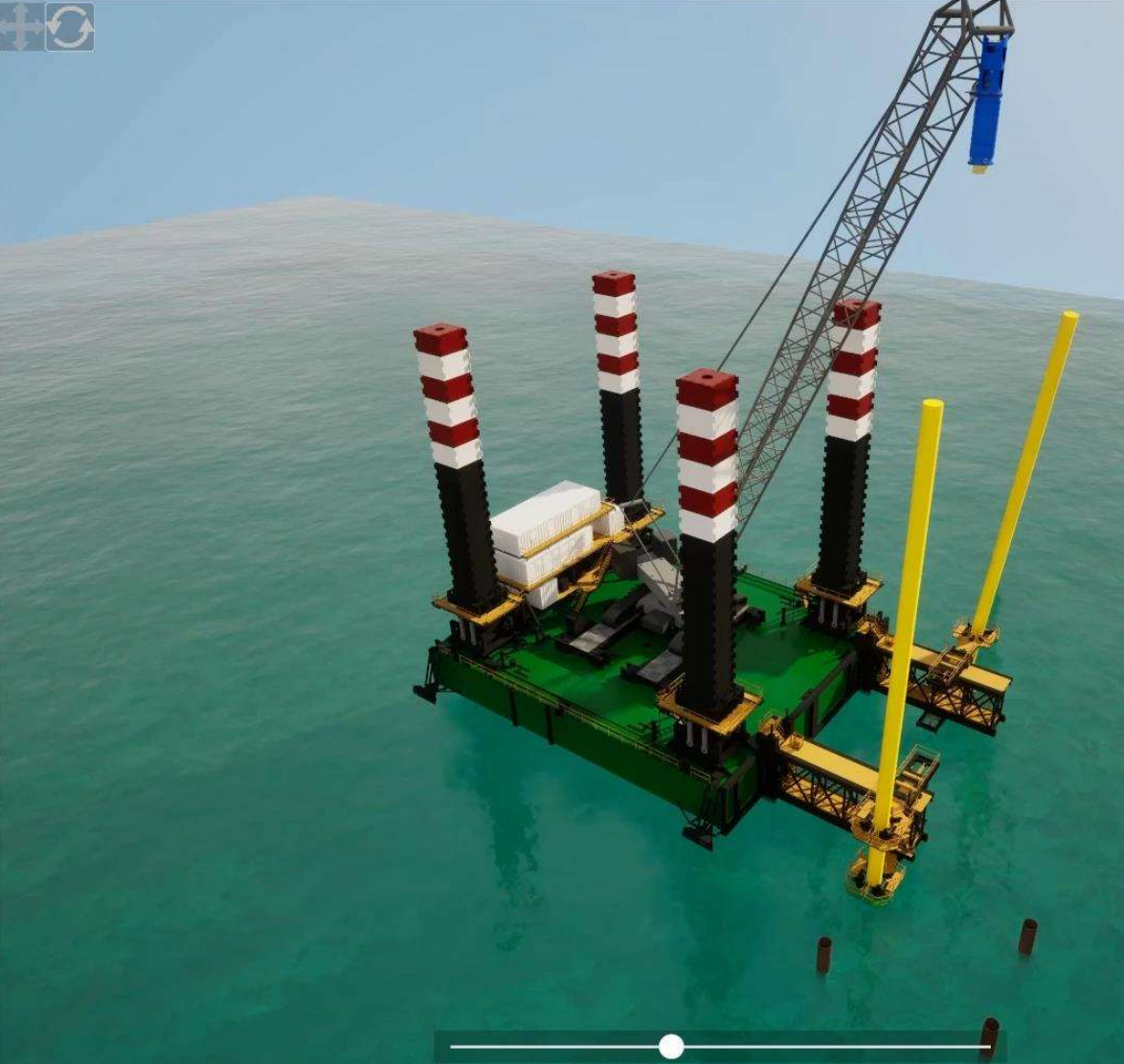
0

Barge

Legs

Outrigger 1

Outrigger 2



Clash List

Save / Load

Save Name

Number

Save View

Auto-Align

Current Pile BP_ConvertedPile1

Select Outrigger

Outrigger 1

Lock Gates? Locked to Gate

Lock Rotation to Gate

Scene State

Hide All

Show All

Hide Design

Hide Piles

Add

State Name

Stage1

Stage2

Stage3

Marine Plant

- 55m Piling Barge
- Jackup Barge
- Material Barge
- Roro Barge
- Tug Boat
- 65m Barge



Tray Position

Body Rotation

Boom Angle

Boom Radius 55.275

Lifting Capacity 23.1

Show Hammer?

Hammer Offset

Show Marker?

Align to Pile?

Show Water?

Tide Level
1.89

Show Seabed?

Piles

Show Piles?

Pile Drive

Pile Radius 12000

Pile Length 40000

Outrigger 1 Angle P=-89.286 Y:

Outrigger 2 Angle P=-81.225 Y:

Pile Rake 1 in 3

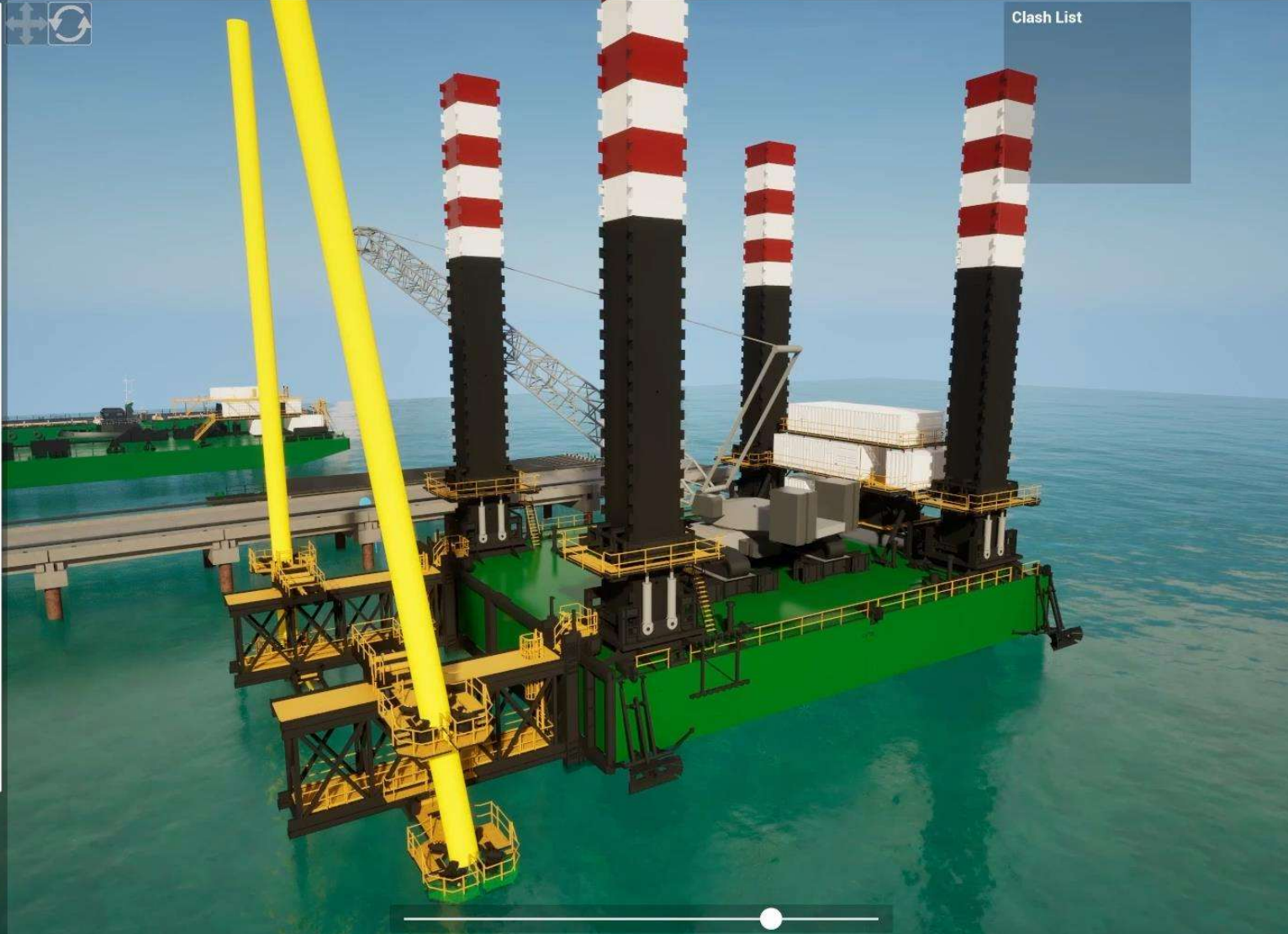
Pile Angle

Barge

Legs

Leg Depth

Leg 1 Position



Clash List

Save / Load

Save Name Number Save View

Auto-Align

Current Pile

Select Outrigger

Outrigger 1

Lock Gates?

Lock Rotation to Gate

Scene State

Add

Stage1

Stage2

Stage3

Marine Plant

- 55m Piling Barge
- Jackup Barge
- Material Barge
- Roro Barge
- Tug Boat
- 65m Barge



Tray Position

Body Rotation

Boom Angle

Boom Radius 31.348

Lifting Capacity 56.963

Show Hammer?

Hammer Offset

Show Marker?

Align to Pile?

Show Water?

Tide Level 1.89

Show Seabed?

Piles

Show Piles?

Pile Drive

Pile Radius 12000

Pile Length 40000

Outrigger 1 Angle P=-81.209 Y=-

Outrigger 2 Angle P=-81.225 Y=-

Pile Rake 1 in 3

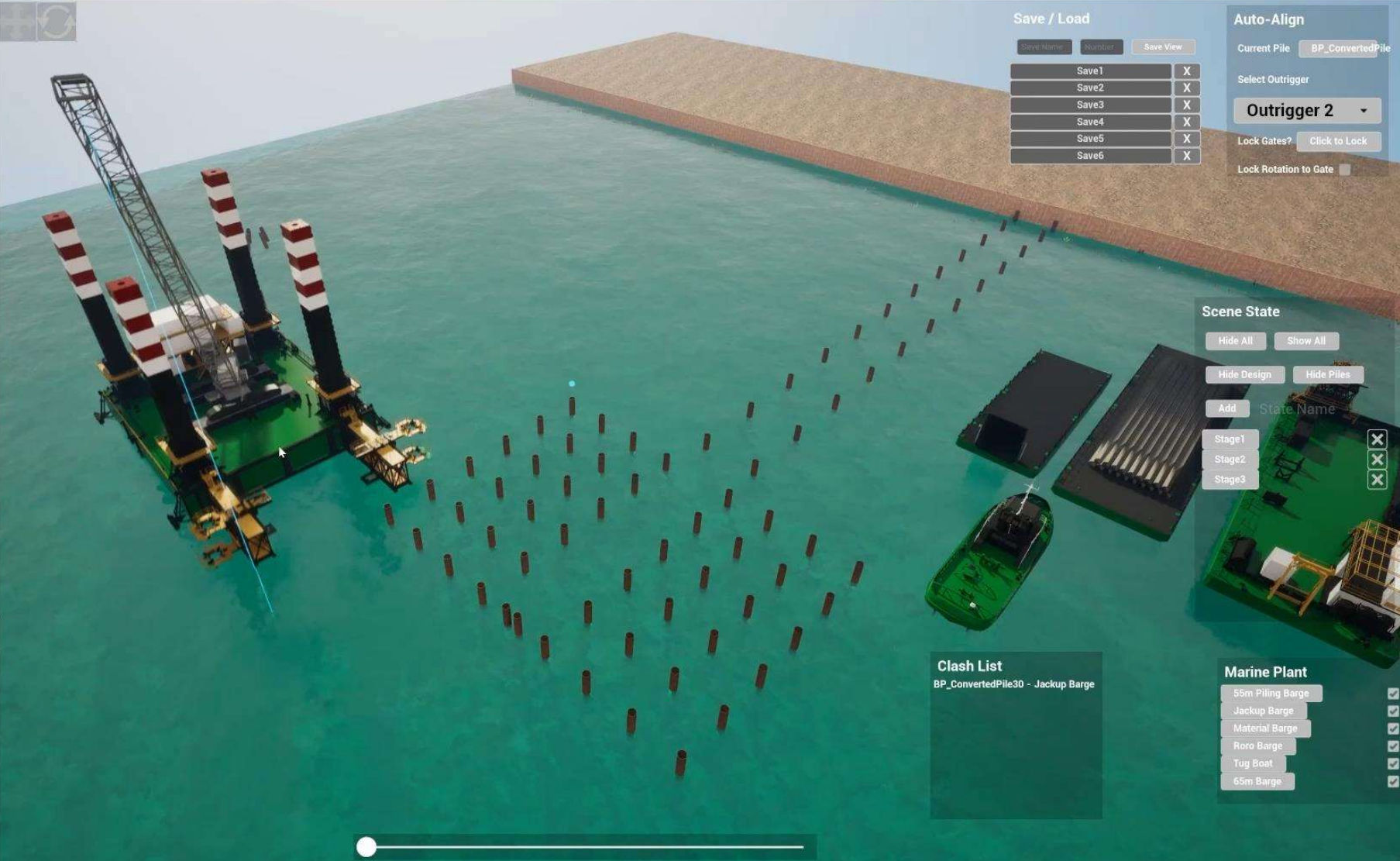
Pile Angle 0

Barge

Legs

Outrigger 1

Outrigger 2



Save / Load

Save Name Number Save View

Save1	X
Save2	X
Save3	X
Save4	X
Save5	X
Save6	X

Auto-Align

Current Pile BP_ConvertedPile

Select Outrigger

Outrigger 2

Lock Gates? Click to Lock

Lock Rotation to Gate

Scene State

Hide All Show All

Hide Design Hide Piles

Add State Name

Stage1 X

Stage2 X

Stage3 X

Clash List

BP_ConvertedPile30 - Jackup Barge

Marine Plant

- 55m Piling Barge
- Jackup Barge
- Material Barge
- Roro Barge
- Tug Boat
- 65m Barge



Thank you



mcconnelldowell.com