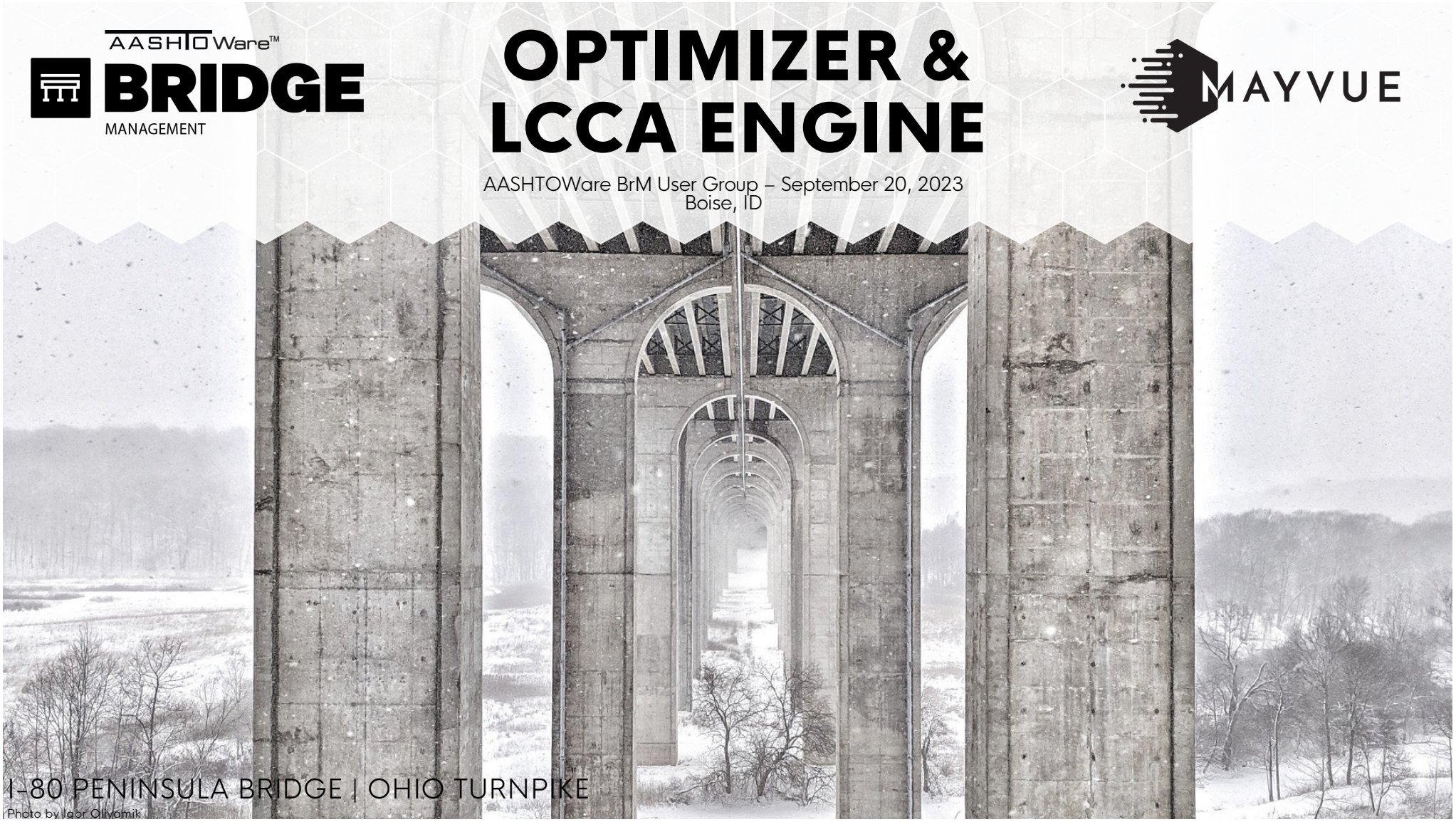
AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZER & LCCA ENGINE

MAYVUE

AASHTOWare BrM User Group – September 20, 2023
Boise, ID



I-80 PENINSULA BRIDGE | OHIO TURNPIKE
Photo by Igor Olyamik

AASHTOWare™
BRIDGE
MANAGEMENT

CONTACT

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BrM@mayvue.com
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MAYVUE

Jira Service Desk
http://support.mayvue.com

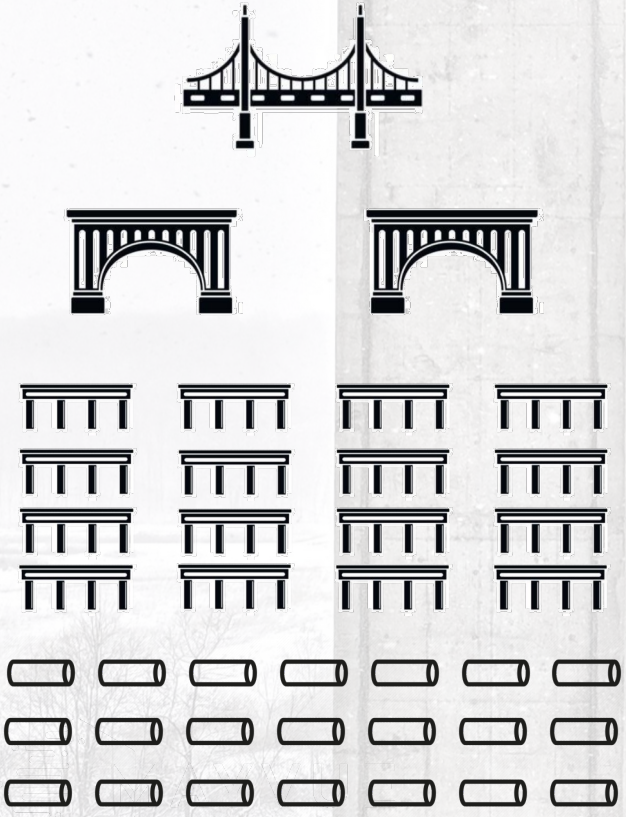
I-80 PENINSULA BRIDGE | OHIO TURNPIKE
Photo by Igor Olyamik

AASHTOWare™
BRIDGE
MANAGEMENT

NETWORK OPTIMIZER OBJECTIVES

AASHTOWare™ BRIDGE MANAGEMENT

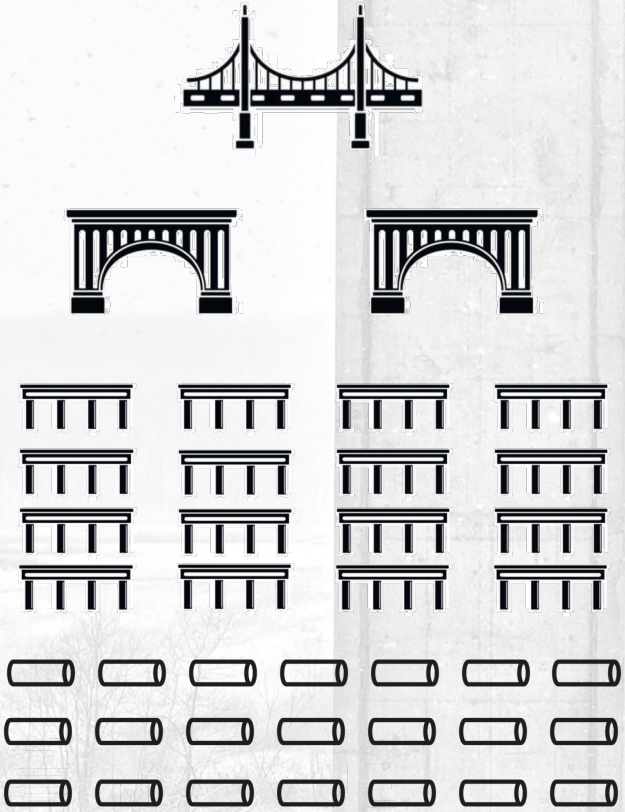
OPTIMIZER OBJECTIVES



NETWORK OF BRIDGES

AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZER OBJECTIVES



NETWORK OF BRIDGES

BUDGETS

FIXES

PROJECTIONS

AASHTOWare™
BRIDGE
MANAGEMENT
GETTING
STARTED

AASHTOWare™ BRIDGE MANAGEMENT

GETTING STARTED

STEP 1: GET YOUR DATA

STEP 2: REVIEW TRAINING

STEP 3: REVIEW PYRAMID

AASHTOWare™ BRIDGE MANAGEMENT

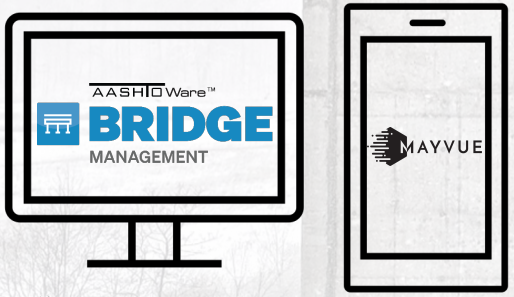
GETTING STARTED

STEP 1: GET YOUR DATA

STEP 2: REVIEW TRAINING

STEP 3: REVIEW PYRAMID

INSPECT WITH AASHTOWARE



SYNC TO AASHTOWARE

DOWNLOAD FROM FHWA

AASHTOWare™ BRIDGE MANAGEMENT

GETTING STARTED

STEP 1: GET YOUR DATA

STEP 2: REVIEW TRAINING

STEP 3: REVIEW PYRAMID

DOWNLOAD FROM FHWA

INSPECT WITH AASHTOWARE

SYNC TO AASHTOWARE

2018 User Group Presentations

AASHTOWare™ BRIDGE MANAGEMENT

GETTING STARTED

STEP 1: GET YOUR DATA

STEP 2: REVIEW TRAINING

STEP 3: REVIEW PYRAMID

YOUTUBE

MAYVUE TRAINING

PAST USER GROUP TRAINING

AASHTOWare™ BRIDGE MANAGEMENT

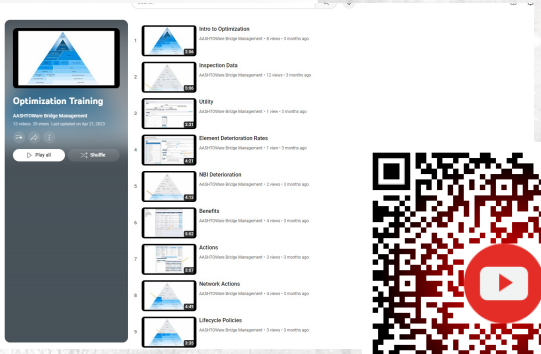
GETTING STARTED

STEP 1: GET YOUR DATA

STEP 2: REVIEW TRAINING

STEP 3: REVIEW PYRAMID

YOUTUBE



BrM Optimizer Playlist

MAYVUE TRAINING

MAYVUE

PAST USER GROUP TRAINING

Past BrM UG Presentations

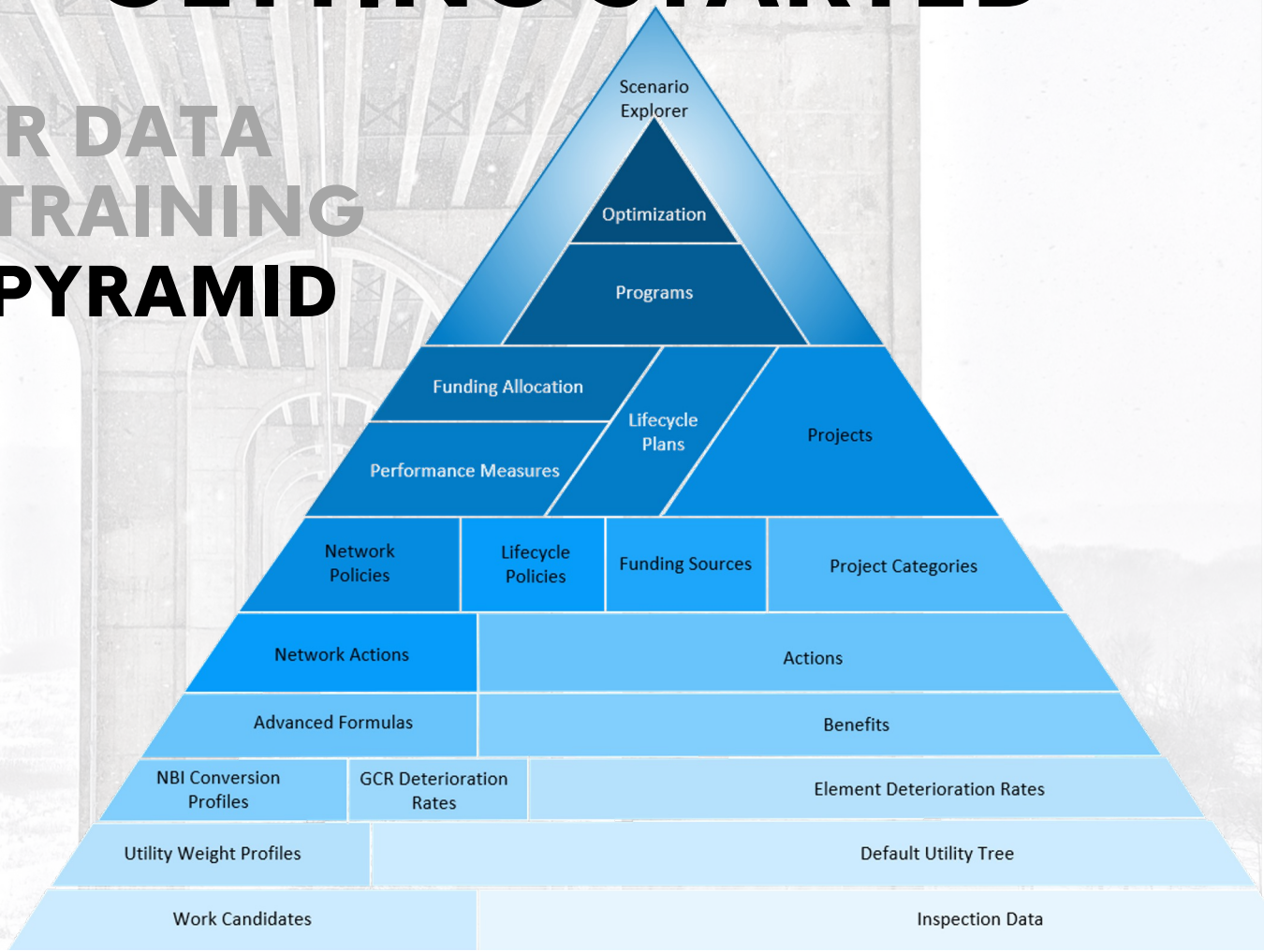
AASHTOWare™ BRIDGE MANAGEMENT

GETTING STARTED

STEP 1: GET YOUR DATA

STEP 2: REVIEW TRAINING

STEP 3: REVIEW PYRAMID



AASHTOWare™ BRIDGE MANAGEMENT

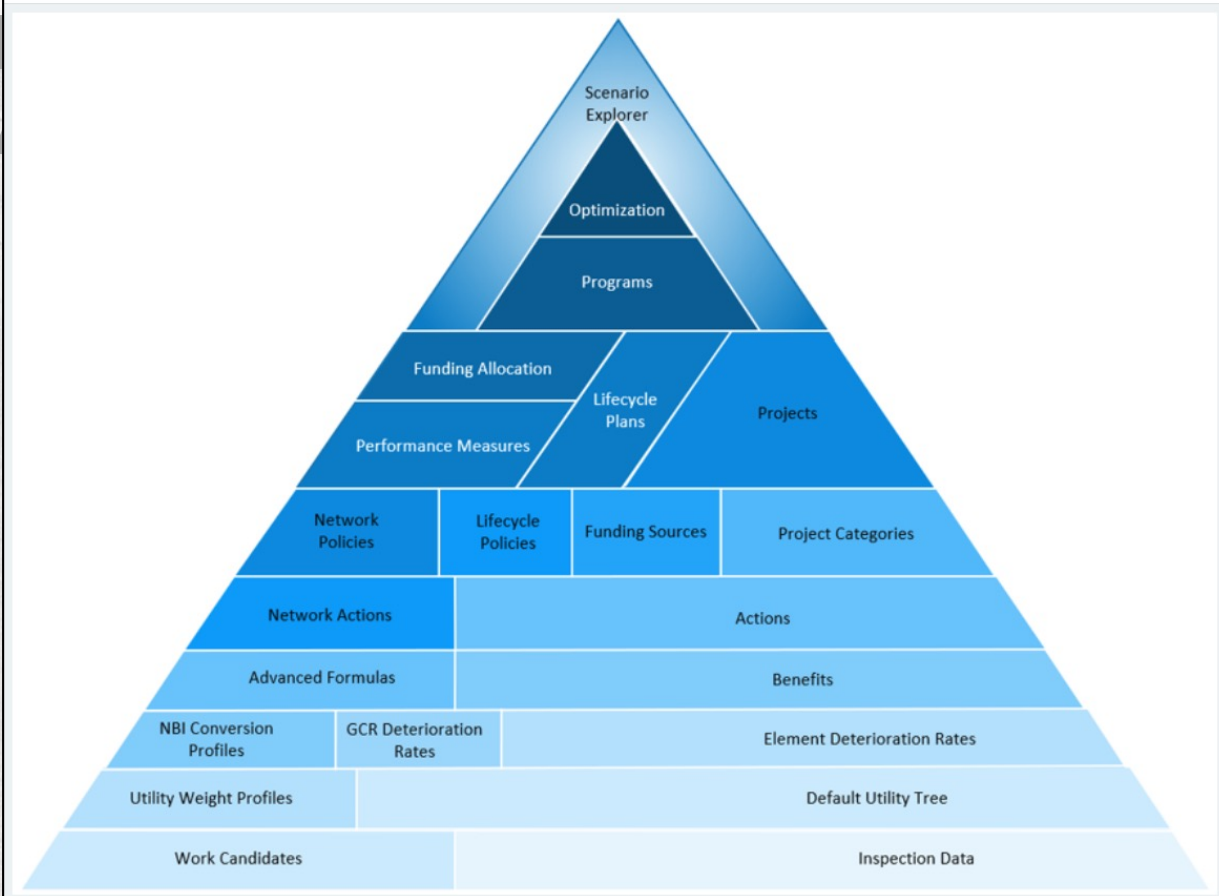
GETTING STARTED

STEP 1: GET YOUR

STEP 2: REVIEW TR

STEP 3: REVIEW PY

Admin > Modeling Config > Pyramid



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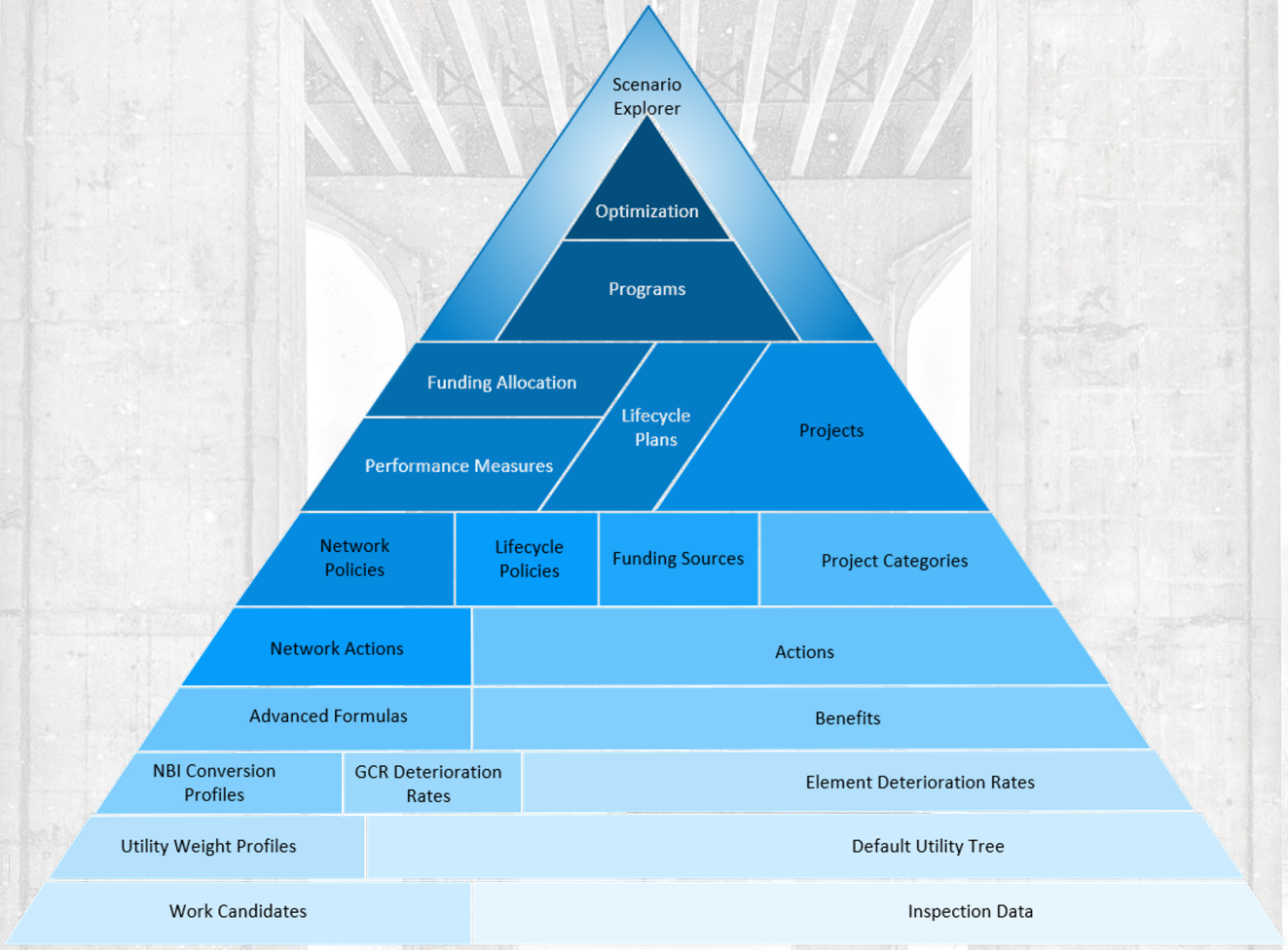
AASHTOWare™
BRIDGE
MANAGEMENT
CHECK
SETTINGS
Photo by Igor Olwank

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



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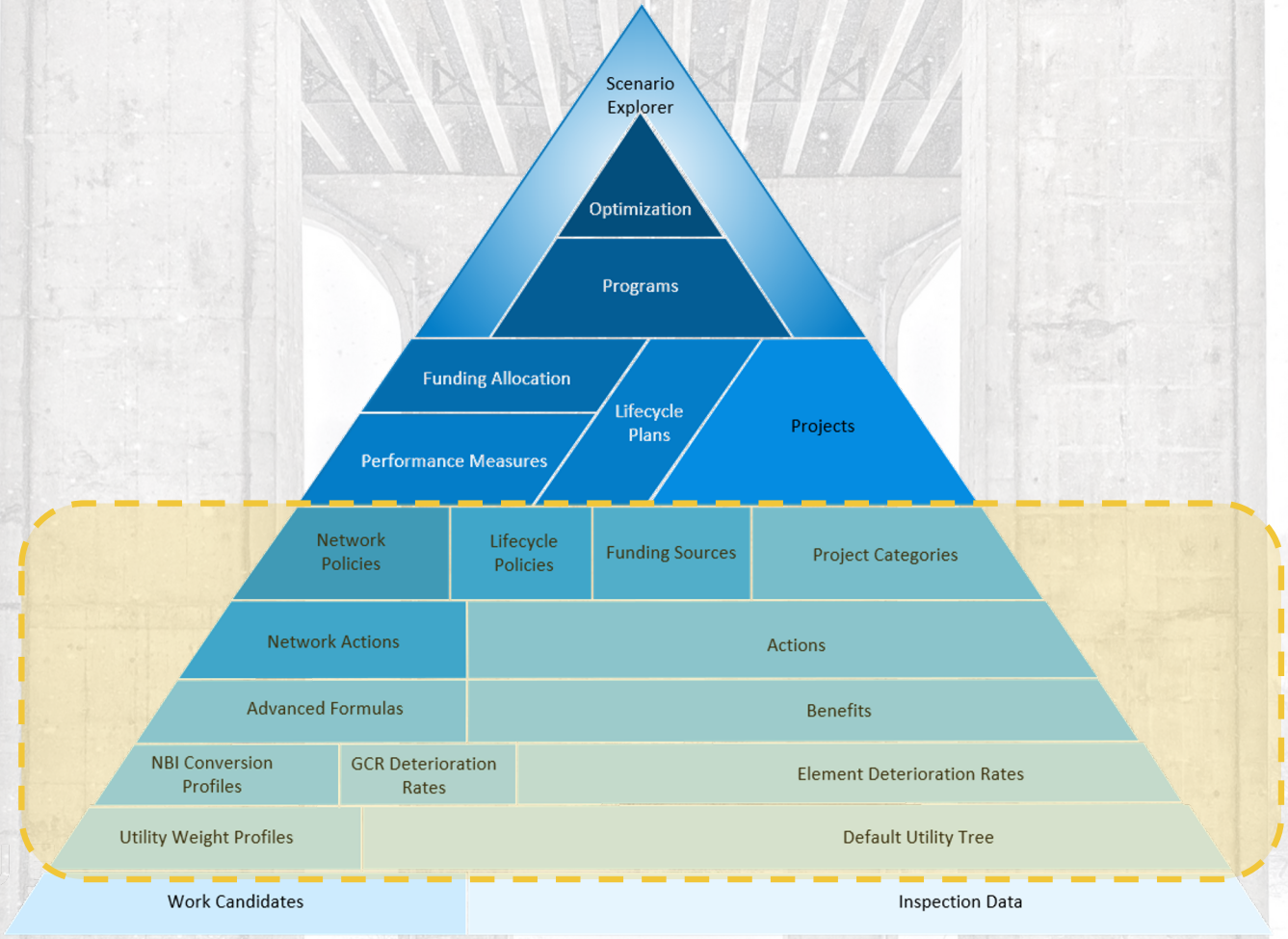
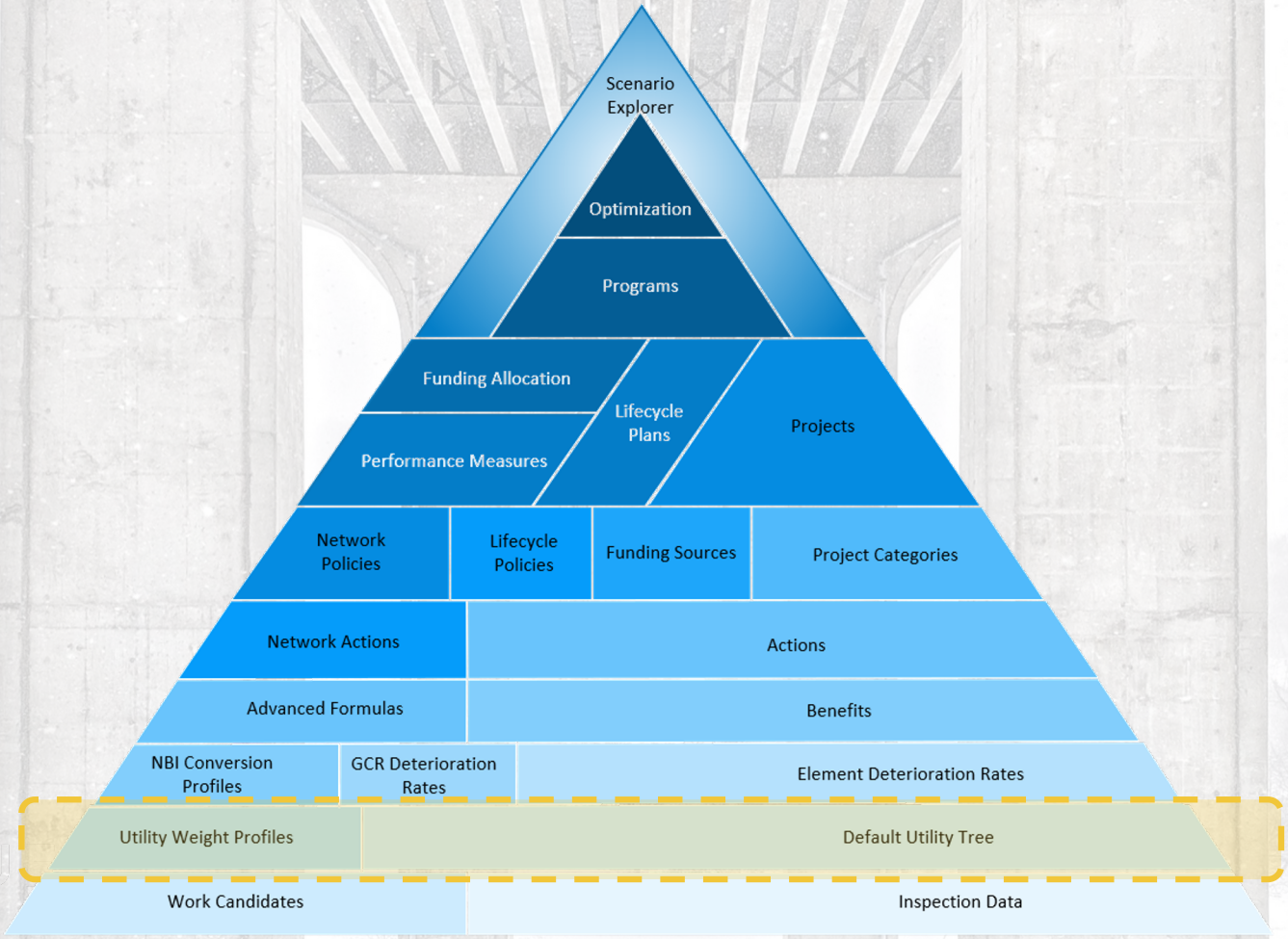


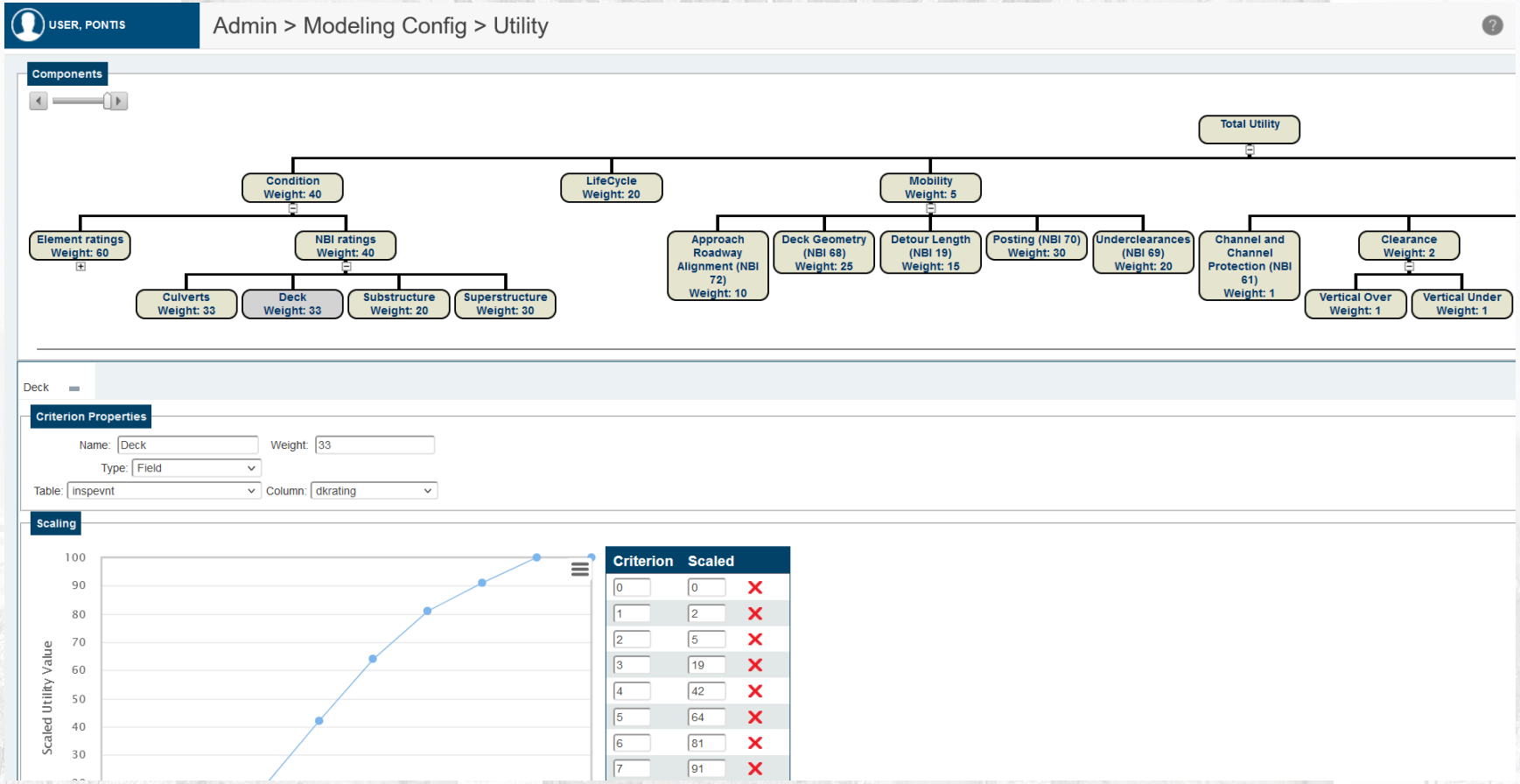
AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



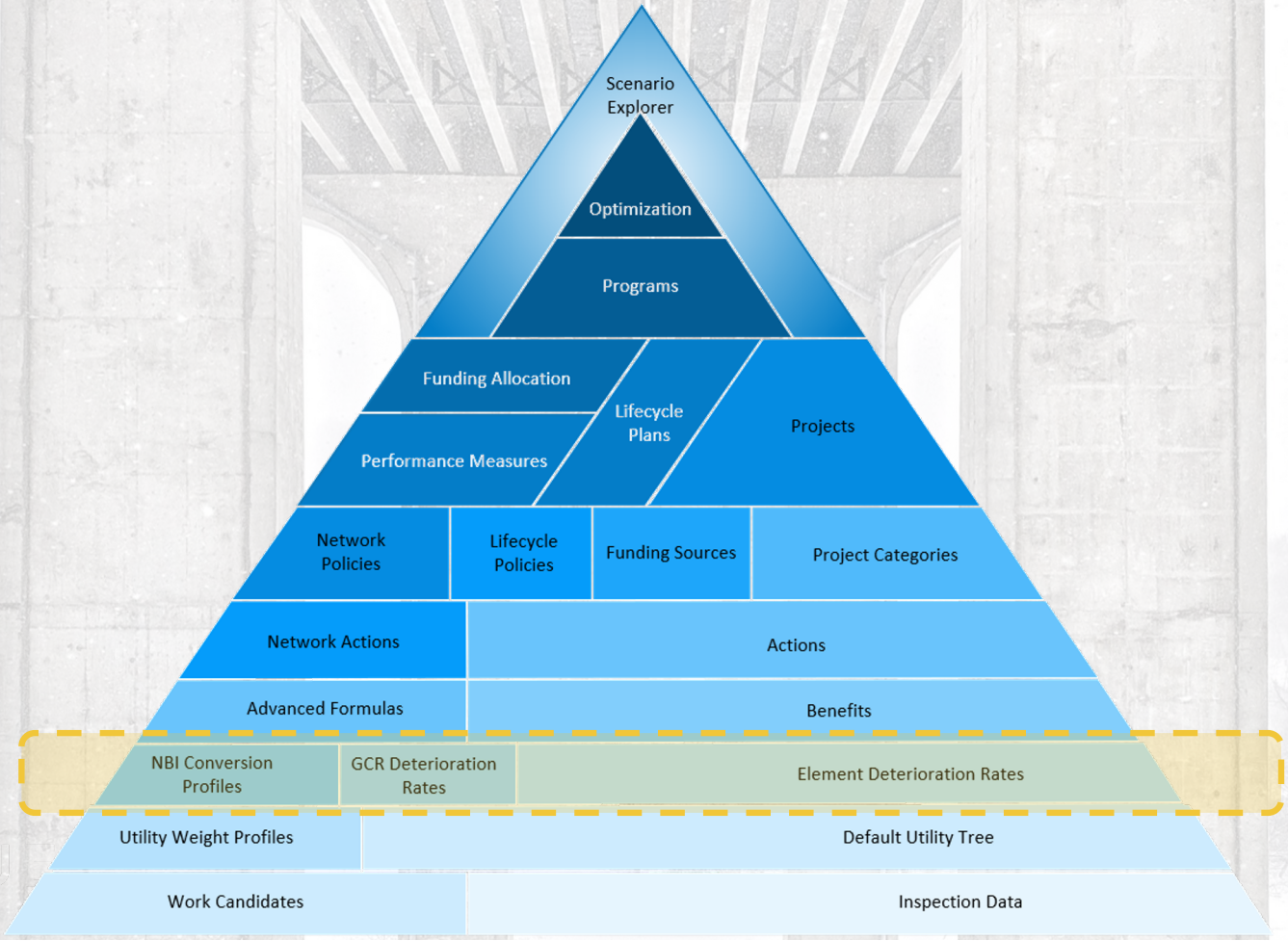
AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

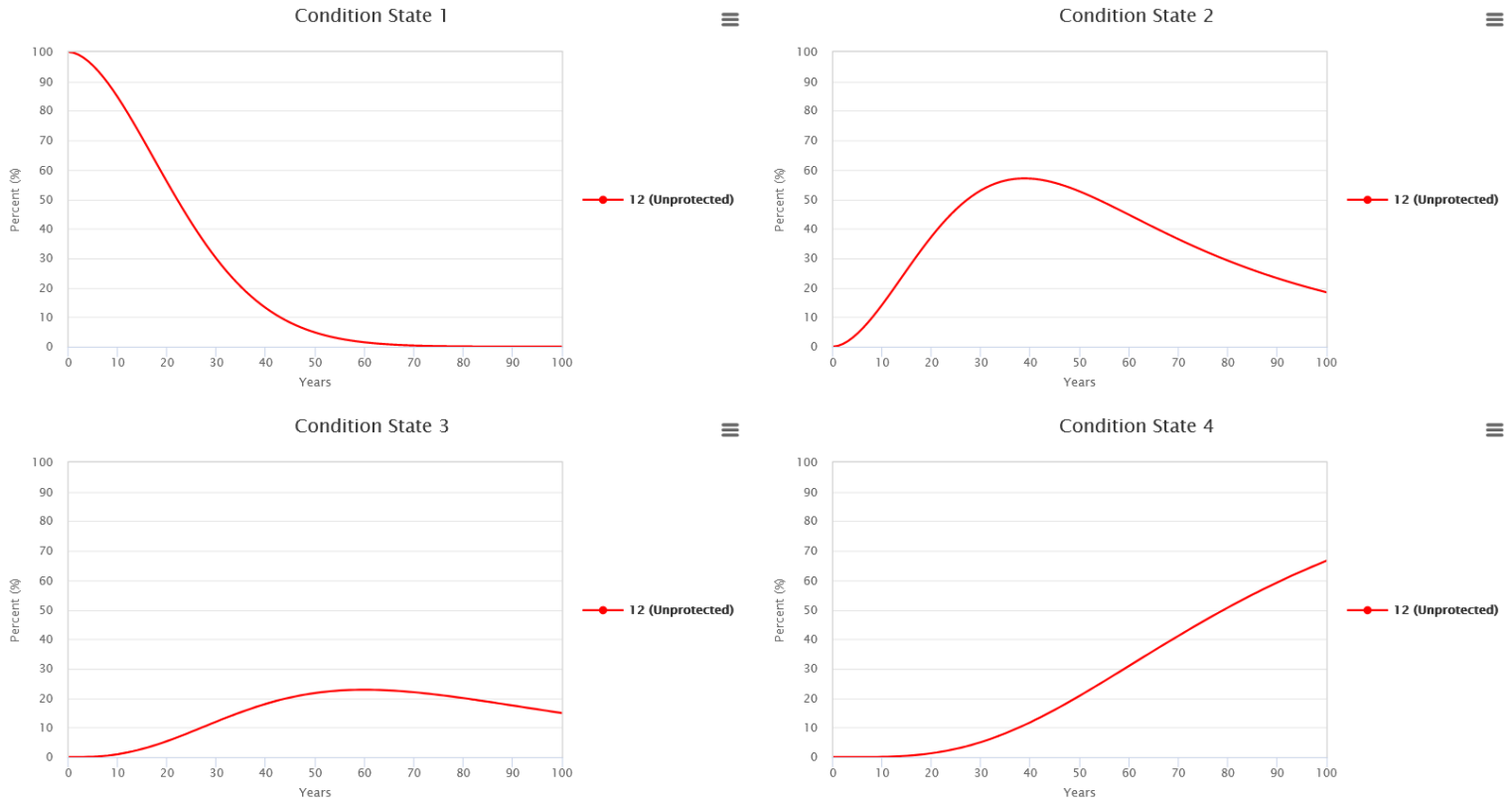


AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

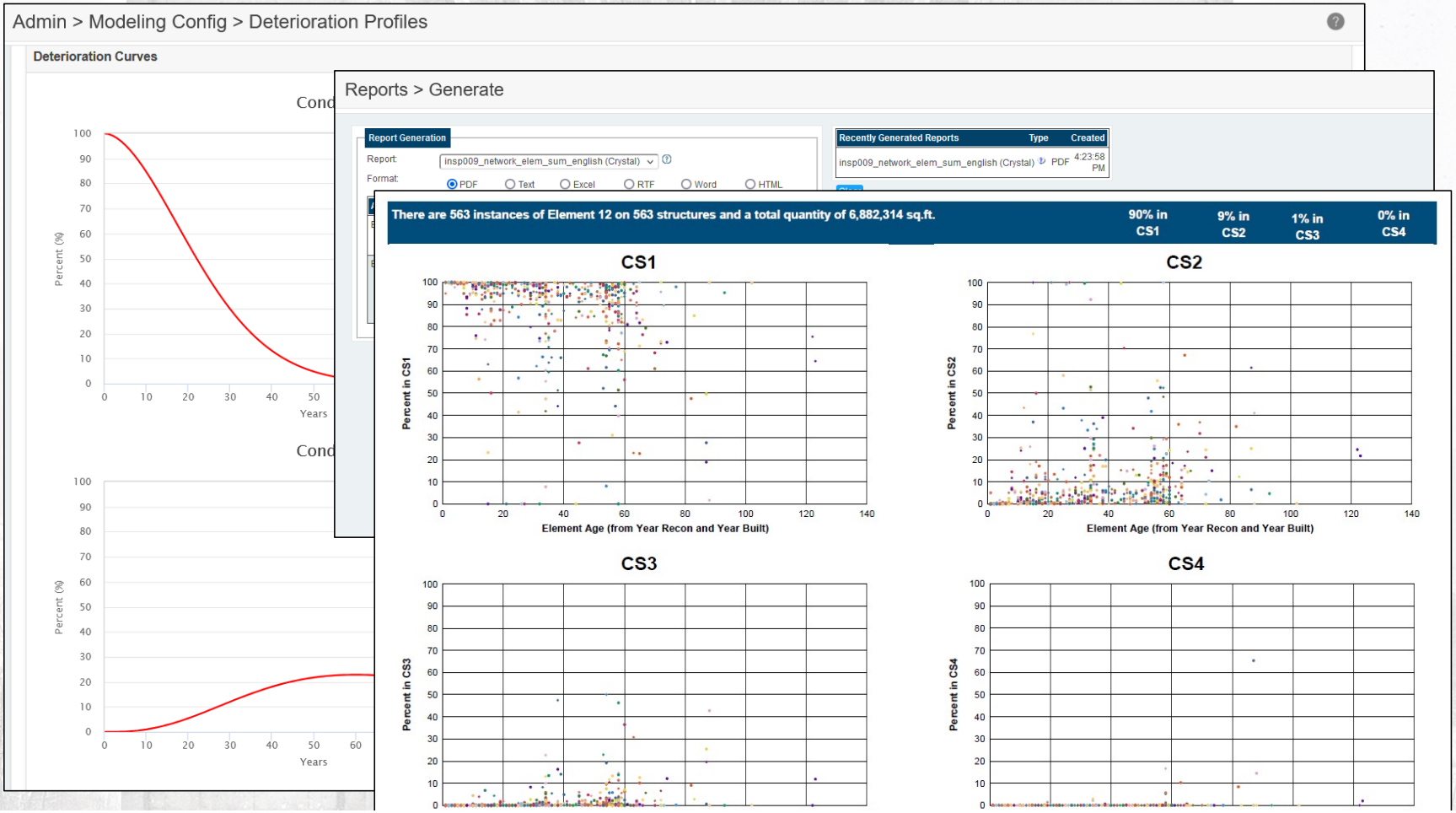
Admin > Modeling Config > Deterioration Profiles

Deterioration Curves



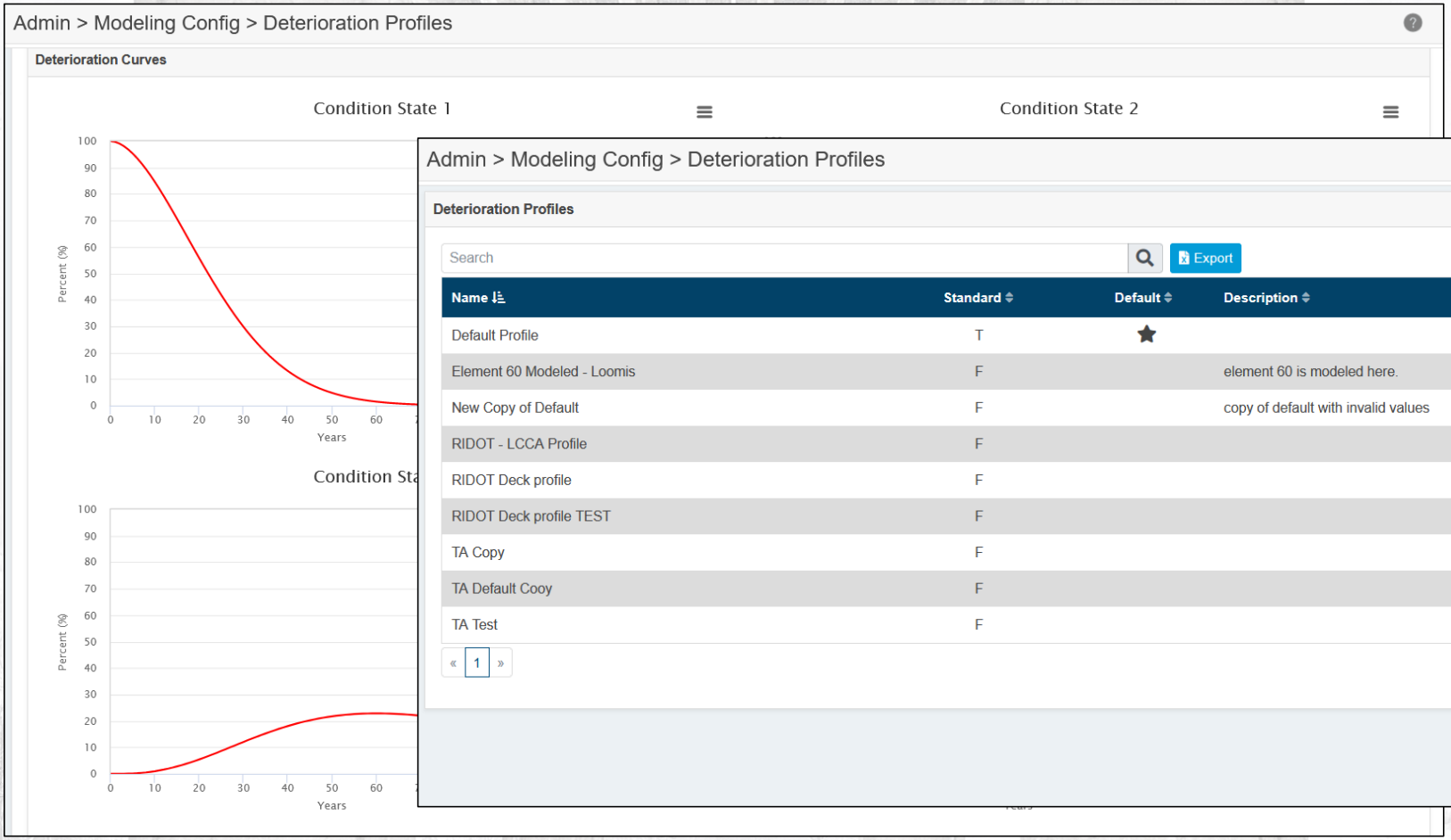
AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > NBI Conversion Profiles

NBI Conversion Profiles

Search

Add New

Name	Default	Resulting GCR	Standard	Active
BrM Culvert Default	★	Culvert	T	T
BrM Deck Default		Deck	T	T
BrM Substructure Default	★	Substructure	T	T
BrM Superstructure Default	★	Superstructure	T	T
FHWA Culvert Profile		Culvert	T	T
FHWA Deck Profile		Deck	T	T
FHWA Profile - Copy Culvert		Culvert	F	T
FHWA Profile - Copy Deck		Deck	F	T
FHWA Profile - Copy Sub		Substructure	F	T
FHWA Profile - Copy Super		Superstructure	F	T
FHWA Substructure Profile		Substructure	T	T
FHWA Superstructure Profile		Superstructure	T	T
RIDOT - 2021 Zac Culvert		Culvert	F	T
RIDOT - 2021 Zac Deck	★	Deck	F	T

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > NBI Conversion Profiles

NBI Conversion Profiles

Search

Name
BrM Culvert Default
BrM Deck Default
BrM Substructure Default
BrM Superstructure Defau
FHWA Culvert Profile
FHWA Deck Profile
FHWA Profile - Copy Culv
FHWA Profile - Copy Deck
FHWA Profile - Copy Sub
FHWA Profile - Copy Supe
FHWA Substructure Profile
FHWA Superstructure Pro
RIDOT - 2021 Zac Culvert
RIDOT - 2021 Zac Deck

Admin > Modeling Config > NBI Conversion Profiles

* **Name:** RIDOT - 2021 Zac Deck

* **Resulting GCR:** Deck

Active:

Set as Default:

Loading tooltip... ement Categories:

-1 Missing
0 Unspecified
1 Superstructure
2 Substructure
3 Joints
4 Bearings
5 Other Elements
7 Smart Flags
8 Culvert
9 Wearing Surface

Selected Element Categories:

6 Decks/Slabs

Generic Upper Limits

* **Method of CS Average:** Element Weighting

NBI	Enabled	CS2 %	CS3 %	CS4 %
9	☑	0.01	0.01	0.01
8	☑	0.5	0.1	0.1
7	☑	5	0.5	1
6	☑		1	1.2
5	☑		5.7	1.5

Add New

Active
T
T
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T
T
T
T
T
T

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > NBI Conversion Profiles

NBI Conversion Profiles

Search

Name
BrM Culvert Default
BrM Deck Default
BrM Substructure Default
BrM Superstructure Defau
FHWA Culvert Profile
FHWA Deck Profile
FHWA Profile - Copy Culv
FHWA Profile - Copy Deck
FHWA Profile - Copy Sub
FHWA Profile - Copy Supe
FHWA Substructure Profile
FHWA Superstructure Pro
RIDOT - 2021 Zac Culvert
RIDOT - 2021 Zac Deck

Admin > Modeling Config > NBI Conversion Profiles

* Name: RIDOT - 2021 Zac Deck

* Resulting GCR:

Active:

Set as Default:

Loading tooltip... ement Categories:

-1 Missing
0 Unspecified
1 Superstructure
2 Substructure
3 Joints
4 Bearings
5 Other Elements
7 Smart Flags
8 Culvert
9 Wearing Surface

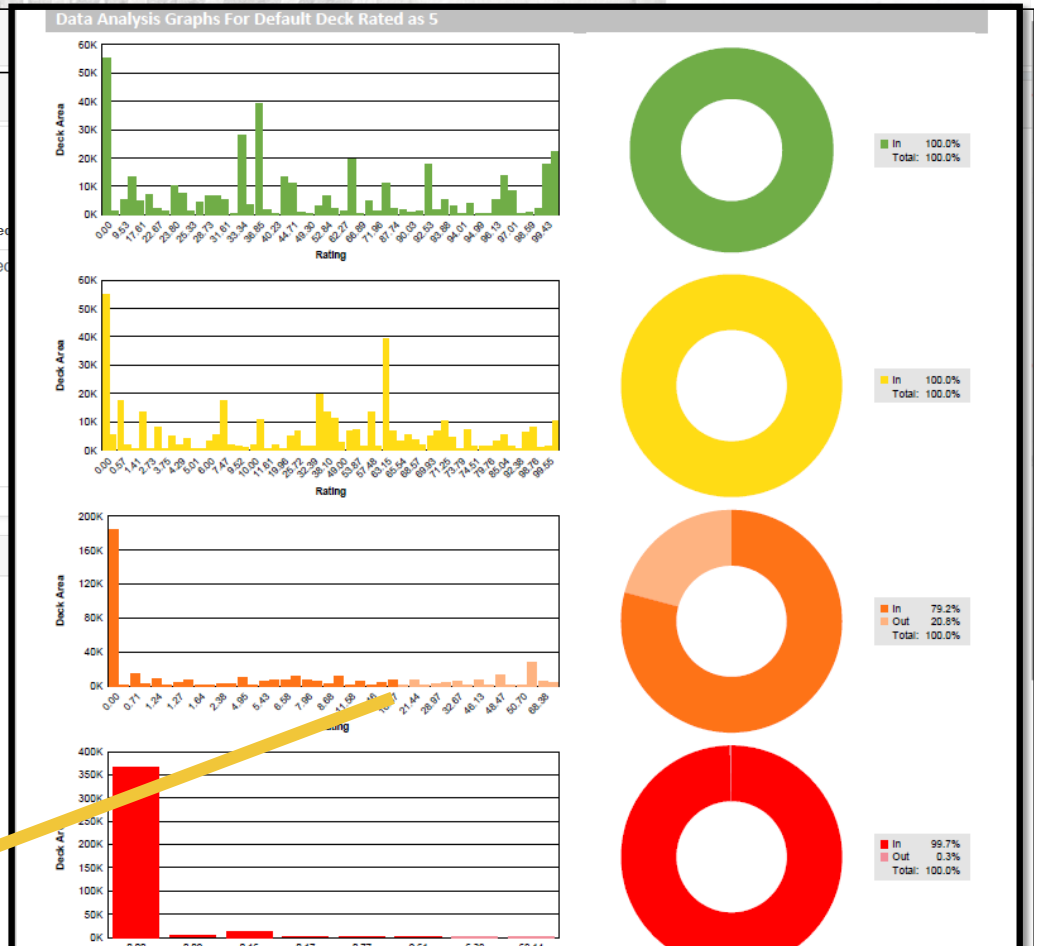
Selecte

6 Dec

Generic Upper Limits

* Method of CS Average: Element Weighting

NBI	Enabled	CS2 %	CS3 %	CS4 %
9	☑	0.01	0.01	0.01
8	☑	0.5	0.1	0.1
7	☑	5	0.5	1
6	☑		1	1.2
5	☑		5.7	1.5



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > GCR Deterioration Profiles

Export | Search | Add GCR Deterioration Profile

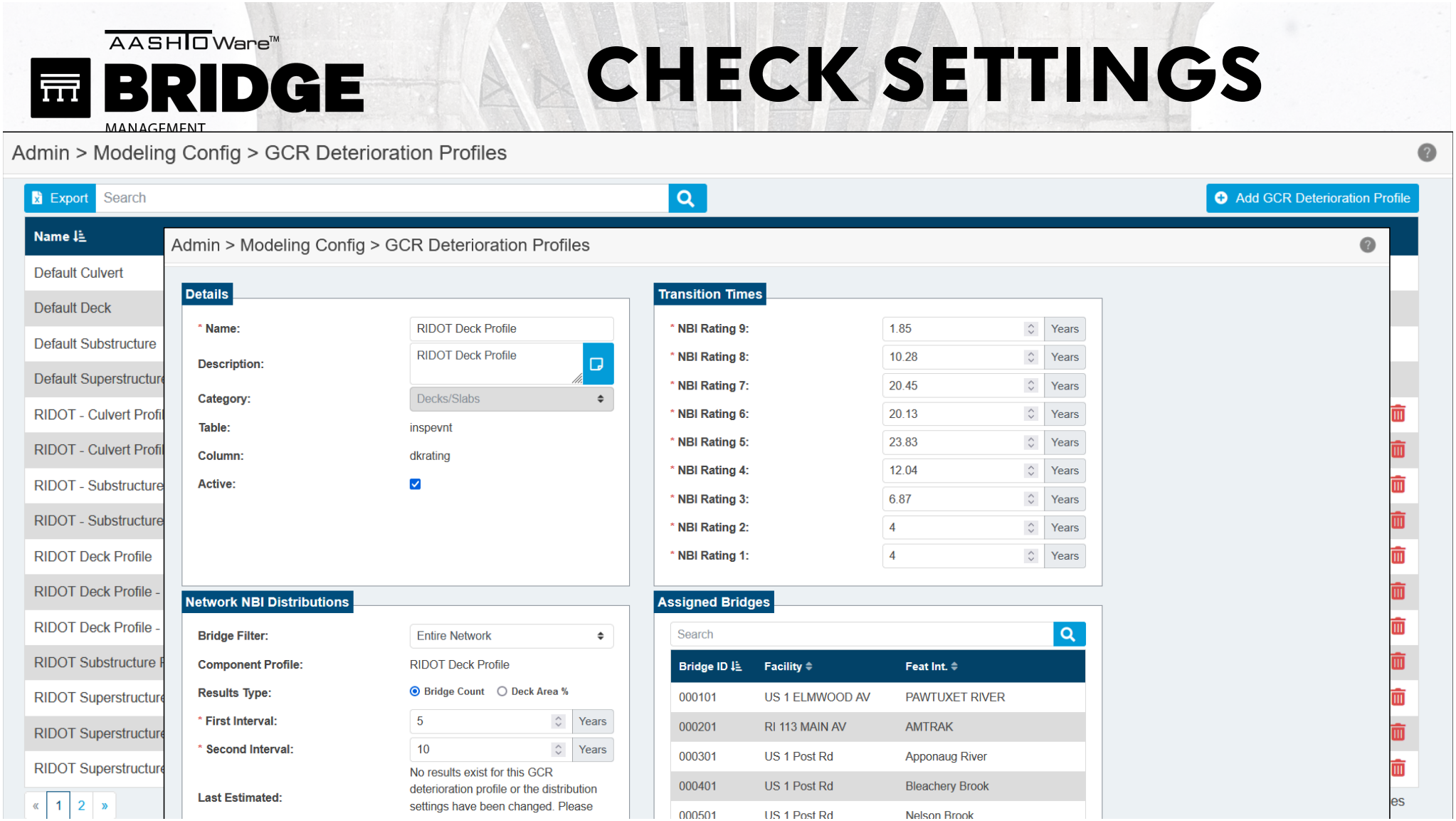
Name	Description	Category	Table	Column	Standard	Active
Default Culvert	Default Culvert Deterioration Profile	Culvert	inspevnt	culvrating	T	T
Default Deck	Default Deck Deterioration Profile	Decks/Slabs	inspevnt	dkrating	T	T
Default Substructure	Default Substructure Deterioration Profile	Substructure	inspevnt	subrating	T	T
Default Superstructure	Default Superstructure Deterioration Profile	Superstructure	inspevnt	suprating	T	T
RIDOT - Culvert Profile	RIDOT - Culvert Profile	Culvert	inspevnt	culvrating	F	T
RIDOT - Culvert Profile - Extended	RIDOT - Culvert Profile - Extended	Culvert	inspevnt	culvrating	F	T
RIDOT - Substructure Profile	RIDOT - Substructure Profile	Substructure	inspevnt	subrating	F	T
RIDOT - Substructure Profile - Extended (Good)	RIDOT - Substructure Profile - Extended (Good)	Substructure	inspevnt	subrating	F	T
RIDOT Deck Profile	RIDOT Deck Profile	Decks/Slabs	inspevnt	dkrating	F	T
RIDOT Deck Profile - Extended	RIDOT Deck Profile - Extended	Decks/Slabs	inspevnt	dkrating	F	T
RIDOT Deck Profile - Extended (Good)	RIDOT Deck Profile - Extended (Good)	Decks/Slabs	inspevnt	dkrating	F	T
RIDOT Substructure Profile - Extended	RIDOT Substructure Profile - Extended	Substructure	inspevnt	subrating	F	T
RIDOT Superstructure Profile	RIDOT Superstructure Profile	Superstructure	inspevnt	suprating	F	T
RIDOT Superstructure Profile - Extended	RIDOT Superstructure Profile - Extended	Superstructure	inspevnt	suprating	F	T
RIDOT Superstructure Profile - Extended (Good)	RIDOT Superstructure Profile - Extended (Good)	Superstructure	inspevnt	suprating	F	T

« 1 2 »

16 items in **2** pages

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > GCR Deterioration Profiles

Export | Search | Add GCR Deterioration Profile

Name

- Default Culvert
- Default Deck
- Default Substructure
- Default Superstructure
- RIDOT - Culvert Profi
- RIDOT - Culvert Profi
- RIDOT - Substructure
- RIDOT - Substructure
- RIDOT Deck Profile
- RIDOT Deck Profile -
- RIDOT Deck Profile -
- RIDOT Substructure P
- RIDOT Superstructure
- RIDOT Superstructure
- RIDOT Superstructure

« 1 2 »

Admin > Modeling Config > GCR Deterioration Profiles

Details

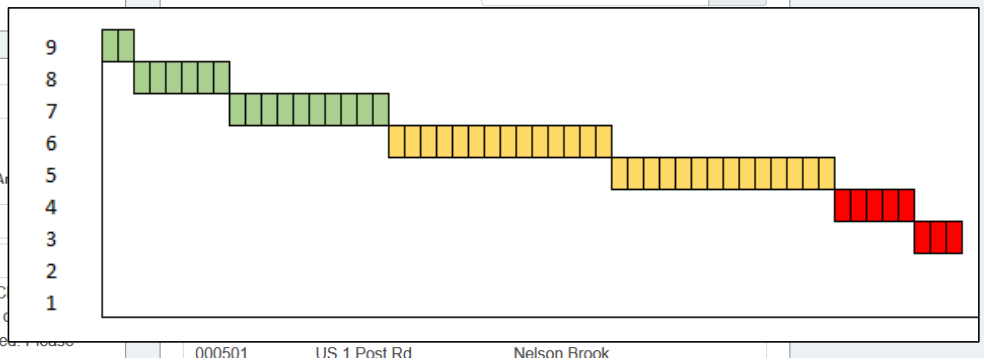
* Name:	RIDOT Deck Profile
Description:	RIDOT Deck Profile
Category:	Decks/Slabs
Table:	inspevnt
Column:	dkrating
Active:	☑

Transition Times

* NBI Rating 9:	1.85	Years
* NBI Rating 8:	10.28	Years
* NBI Rating 7:	20.45	Years
* NBI Rating 6:	20.13	Years
* NBI Rating 5:	23.83	Years
* NBI Rating 4:	12.04	Years
* NBI Rating 3:	6.87	Years
* NBI Rating 2:	4	Years
* NBI Rating 1:	4	Years

Network NBI Distributions

Bridge Filter:	Entire Network
Component Profile:	RIDOT Deck Profile
Results Type:	◉ Bridge Count ○ Deck Ar
* First Interval:	5
* Second Interval:	10
Last Estimated:	No results exist for this GC deterioration profile or the c settings have been changed. Please



000501 US 1 Post Rd Nelson Brook

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > GCR Deterioration Profiles

Export | Search | Add GCR Deterioration Profile

Name

- Default Culvert
- Default Deck
- Default Substructure

Admin > Modeling Config > GCR Deterioration Profiles

Details

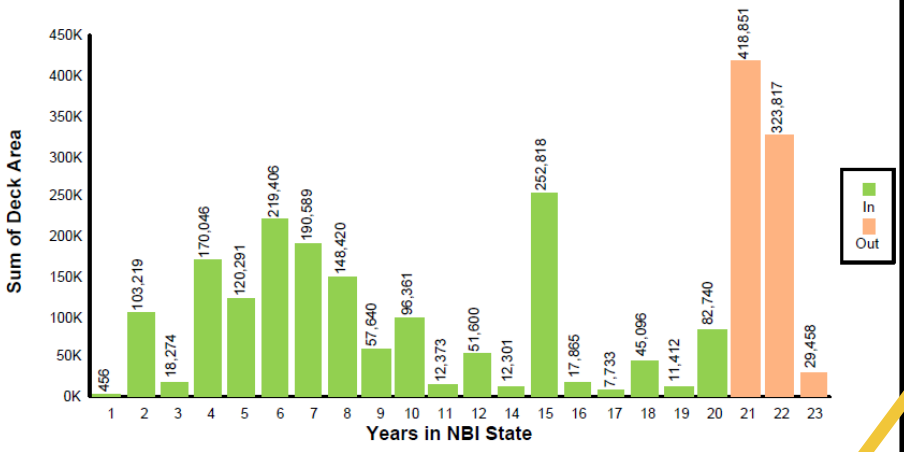
* Name: RIDOT Deck Profile

Description: RIDOT Deck Profile

Transition Times

* NBI Rating 9:	1.85	Years
* NBI Rating 8:	10.28	Years
NBI Rating 7:	20.45	Years
NBI Rating 6:	20.13	Years
NBI Rating 5:	23.83	Years
NBI Rating 4:	12.04	Years
NBI Rating 3:	6.87	Years
NBI Rating 2:	4	Years
NBI Rating 1:	4	Years

For 6 By Deck Area



Total Deck Area:	2,390,769	wAvg + 1 w St Dev:	20.22
Weighted Avg Time in State:	13.08	wAvg + 2 w St Dev:	27.36
Weighted Std Deviation:	7.14		

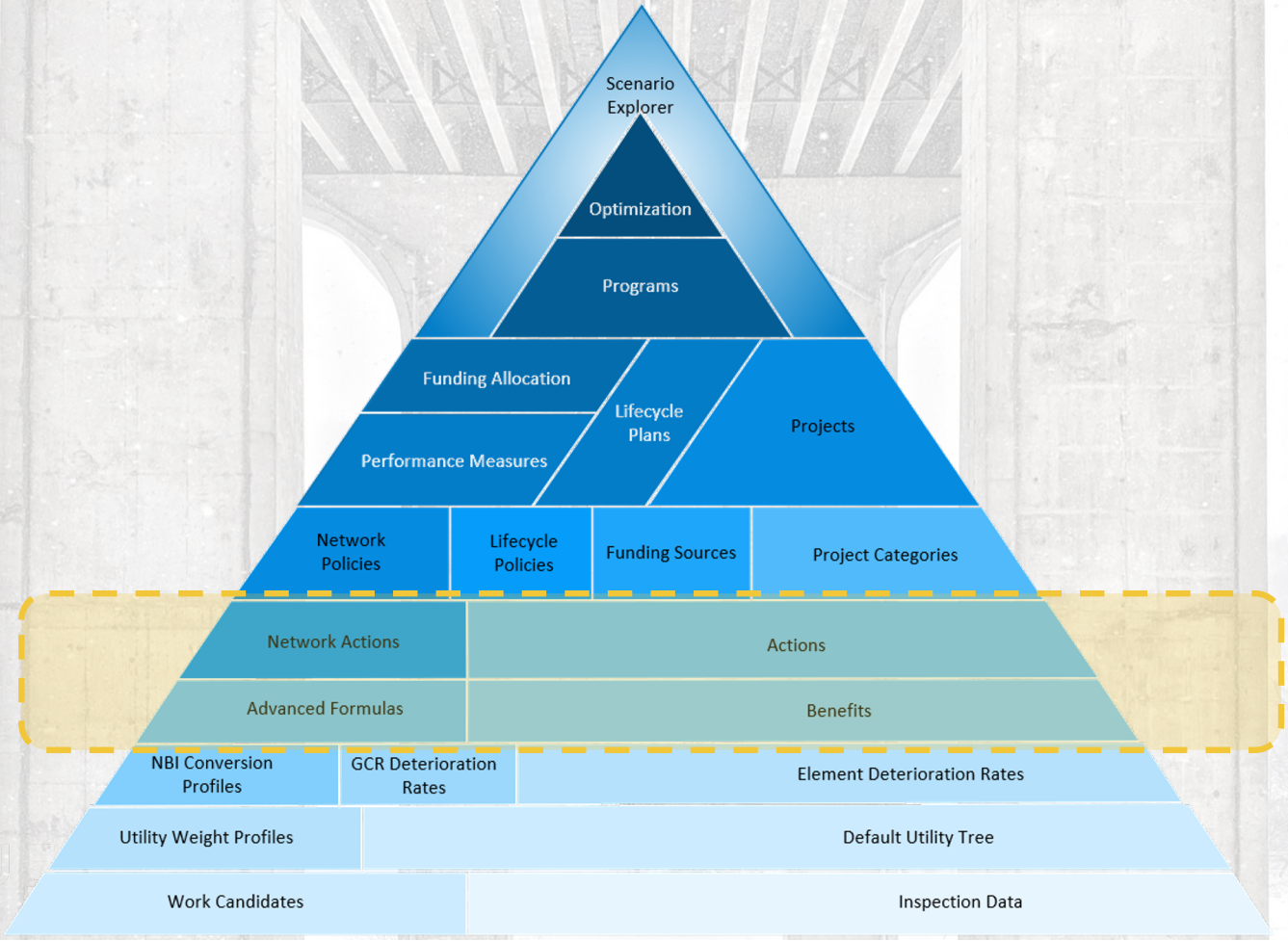
Assigned Bridges

Search

Bridge ID	Facility	Feat Int.
0101	US 1 ELMWOOD AV	PAWTUXET RIVER
000201	RI 113 MAIN AV	AMTRAK
000301	US 1 Post Rd	Apponaug River
000401	US 1 Post Rd	Bleachery Brook
000501	US 1 Post Rd	Nelson Brook

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > Benefit Groups

			Overlay			
Create Elem 521		Newaction, Seal Substructure, Seal and Wash Bridge	Yes	20		
Create Protective Coating Beam Ends	-	Paint Steel Beam End	Yes			
Create Sub Paint	Create Elem 515	Paint Sub - Network	Yes	9999		
Create Super Paint	Create Elem 515	Paint Super - Network	Yes	9999		

Expand Group Details Collapse Group Details

Child Benefit Groups (0)

Changed Elements (0)

Removed Elements (0)

Replaced Elements (0)

Created Protective Systems (16)

Element	Parent Element	Percent Coverage
515 Steel Protective Coating	120 Steel Truss	100
515 Steel Protective Coating	149 Otr Secondary Cable	100
515 Steel Protective Coating	314 Pot Bearing	100
515 Steel Protective Coating	107 Steel Opn Girder/Beam	100
515 Steel Protective Coating	152 Steel Floor Beam	100
515 Steel Protective Coating	102 Steel Clsd Box Gird	100
515 Steel Protective Coating	311 Moveable Bearing	100
515 Steel Protective Coating	312 Enclosed Bearing	100
515 Steel Protective Coating	113 Steel Stringer	100
515 Steel Protective Coating	141 Stl Arch	100
515 Steel Protective Coating	147 Stl Main Cables	100

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > Action Defs

Associated Benefit Groups for Action Deck Replacement

Metric English

Benefit Groups

Please Select Add

- Add Extended Deck protective system
- NBI Deck =9
- Replace Approach Slab Elements
- Replace Asphaltic Plug Joint
- Replace Deck Elements
- Replace Joint Elements-RITBA
- Replace Rail Elements

Overriding Direct Cost (overrides unit-costs)

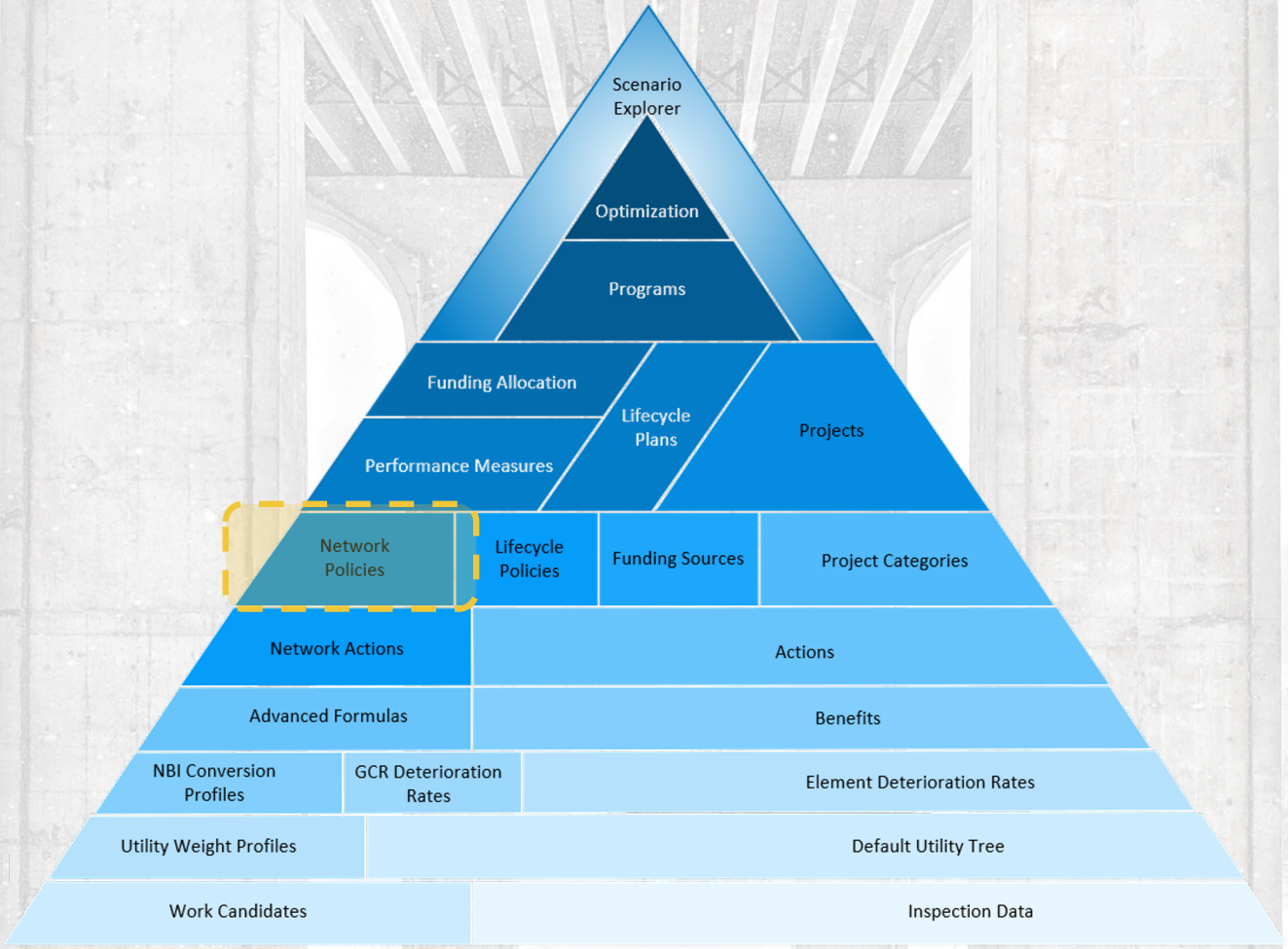
Enabled	Field Name	Cost Per Unit	Unit
☐	Deck Area	$ 150	sq.ft

Unit Costs

ID	Element Name	Sepa-rated	Cost Per Unit	Unit	?	
12	Re Concrete Deck (Replace)		$ 50	sq.ft	■	✕
13	Pre Concrete Deck (Replace)		$ 50	sq.ft	■	✕
31	Timber Deck (Replace)		$ 30	sq.ft	■	✕
300	Strip Seal Exp Joint (Replace)		$ 75	ft	■	✕
301	Pourable Joint Seal (Replace)		$ 75	ft	■	✕
321	Re Conc Approach Slab (Replace)		$ 50	sq.ft	■	✕
330	Metal Bridge Railing (Replace)		$ 75	ft	■	✕
331	Re Conc Bridge Railing (Replace)		$ 100	ft	■	✕
332	Timb Bridge Railing (Replace)		$ 0	ft	■	✕
8060	Scupper (Replace)		$ 250	each	■	✕
8080	Do Not Use - Extended Deck (Create)		$	each	■	✕
8305	Asphaltic Joint Material (Replace)		$ 130	ft	■	✕

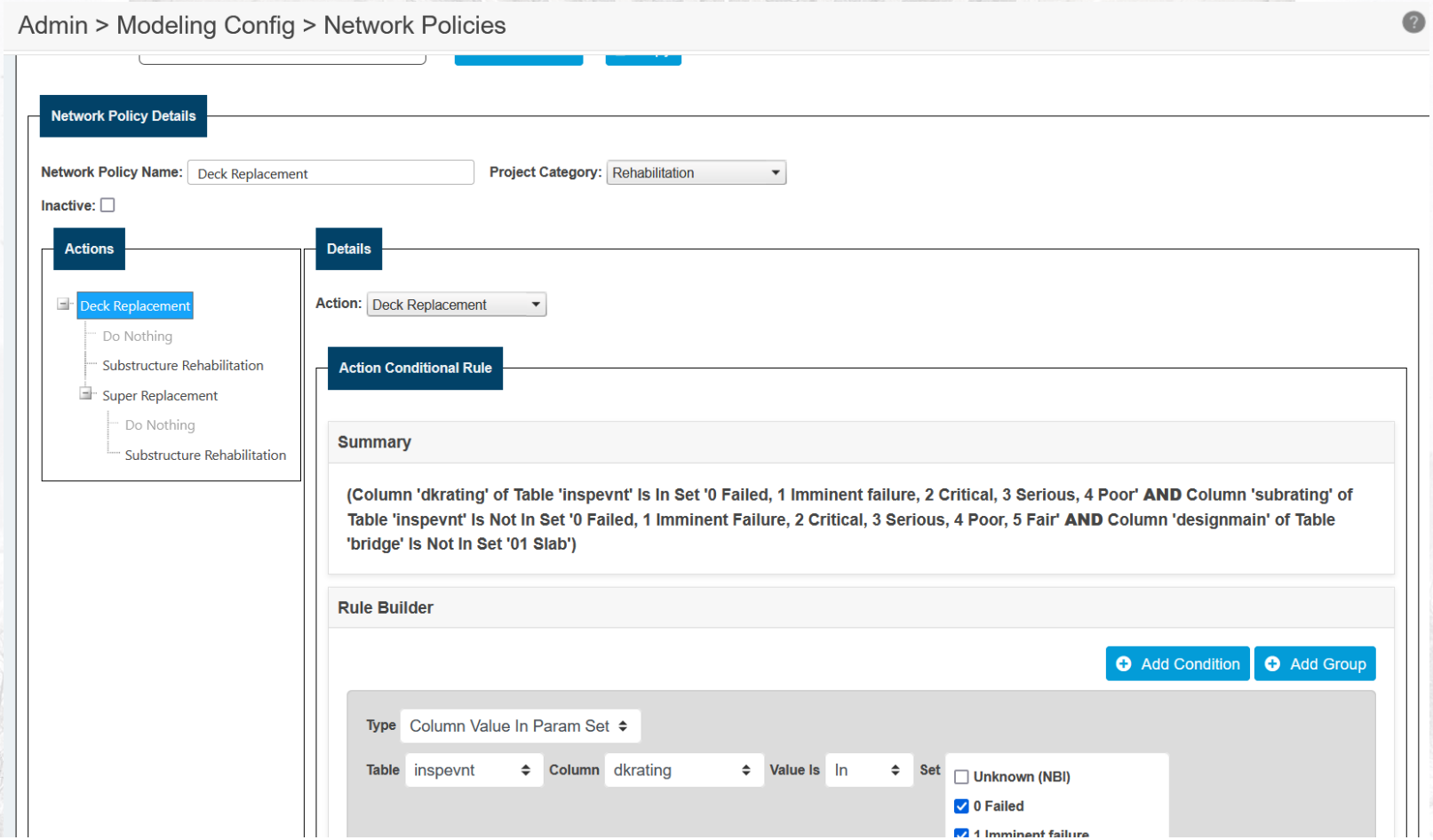
AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > Network Policies

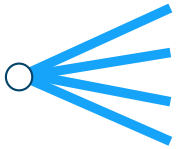
Network Policy Details

Network Policy Name: Deck Replacement Project Category: Rehabilitation

Inactive: ☐

Actions

- Deck Replacement
  - Do Nothing
  - Substructure Rehabilitation
  - Super Replacement
    - Do Nothing
    - Substructure Rehabilitation



Deck Replace
Deck Replace, Sub Rehab
Deck Replace, Super Replace
Deck Replace, Super Replace, Sub Rehab

Summary

(Column 'dkrating' of Table 'inspevnt' Is In Set '0 Failed, 1 Imminent failure, 2 Critical, 3 Serious, 4 Poor' AND Column 'subrating' of Table 'inspevnt' Is Not In Set '0 Failed, 1 Imminent Failure, 2 Critical, 3 Serious, 4 Poor, 5 Fair' AND Column 'designmain' of Table 'bridge' Is Not In Set '01 Slab')

Rule Builder

Add Condition Add Group

Type: Column Value In Param Set

Table: inspevnt Column: dkrating Value Is: In Set:

- ☐ Unknown (NBI)
- ☑ 0 Failed
- ☑ 1 Imminent failure

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > Network Policies

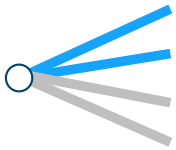
Network Policy Details

Network Policy Name: Deck Replacement Project Category: Rehabilitation

Inactive: ☐

Actions

- Deck Replacement
  - Do Nothing
  - Substructure Rehabilitation
  - Super Replacement
    - Do Nothing
    - Substructure Rehabilitation



Deck Replace
Deck Replace, Sub Rehab
Deck Replace, Super Replace
Deck Replace, Super Replace, Sub Rehab

Summary

(Column 'dkrating' of Table 'inspevnt' Is In Set '0 Failed, 1 Imminent failure, 2 Critical, 3 Serious, 4 Poor' **AND** Column 'subrating' of Table 'inspevnt' Is Not In Set '0 Failed, 1 Imminent Failure, 2 Critical, 3 Serious, 4 Poor, 5 Fair' **AND** Column 'designmain' of Table 'bridge' Is Not In Set '01 Slab')

Rule Builder

Add Condition Add Group

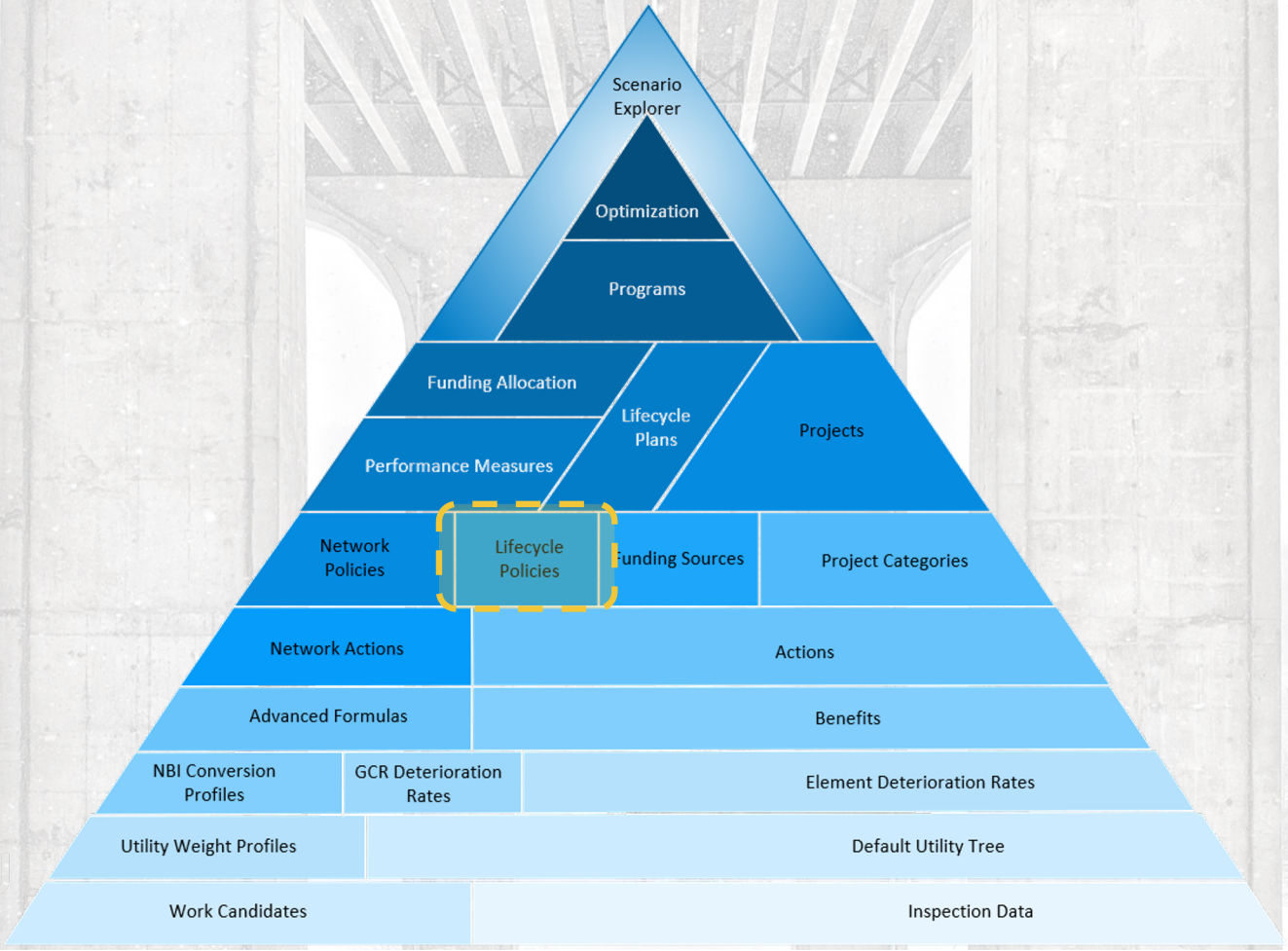
Type: Column Value In Param Set

Table: inspevnt Column: dkrating Value Is: In Set:

- ☐ Unknown (NBI)
- ☑ 0 Failed
- ☑ 1 Imminent failure

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > LCCA Policy

Policy Editor

Policy: Default Superstructure Policy | Create New | Copy >>

Policy Details

Name: Default Superstructure Policy

Inactive:

Description:

Notes:

User Cost Calculation:

User Cost Formula String:

Policy Rules

Name	Condition	Action	Up	Down	Top	Bottom	
Preserve Super	(Health Index of Element '515 Steel Protective Coating' Must Be Less Than Or Equal To Number Value 40 **AND** Health Index of Material 'Painted Steel' Must Be Greater Than Number Value 60)	Repaint Super/Sub - Network		↓		↓	✕ ✎
Rehab Super	(Health Index of Category 'Superstructure' Must Be Less Than Or Equal To Number Value 50 **AND** Health Index of Category 'Decks/Slabs' Must Be Greater Than Number Value 50 **AND** Health Index of Category 'Substructure' Must Be Greater Than Number Value 50)	Rehab Super - Network	↑	↓	⤒	↓	✕ ✎
First Protective System	(Field '515 Steel Protective Coating' Is Null **AND** (Health Index of Material 'Painted Steel' Must Be Greater Than Or Equal To Number Value 40 **OR** Health Index of Material 'Unpainted Steel' Must Be Greater Than Or Equal To Number Value 40))	Paint Super - Network	↑		⤒		✕ ✎

Add Rule

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BrM Version 0.0.0.926ff6d248 FutureRelease [Build Date: Wednesday March 29, 2023]
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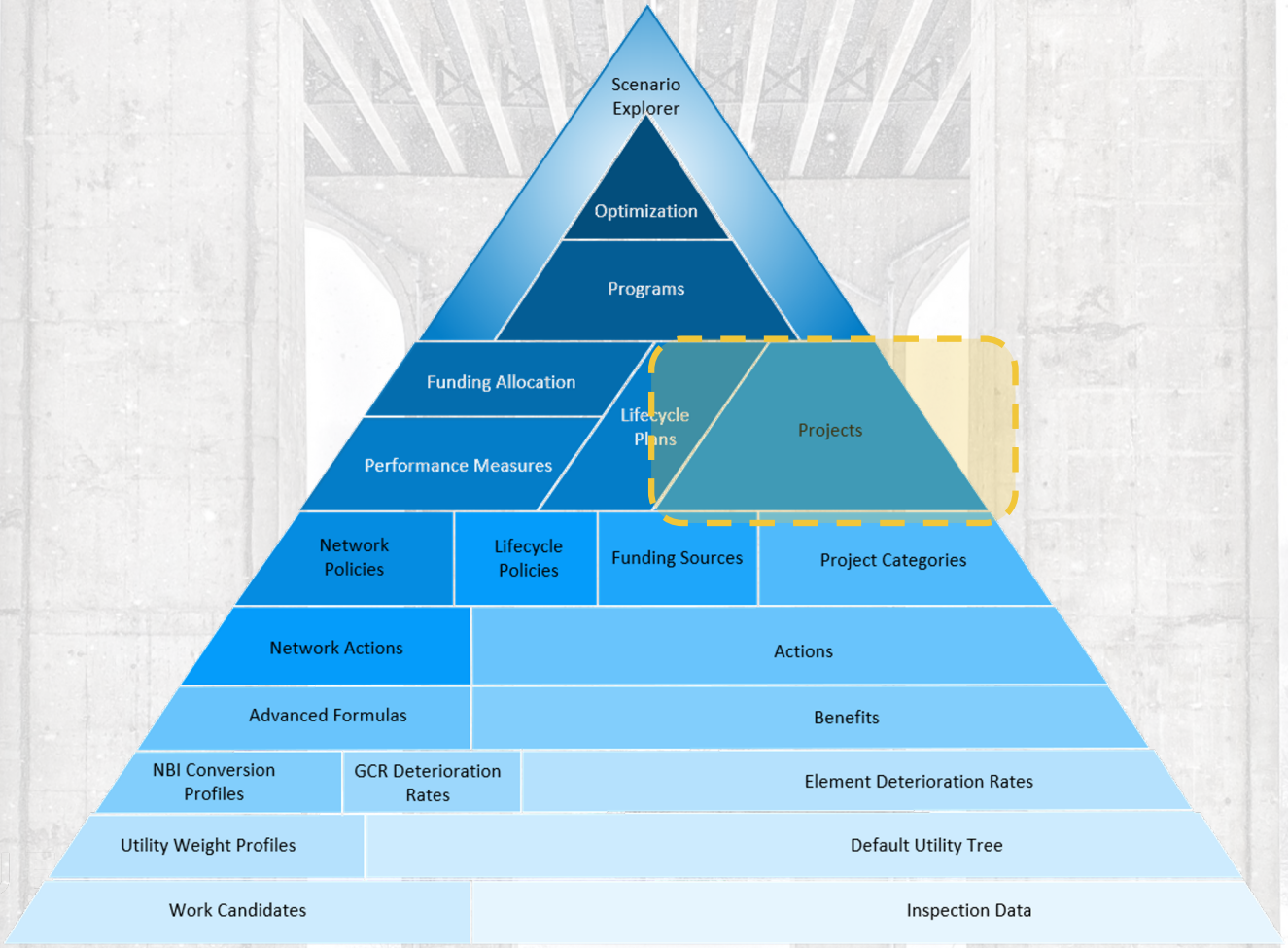
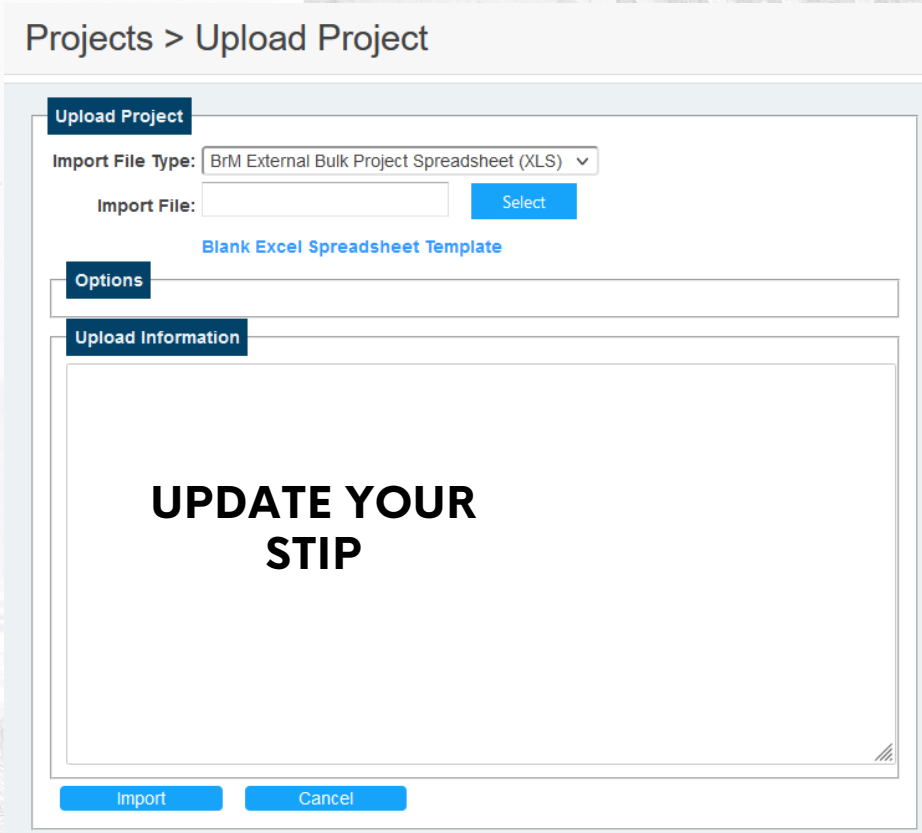
AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Projects > Upload Project

Upload Project

Import File Type: BrM External Bulk Project Spreadsheet (XLS)

Import File: Select

Blank Excel Spreadsheet Template

Options

Upload Information

UPDATE YOUR STIP

Import Cancel

[BrM 6.6 DONATIONS SLIDE 70 - 78]

AASHTOWare™
BRIDGE
MANAGEMENT

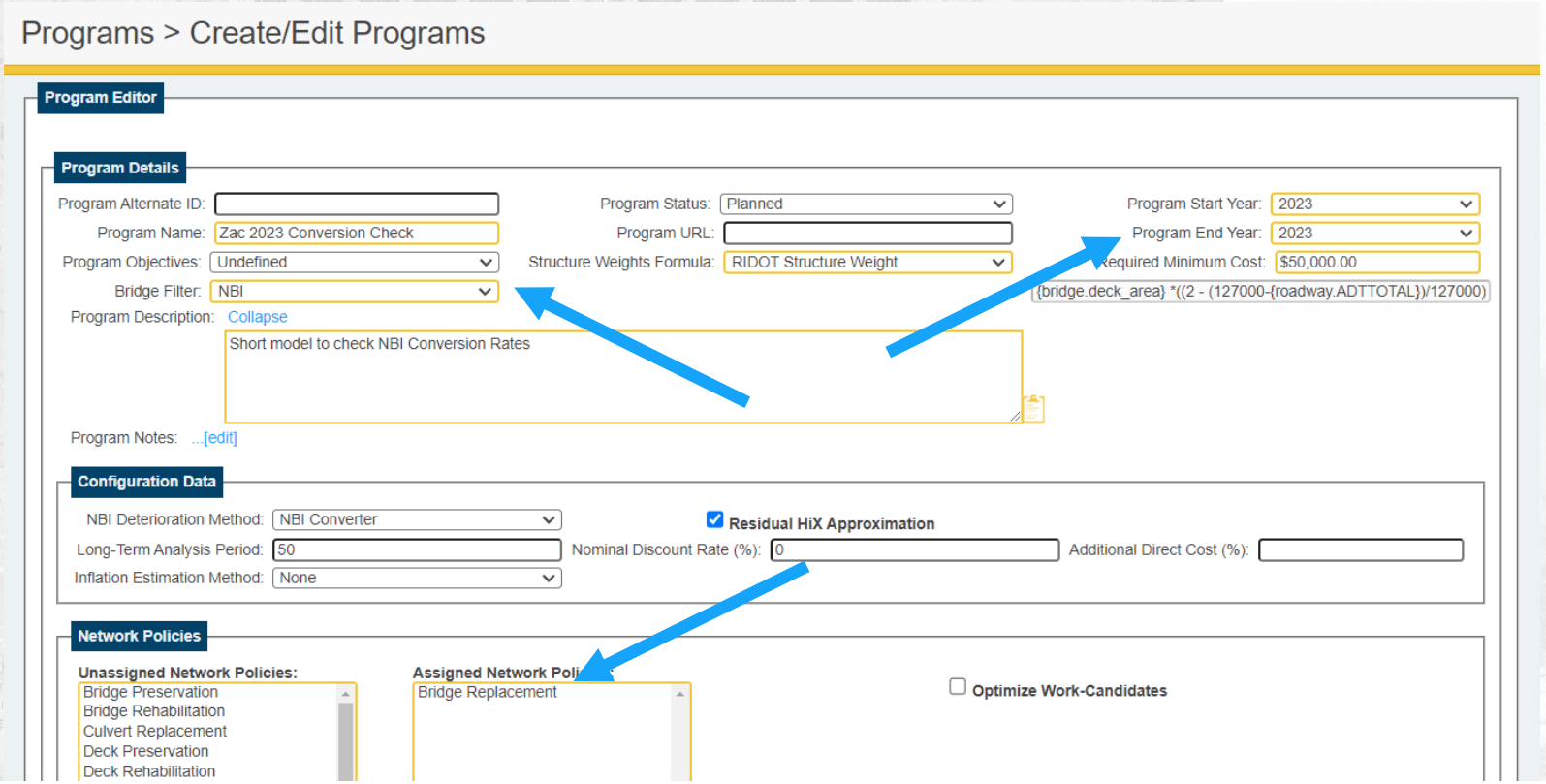
OPTIMIZATIONS

AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

CHECK 1: CONVERSION CHECK

- All Bridges
- 1 Year
- 1 Action
- 0 Money

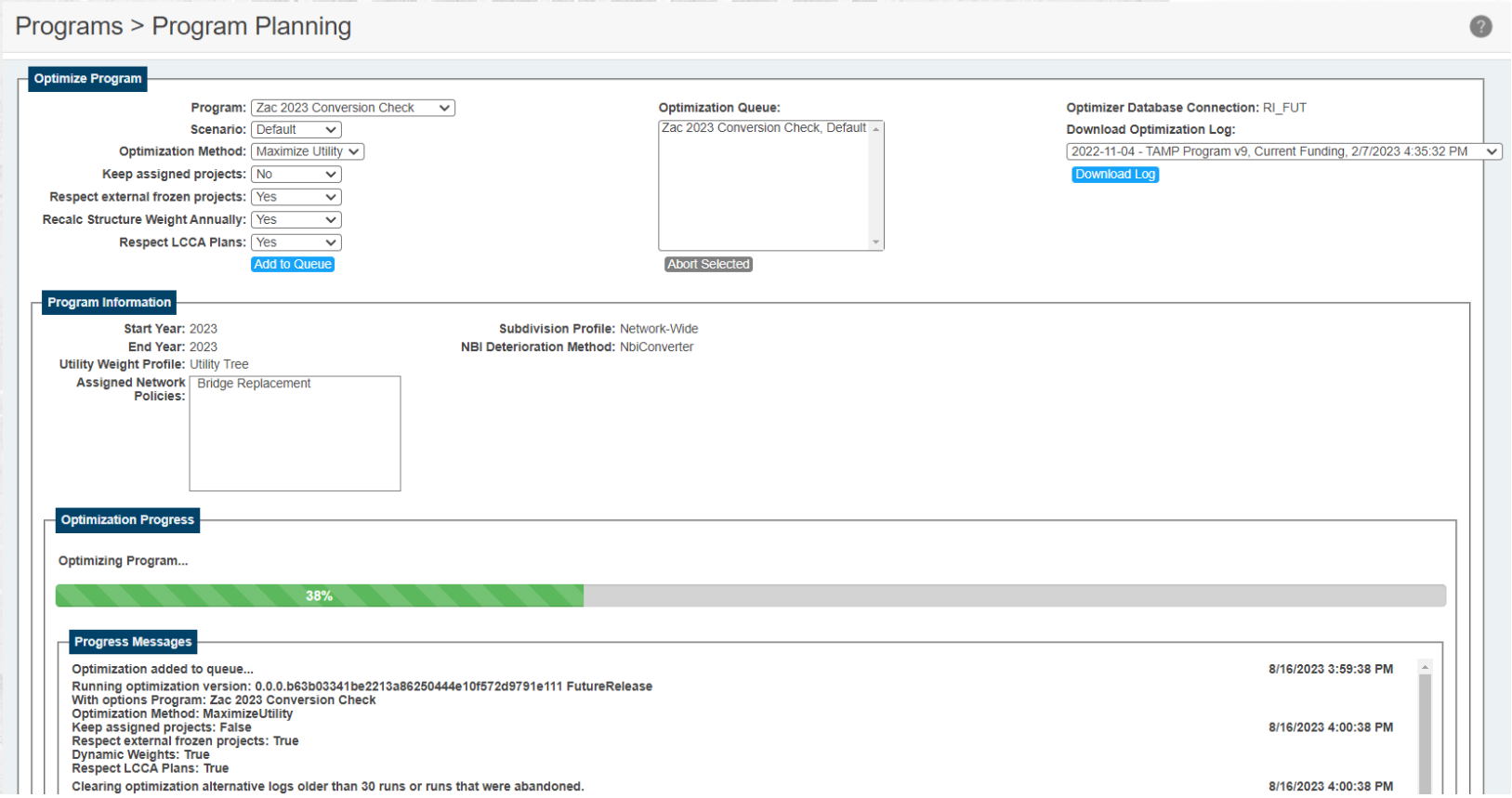


AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

CHECK 1: CONVERSION CHECK

- All Bridges
- 1 Year
- 1 Action
- 0 Money



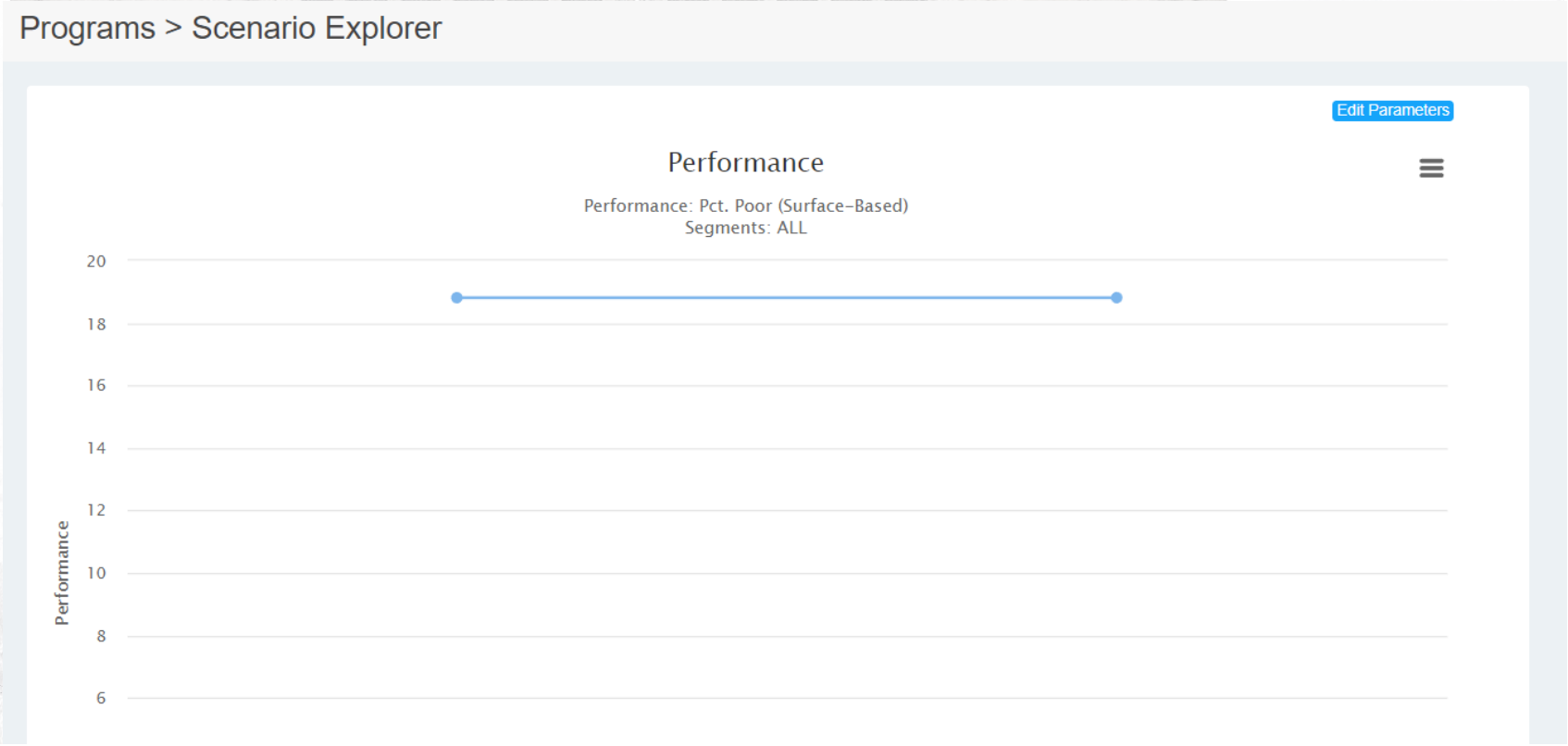
AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

CHECK 1: CONVERSION CHECK

- All Bridges
- 1 Year
- 1 Action
- 0 Money

- Check starting point
- Conversion Report is your guide



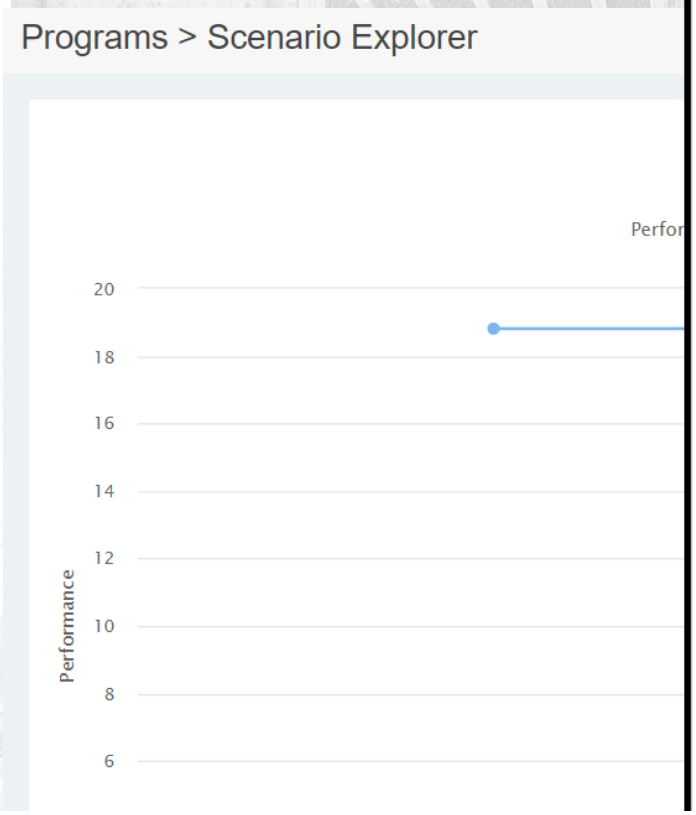
AASHTOWare™ BRIDGE MANAGEMENT

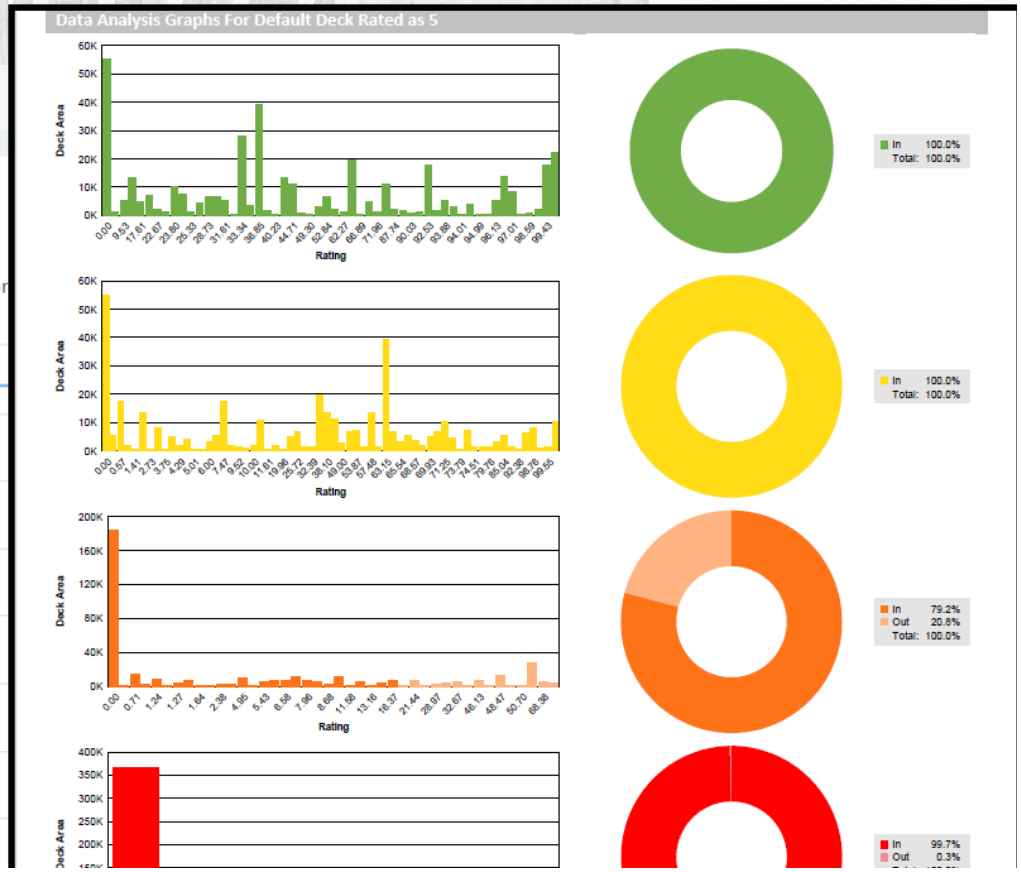
OPTIMIZATIONS

CHECK 1: CONVERSION CHECK

- All Bridges
- 1 Year
- 1 Action
- 0 Money

- Check starting point
- Conversion Report is your guide



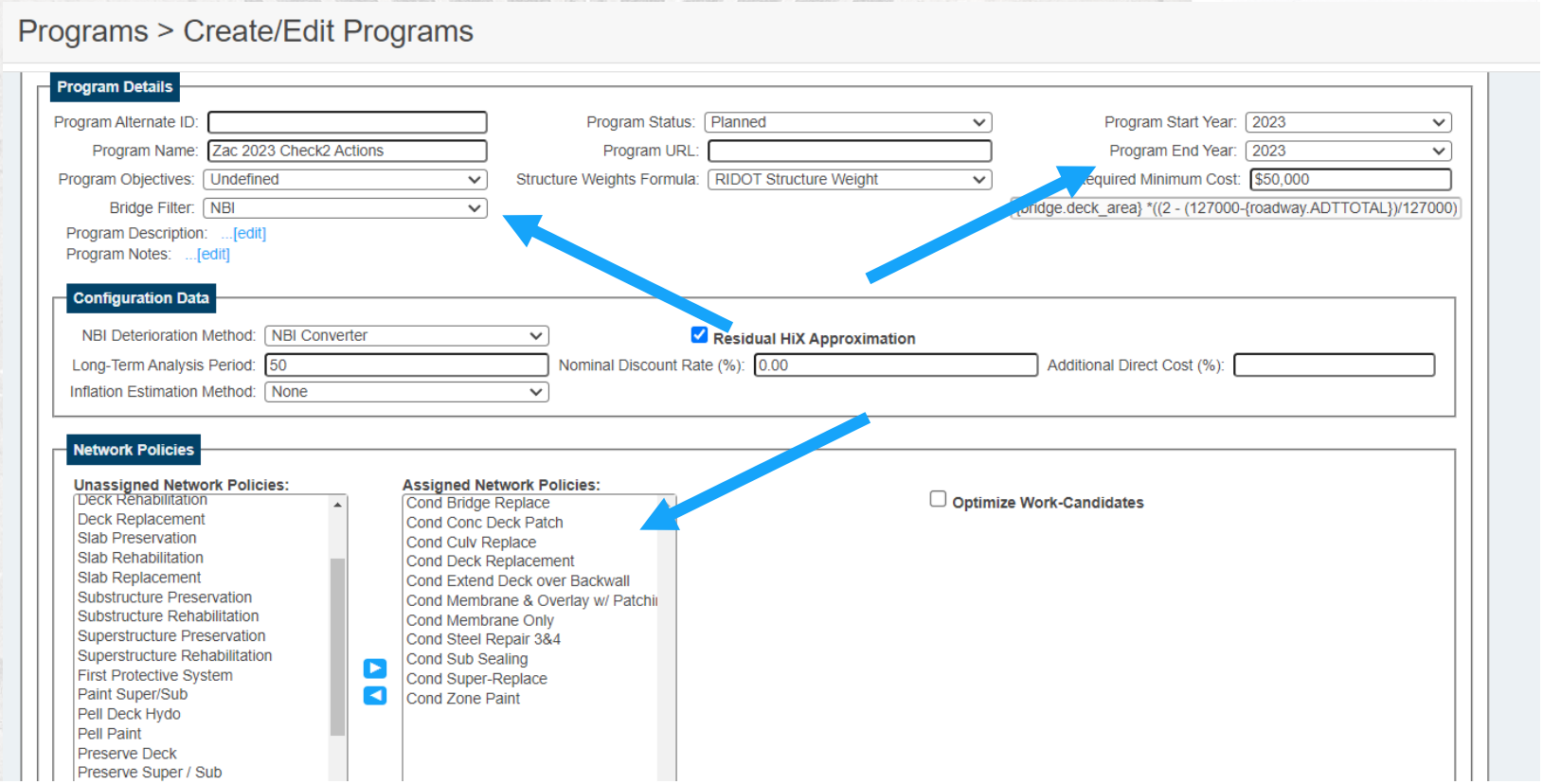


AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

CHECK 2: ACTIONS CHECK

- All Bridges
- 1 Year
- All Actions
- Normal Money

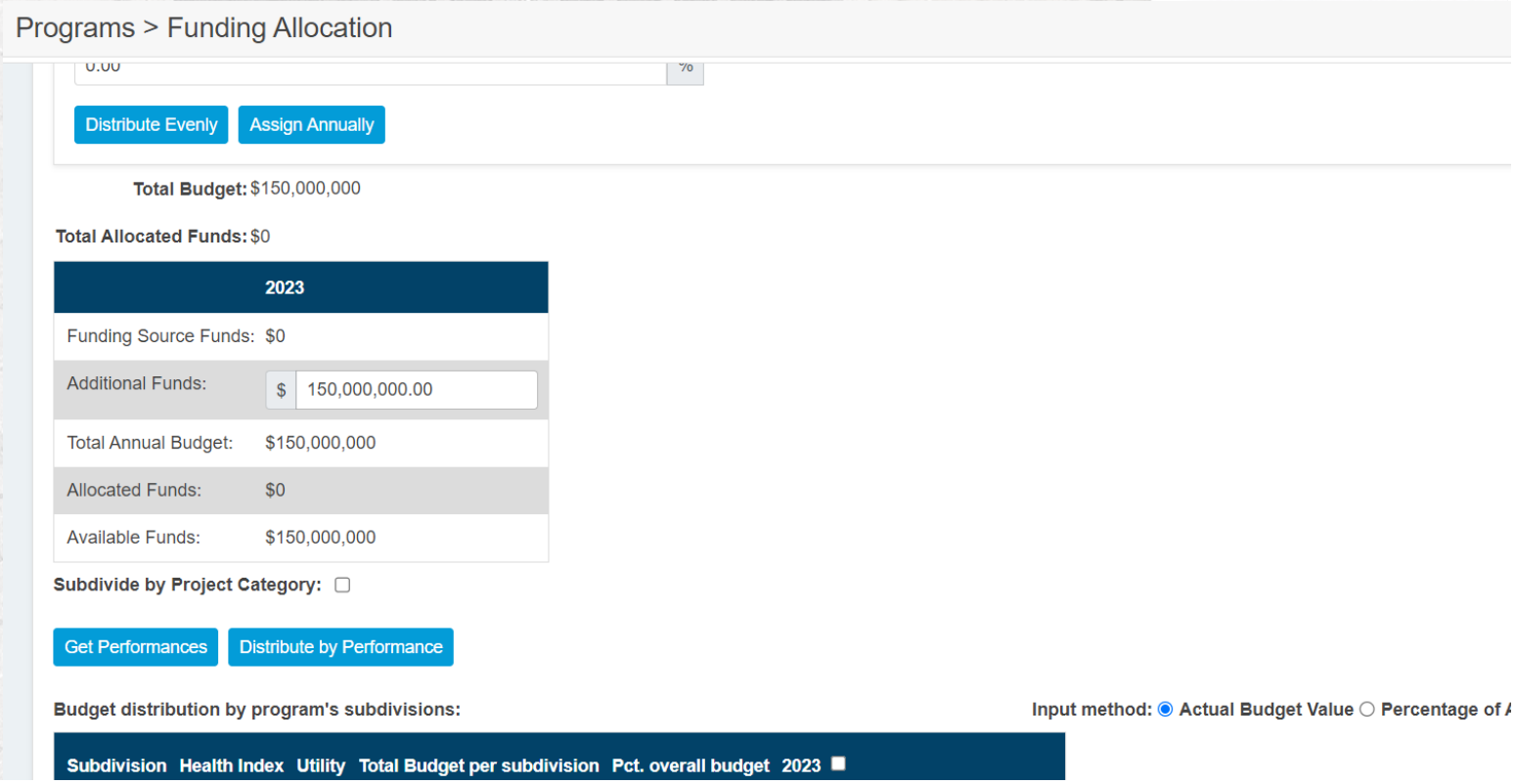


AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

CHECK 2: ACTIONS CHECK

- All Bridges
- 1 Year
- All Actions
- Normal Money



AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

CHECK 2: ACTIONS CHECK

- All Bridges
- 1 Year
- All Actions
- Normal Money

- Check results,
- Alternatives log is your guide

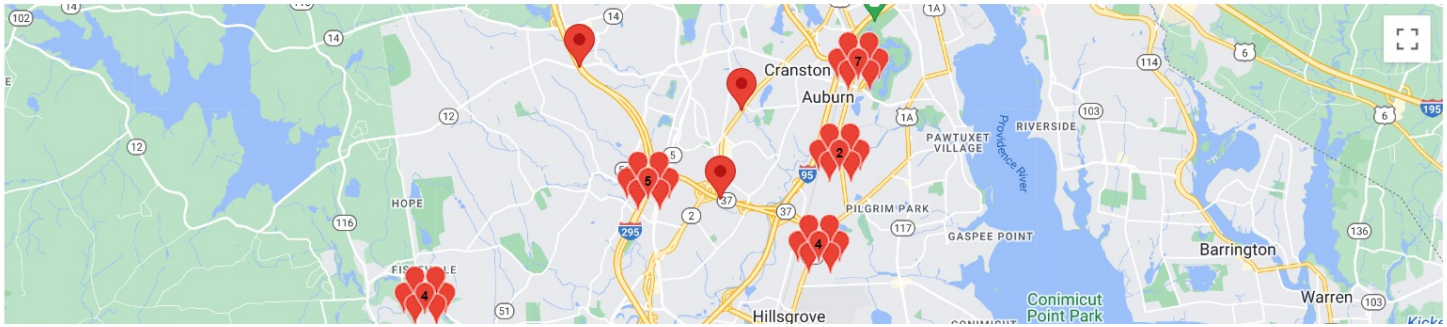
Programs > Program Planning

Project Name	Category	Automatic	Cost	Utility	Utility Benefit	Benefit/Cost ($k)	Cost ($k) / Benefit	Year	Frozen	Status
027001(Steel Repairs CS3 & CS4 Part)	Major Rehab Work	Yes	$960,099	54	5.83	0.000006072	$164,682.58	2023	No	Proposed
098121(Seal Substructure, Scour Countermeasures)	Preservation Work	Yes	$380,200	70	5.36	0.000014097	$70,932.84	2023	No	Proposed
037001(Bridge Replacement)	Replacement	Yes	$2,227,374	77	35.87	0.000016104	$62,095.73	2023	No	Proposed
066701(Seal Substructure, Scour Countermeasures)	Preservation Work	Yes	$371,800	74	1.43	0.000003846	$260,000.00	2023	No	Proposed
010801(Seal Substructure, Scour Countermeasures)	Preservation Work	Yes	$283,000	65	5.36	0.000018939	$52,798.51	2023	No	Proposed
075001(Seal Substructure, Sub Chip & Patch)	Preservation Work	Yes	$248,945	83	2.59	0.000010403	$96,118.05	2023	No	Proposed
091901(Membrane & Overlay)	Preservation Work	Yes	$79,320	61	2.2	0.000027735	$36,054.55	2023	No	Proposed
065501(Seal Substructure, Sub Chip & Patch)	Preservation Work	Yes	$2,203,297	71	5.28	0.000002396	$417,291.25	2023	No	Proposed
048501(Deck Replacement)	Major Rehab Work	Yes	$218,880	88	6.24	0.000028508	$35,076.92	2023	No	Proposed
059401(Bridge Replacement)	Replacement	Yes	$422,450	70	29.82	0.000070588	$14,166.67	2023	No	Proposed
072401(Bridge Replacement)	Replacement	Yes	$2,909,125	77	25.52	0.000008772	$113,993.93	2023	No	Proposed
096301(Seal Substructure, Scour Countermeasures)	Preservation Work	Yes	$292,600	69	2.45	0.000008373	$119,428.57	2023	No	Proposed
082701(Bridge Replacement)	Replacement	Yes	$2,524,738	86	19.98	0.000007913	$126,363.26	2023	No	Proposed
027101(Seal Substructure, Scour Countermeasures)	Preservation Work	Yes	$286,000	76	2.97	0.000010384	$96,296.30	2023	No	Proposed
072001(Seal Substructure, Sub Chip & Patch)	Preservation Work	Yes	$1,512,485	61	4.39	0.000002902	$344,529.68	2023	No	Proposed

First Previous 1 2 3 Next Last

Items per page: 15

Projects Map



AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

CHECK 2: ACTIONS CHECK

- All Bridges
- 1 Year
- All Actions
- Normal Money

- Check results,
- Alternatives log is your guide

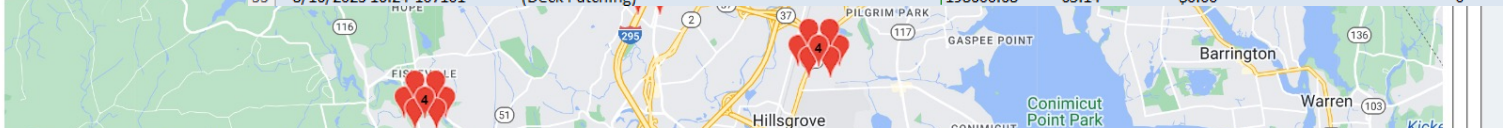
Programs > Program Pla

Project Name

027001(Steel Repairs CS3 & CS4 P
098121(Seal Substructure, Scour C
037001(Bridge Replacement)
066701(Seal Substructure, Scour C
010801(Seal Substructure, Scour C
075001(Seal Substructure, Sub Ch
091901(Membrane & Overlay)
065501(Seal Substructure, Sub Ch
048501(Deck Replacement)
059401(Bridge Replacement)
072401(Bridge Replacement)
096301(Seal Substructure, Scour C
082701(Bridge Replacement)
027101(Seal Substructure, Scour C
072001(Seal Substructure, Sub Ch

Projects Map

	A	B	C	D	E	F	G	H	I
1	Alternative Log Output. Optimization GUID: '76C1AD763A8E48A4A33C52EA1FC4743C' Program: 'Zac 202								
2	Created Time	Bridge ID	Combination Name	ucture W	arting U	Cost	tility Be	Utility I	Weighted Utility	Wei Utili
3	8/16/2023 16:24	001101	(Membrane & Overlay w/ Patching)	29040.106	70.56	$0.00			0	
4	8/16/2023 16:24	001101	(Extend Deck Over Backwall)	29040.106	70.56	$0.00			0	
5	8/16/2023 16:24	001101	(Extend Deck Over Backwall, Steel Repairs)	29040.106	70.56	$0.00			0	
6	8/16/2023 16:24	001101	(Extend Deck Over Backwall, Repaint All Steel Members	29040.106	70.56	$0.00			0	
7	8/16/2023 16:24	001101	(Extend Deck Over Backwall, Beam End Repair)	29040.106	70.56	$0.00			0	
8	8/16/2023 16:24	001101	(Extend Deck Over Backwall, Zone Paint)	29040.106	70.56	$0.00			0	
9	8/16/2023 16:24	001101	(Zone Paint)	29040.106	70.56	$0.00			0	
10	8/16/2023 16:24	001101	(Seal Substructure)	29040.106	70.56	$11,400.00			0	
11	8/16/2023 16:24	001101	(Steel Repairs CS3 & CS4 Part)	29040.106	70.56	$0.00			0	
12	8/16/2023 16:24	001101	(Membrane & Overlay)	29040.106	70.56	$0.00			0	
13	8/16/2023 16:24	001101	(Deck Replacement, Super Replacement)	29040.106	70.56	$0.00			0	
14	8/16/2023 16:24	001101	(Deck Replacement, Repair Conc. Beam (Fiberwrap))	29040.106	70.56	$0.00			0	
15	8/16/2023 16:24	001101	(Deck Replacement, Steel Repairs)	29040.106	70.56	$0.00			0	
16	8/16/2023 16:24	001101	(Deck Replacement, Beam End Repair)	29040.106	70.56	$0.00			0	
17	8/16/2023 16:24	001101	(Deck Replacement)	29040.106	70.56	$0.00			0	
18	8/16/2023 16:24	001101	(Deck Patching)	29040.106	70.56	$0.00			0	
19	8/16/2023 16:24	001101	(Culvert Replacement)	29040.106	70.56	$0.00			0	
20	8/16/2023 16:24	107101	(Membrane & Overlay w/ Patching)	198600.68	65.14	$0.00			0	
21	8/16/2023 16:24	107101	(Extend Deck Over Backwall)	198600.68	65.14	$5,078,040.00			0	
22	8/16/2023 16:24	107101	(Extend Deck Over Backwall, Zone Paint)	198600.68	65.14	$6,599,420.26			0	
23	8/16/2023 16:24	107101	(Extend Deck Over Backwall, Beam End Repair)	198600.68	65.14	$5,408,872.62			0	
24	8/16/2023 16:24	107101	(Extend Deck Over Backwall, Repaint All Steel Members	198600.68	65.14	$27,569,400.00			0	
25	8/16/2023 16:24	107101	(Bridge Replacement)	198600.68	65.14	$0.00			0	
26	8/16/2023 16:24	107101	(Zone Paint)	198600.68	65.14	$1,521,380.26			0	
27	8/16/2023 16:24	107101	(Membrane & Overlay)	198600.68	65.14	$0.00			0	
28	8/16/2023 16:24	107101	(Deck Replacement, Super Replacement)	198600.68	65.14	$0.00			0	
29	8/16/2023 16:24	107101	(Deck Replacement, Repair Conc. Beam (Fiberwrap))	198600.68	65.14	$0.00			0	
30	8/16/2023 16:24	107101	(Deck Replacement, Steel Repairs)	198600.68	65.14	$0.00			0	
31	8/16/2023 16:24	107101	(Deck Replacement, Beam End Repair)	198600.68	65.14	$0.00			0	
32	8/16/2023 16:24	107101	(Deck Replacement)	198600.68	65.14	$0.00			0	
33	8/16/2023 16:24	107101	(Deck Patching)	198600.68	65.14	$0.00			0	

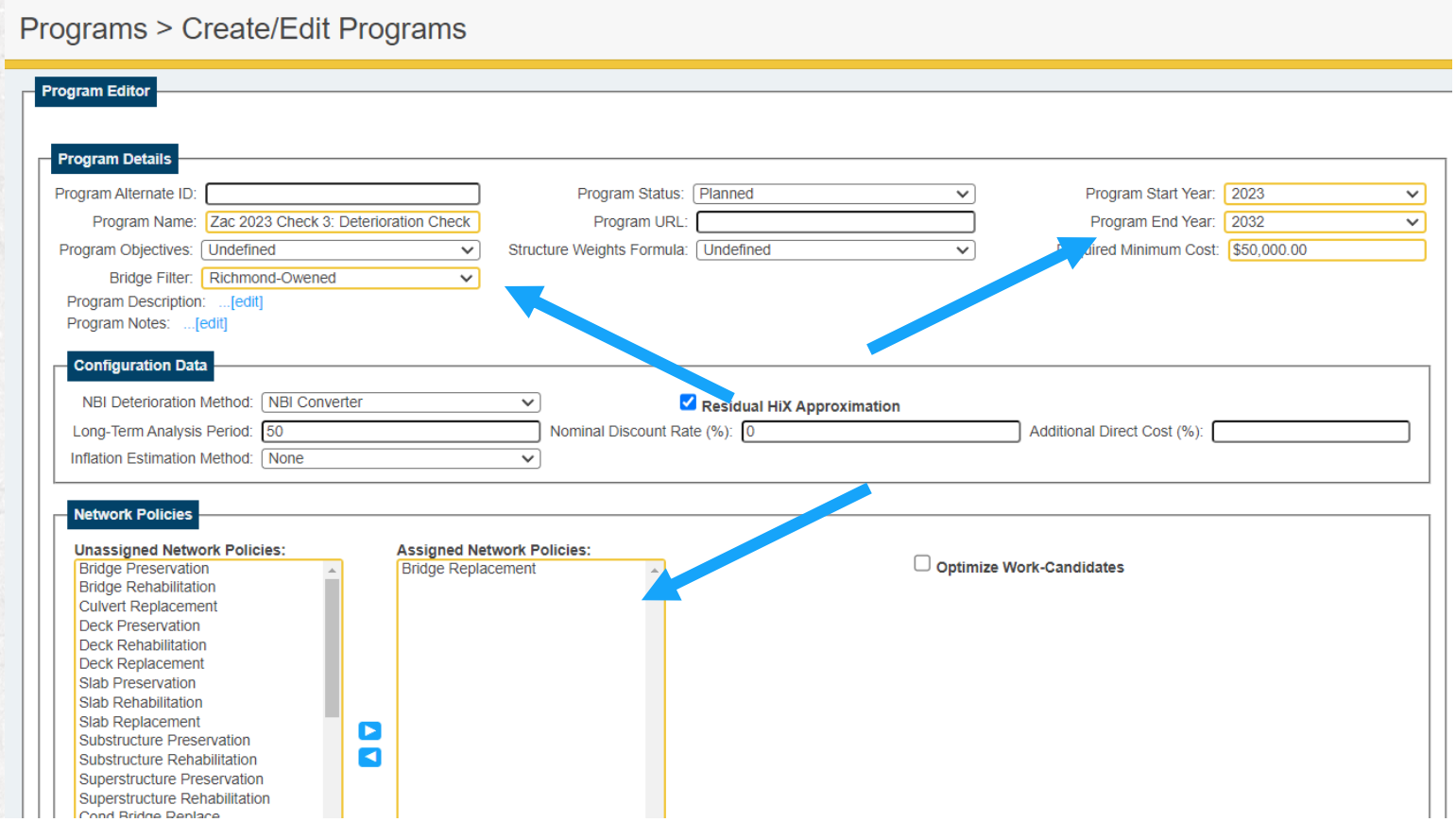


AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

CHECK 3: DETERIORATION CHECK

- Small Subset Bridges
- 10 Years
- 1 Action
- Normal Money



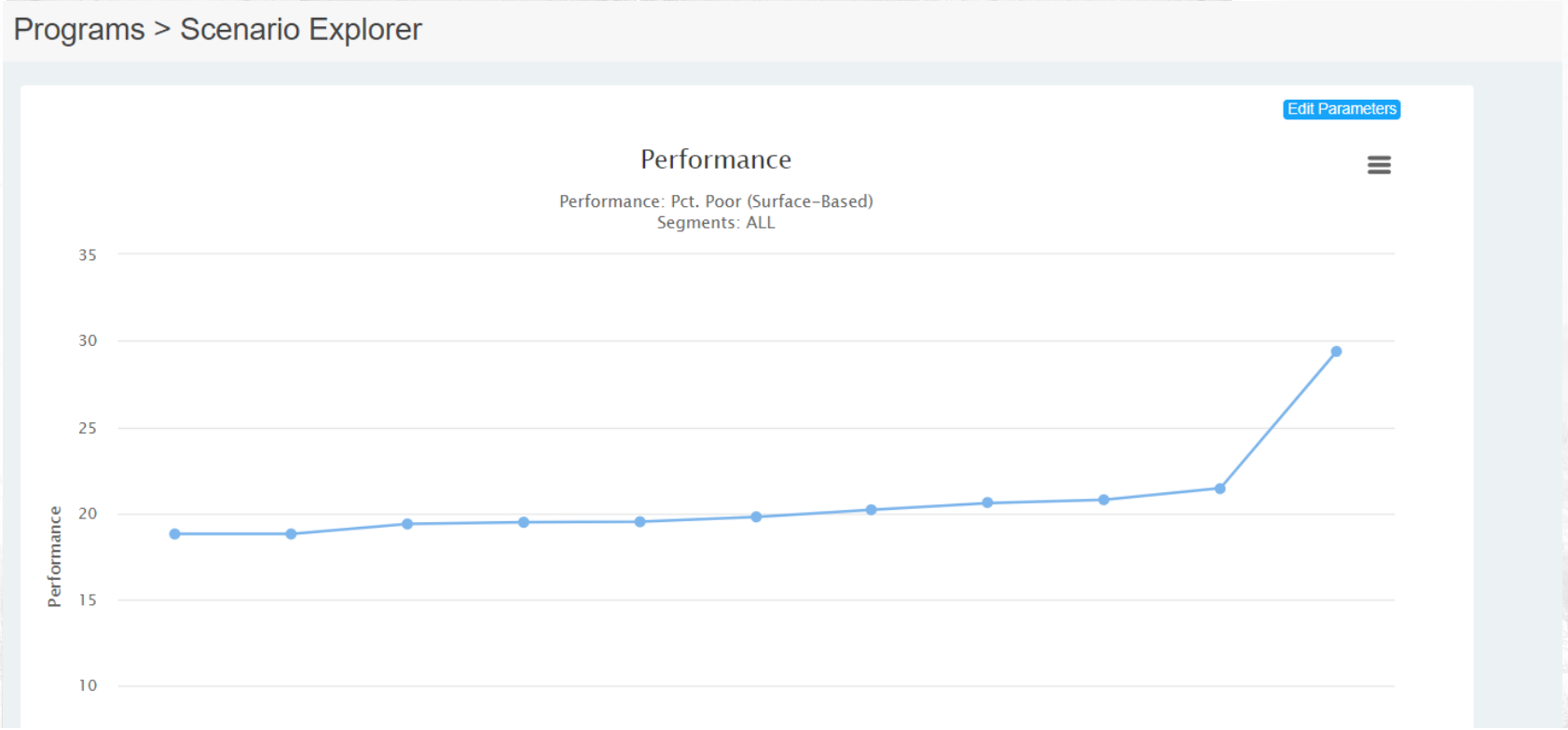
AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

CHECK 3: DETERIORATION CHECK

- Small Subset Bridges
- 10 Years
- 1 Action
- 0 Money

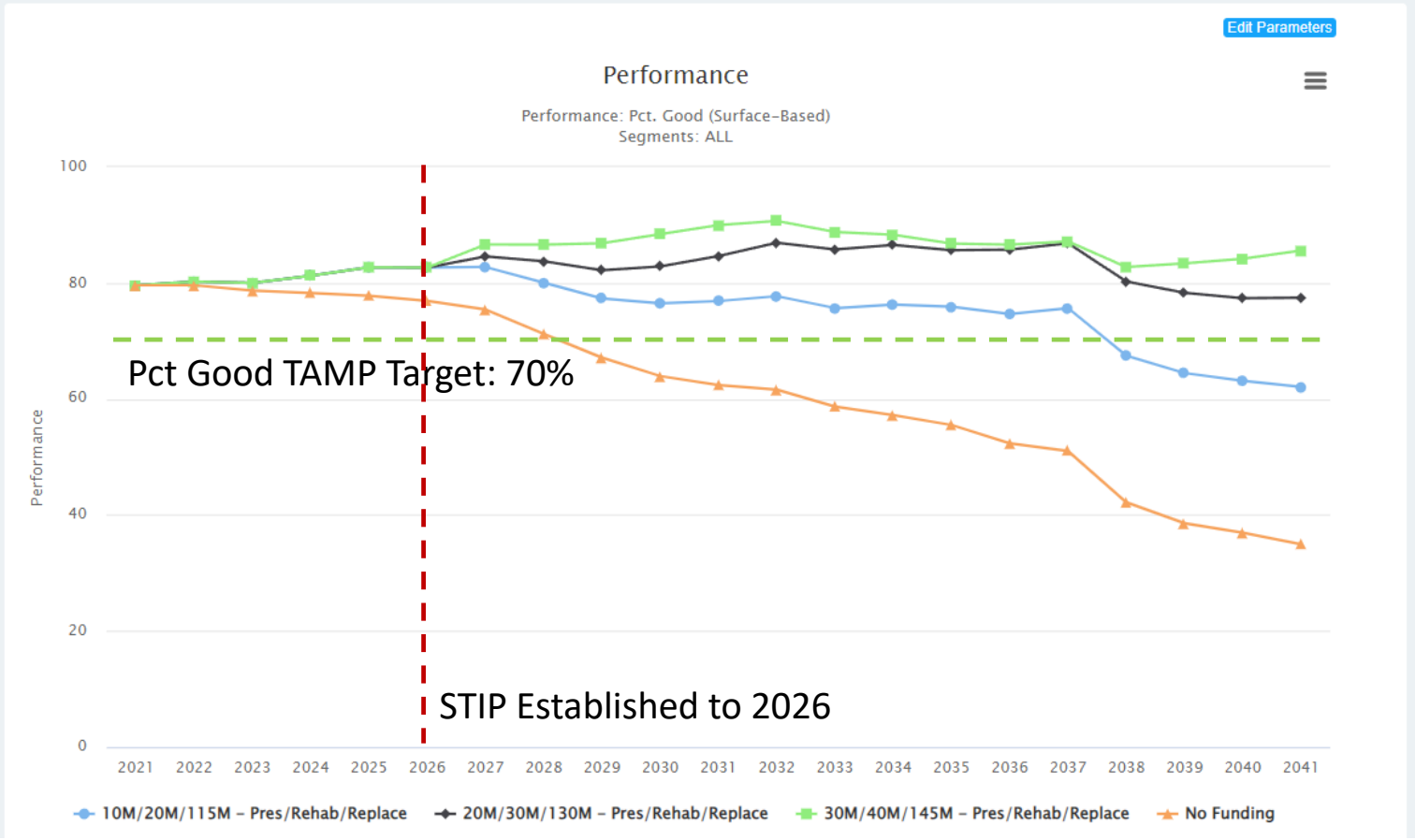
- Check results,
- Watch for cliffs

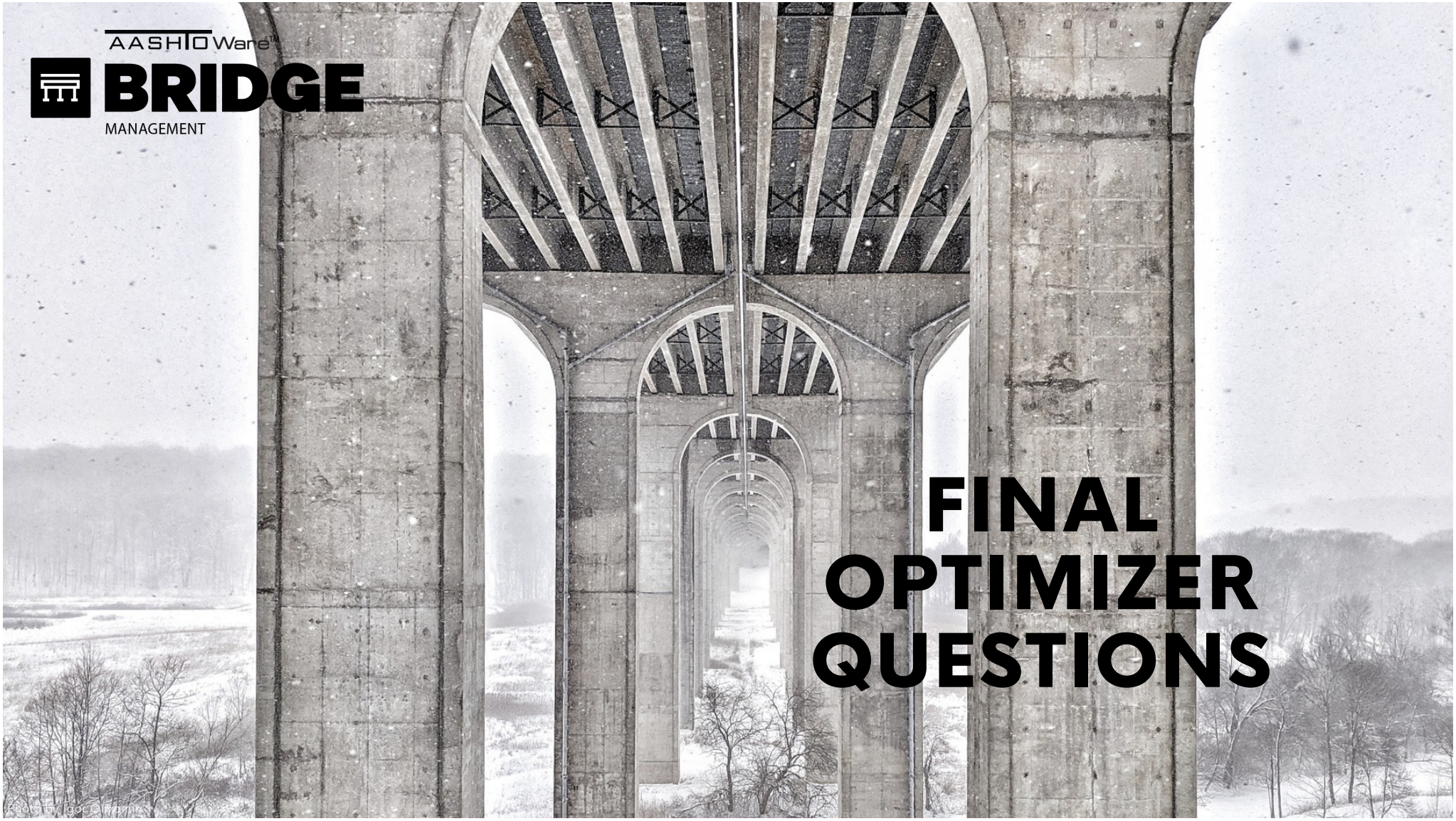


AASHTOWare™ BRIDGE MANAGEMENT

OPTIMIZATIONS

Programs > Scenario Explorer

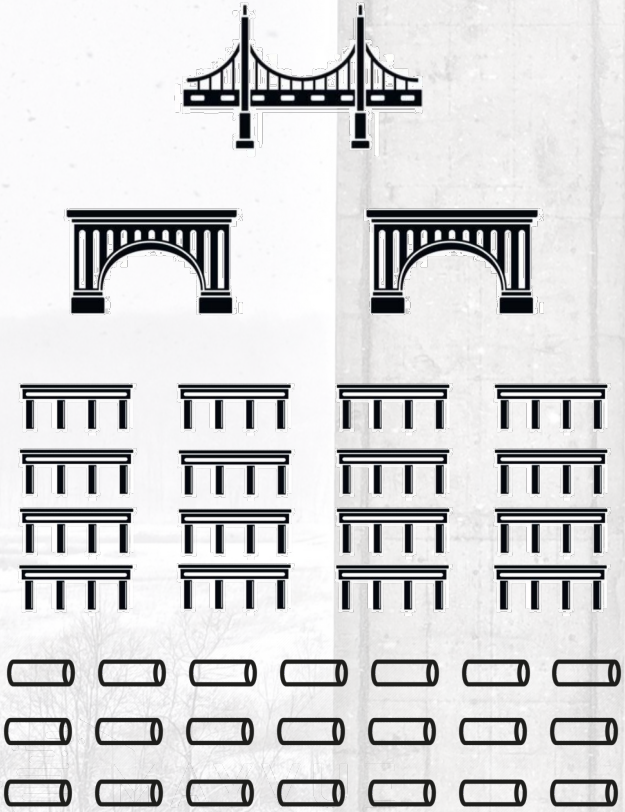



AASHTOWare™
BRIDGE
MANAGEMENT
FINAL
OPTIMIZER
QUESTIONS

AASHTOWare™
BRIDGE
MANAGEMENT
LIFECYCLE
COST
ANALYSIS
Photo by Igor Oliyamik

AASHTOWare™ BRIDGE MANAGEMENT

LCCA OBJECTIVES

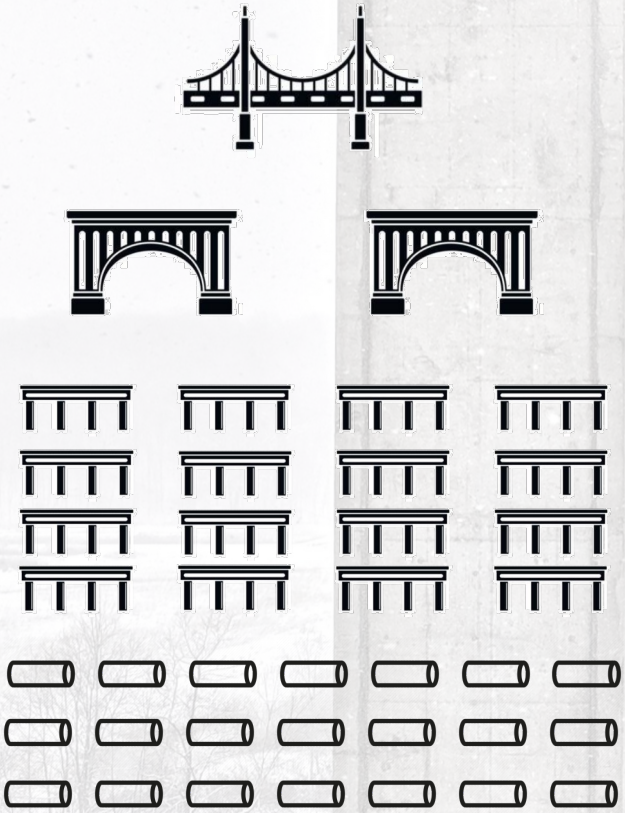


NETWORK OF BRIDGES

AASHTOWare™ BRIDGE MANAGEMENT

LCCA OBJECTIVES

NETWORK OF BRIDGES



SINGLE STRUCTURE

AASHTOWare™ BRIDGE MANAGEMENT

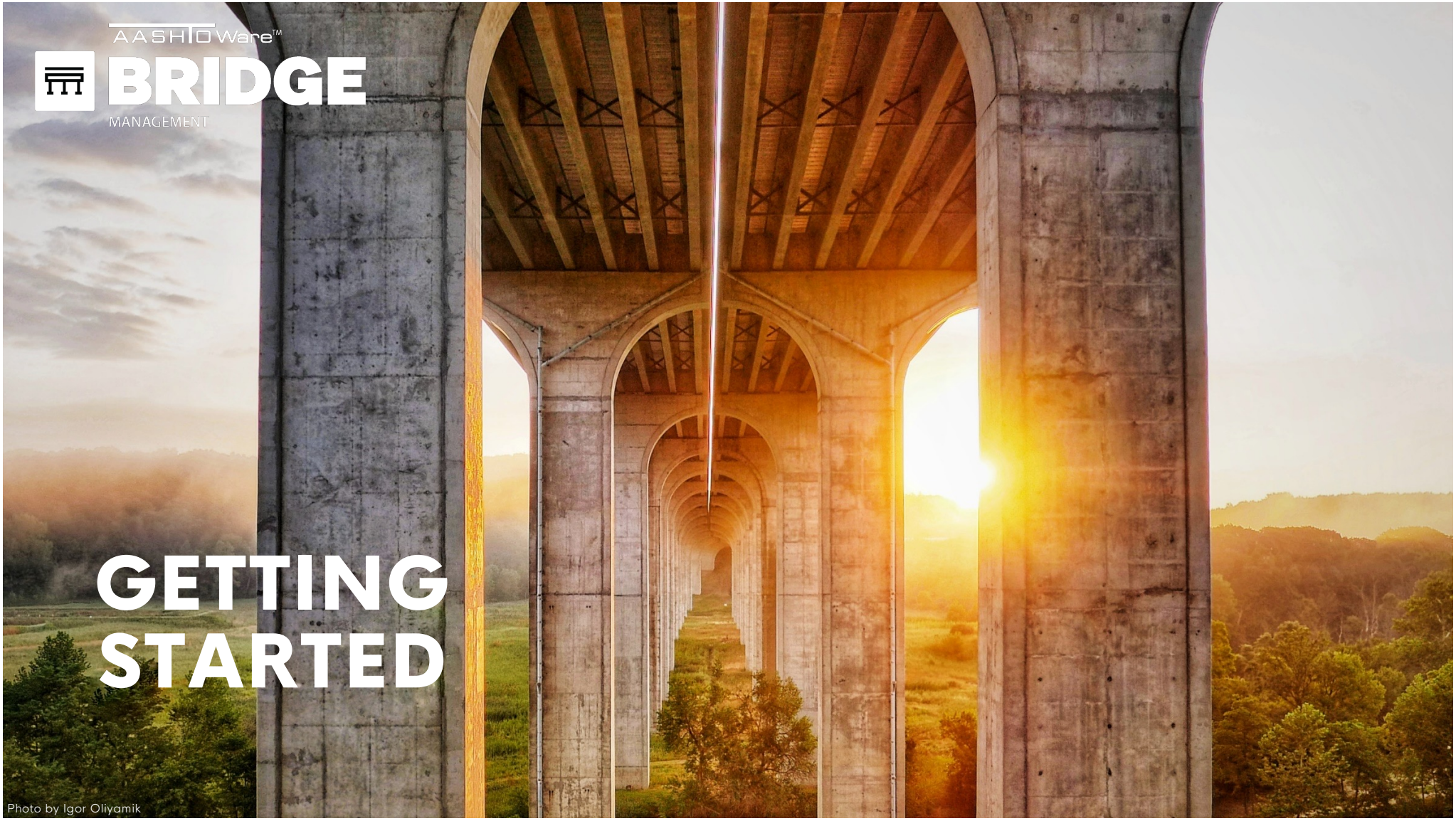
LCCA OBJECTIVES

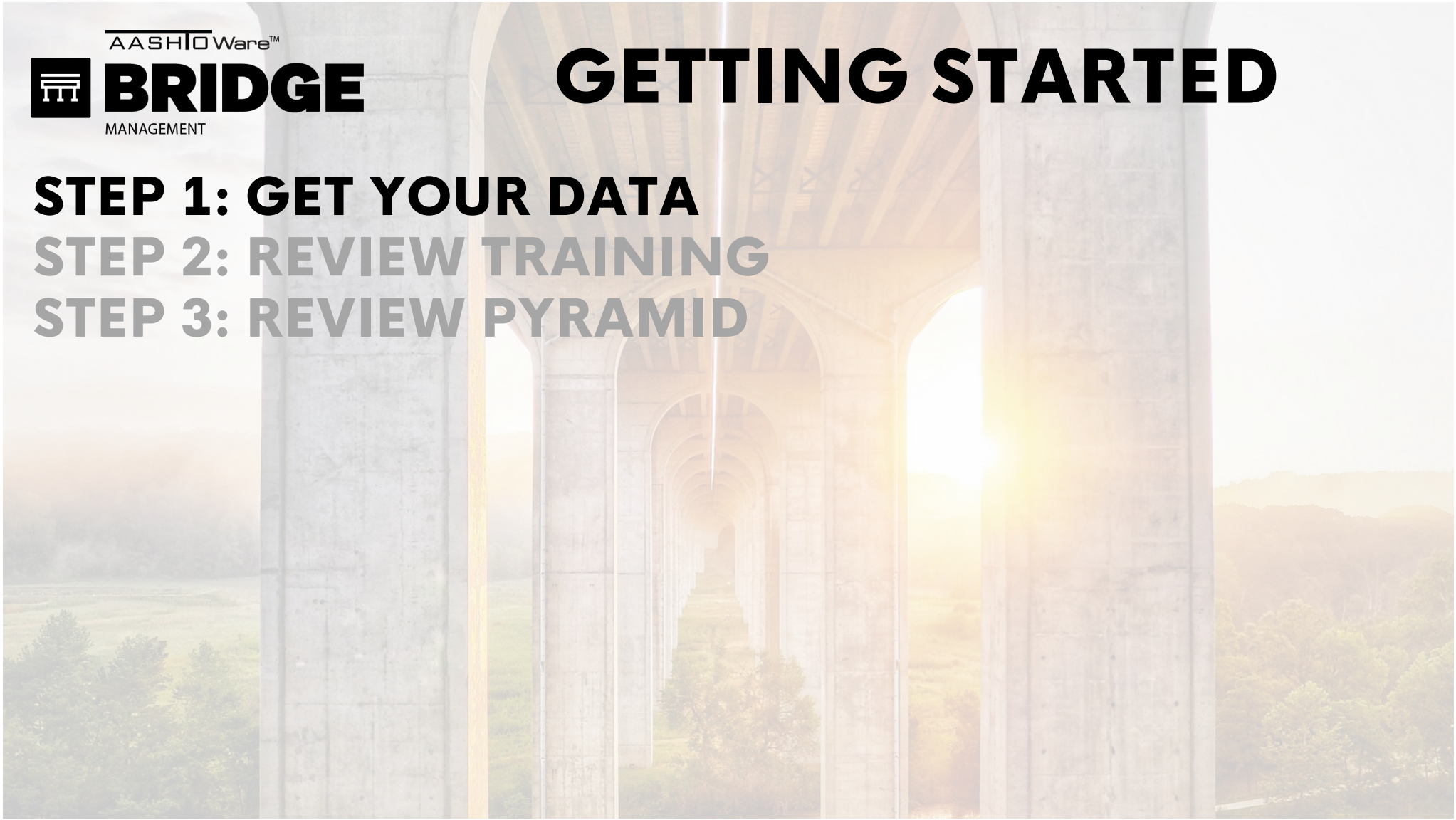
SINGLE STRUCTURE

BUDGETS

FIXES

PROJECTIONS


AASHTOWare™
BRIDGE
MANAGEMENT
GETTING
STARTED
Photo by Igor Oliyamik


AASHTOWare™
BRIDGE
MANAGEMENT
GETTING STARTED
STEP 1: GET YOUR DATA
STEP 2: REVIEW TRAINING
STEP 3: REVIEW PYRAMID

AASHTOWare™ BRIDGE MANAGEMENT

GETTING STARTED

STEP 1: GET YOUR DATA

Projects > Upload Project

Upload Project

Import File Type: BrM External Bulk Project Spreadsheet (XLS)

Import File: Select

Blank Excel Spreadsheet Template

Options

Upload Information

UPDATE YOUR STIP

Import Cancel

[BrM 6.6 DONATIONS SLIDE 70 - 78]

AASHTOWare™ BRIDGE MANAGEMENT

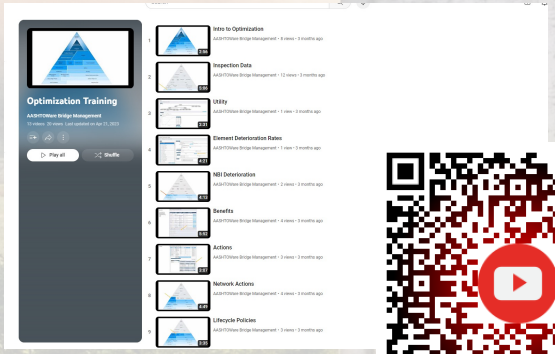
GETTING STARTED

STEP 1: GET YOUR DATA

STEP 2: REVIEW TRAINING

STEP 3: REVIEW PYRAMID

YOUTUBE

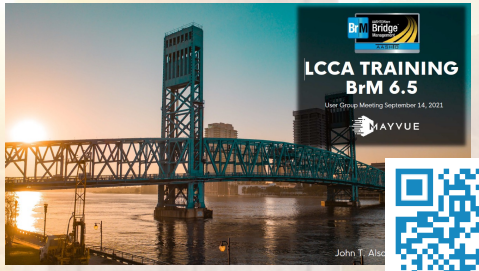


BrM Optimizer Playlist

MAYVUE TRAINING

MAYVUE

PAST USER GROUP TRAINING



Past BrM UG Presentations

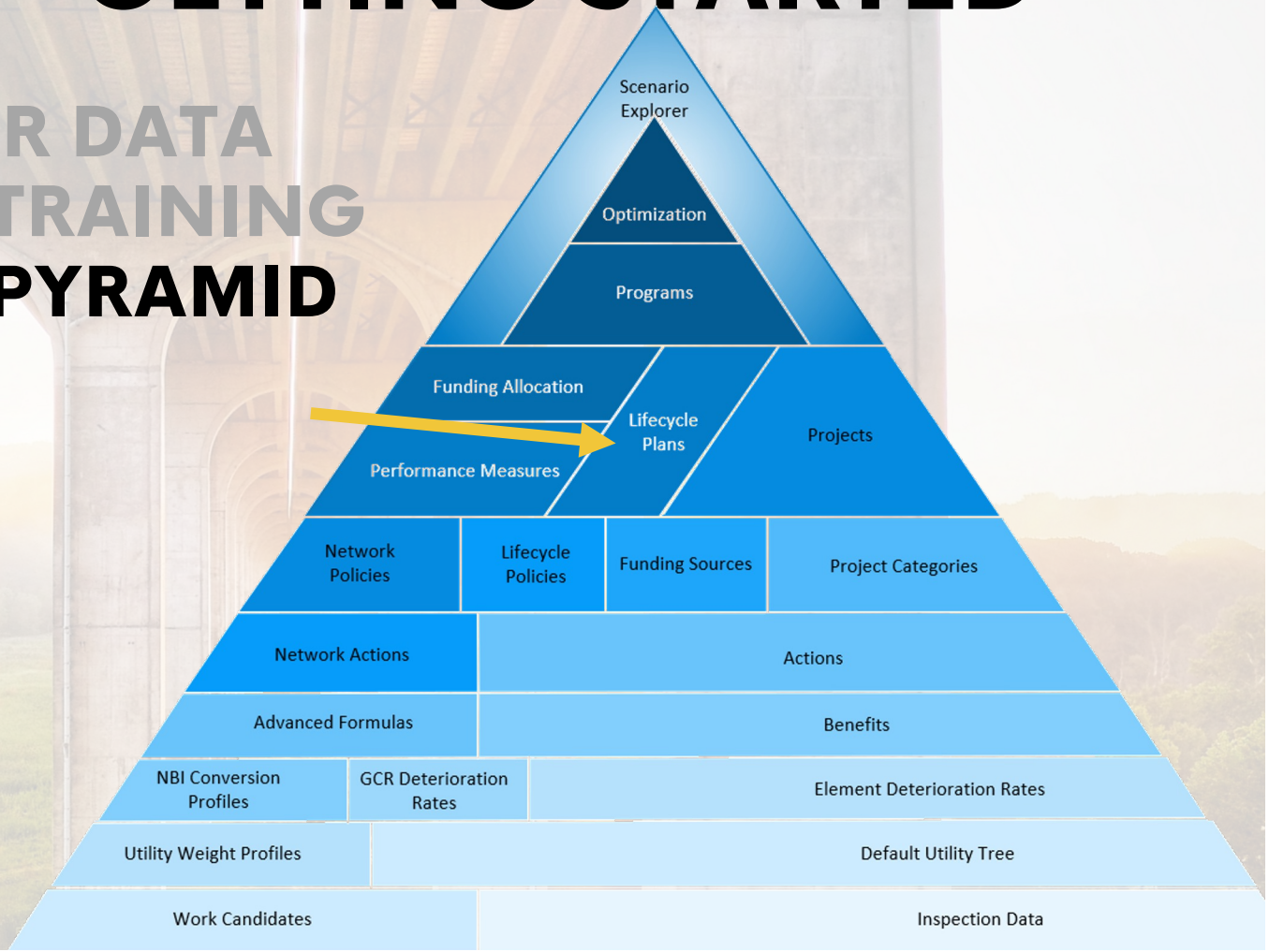
AASHTOWare™ BRIDGE MANAGEMENT

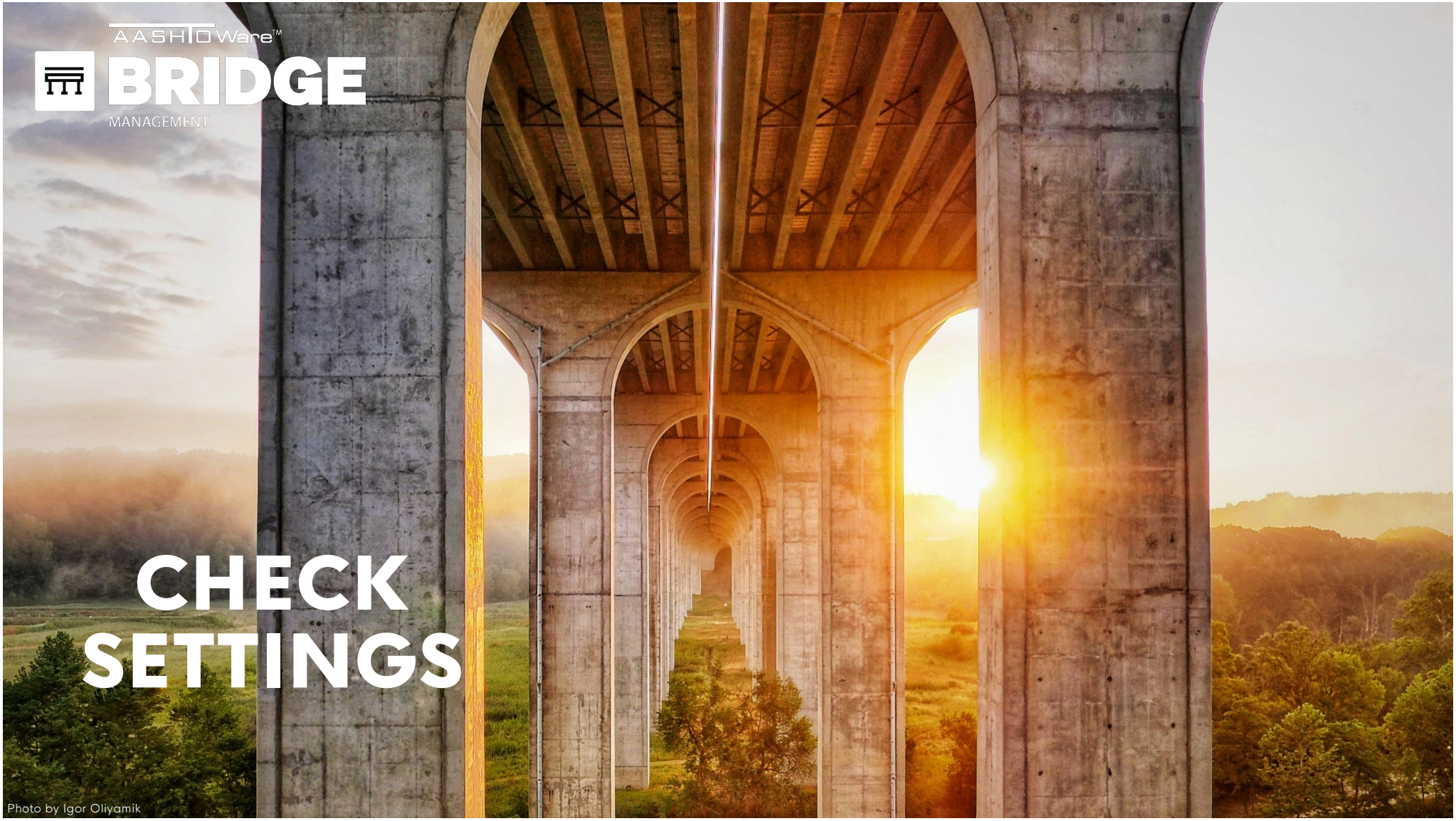
GETTING STARTED

STEP 1: GET YOUR DATA

STEP 2: REVIEW TRAINING

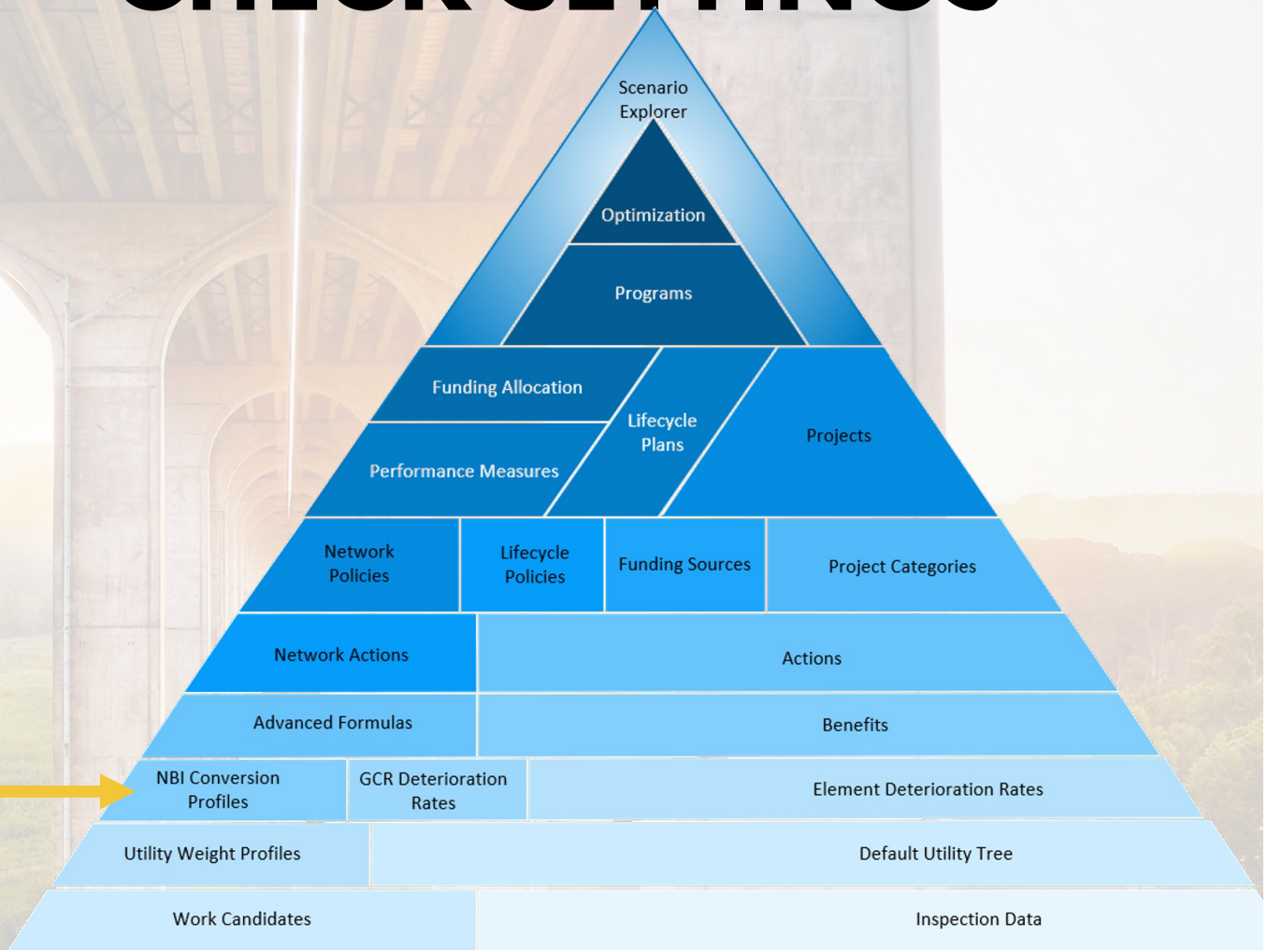
STEP 3: REVIEW PYRAMID




AASHTOWare™
BRIDGE
MANAGEMENT
CHECK
SETTINGS
Photo by Igor Oliyamik

AASHTOWare™ BRIDGE MANAGEMENT

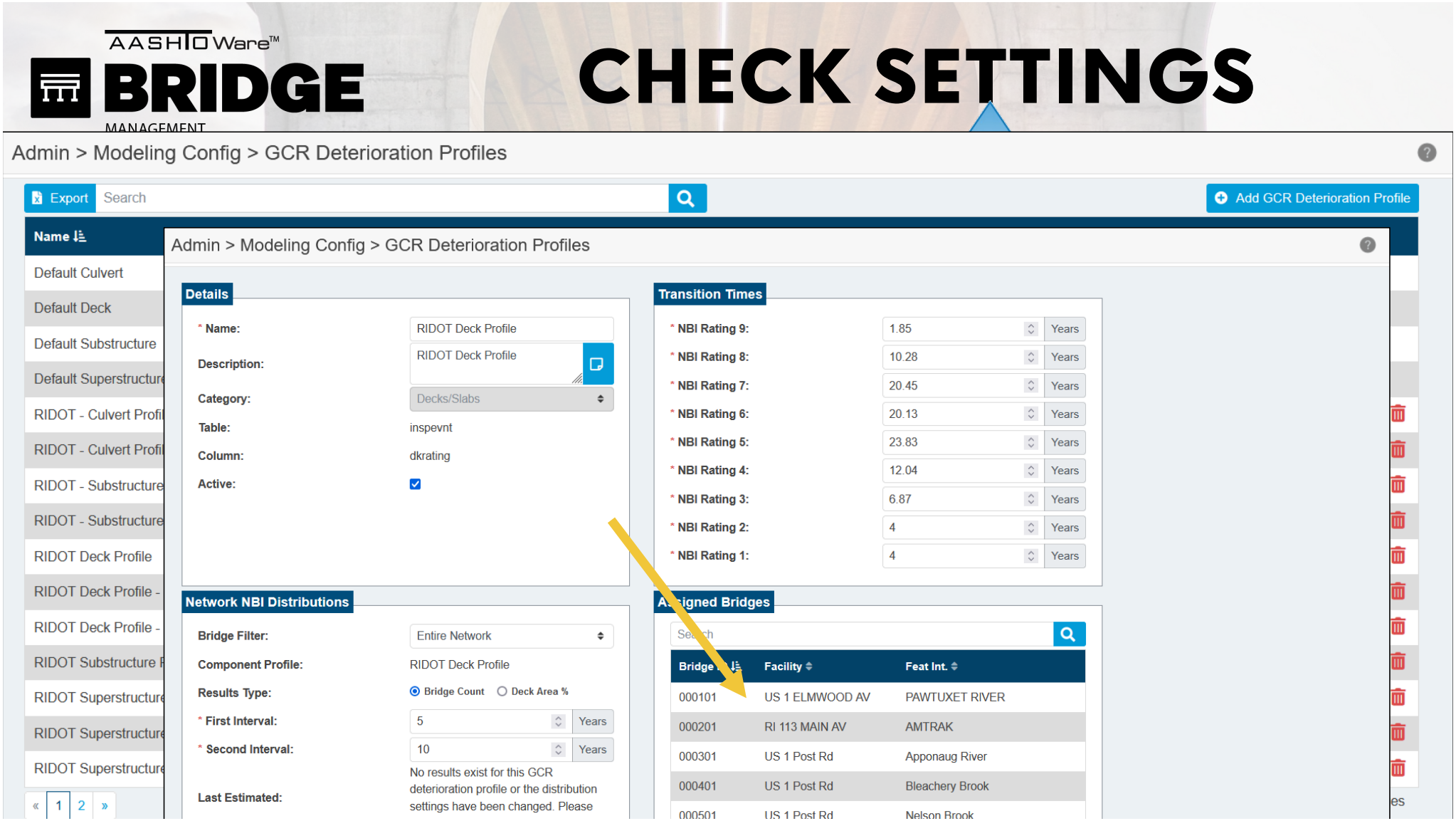
CHECK SETTINGS



CUSTOM DETERIORATION OR CONVERSION

AASHTOWare™ BRIDGE MANAGEMENT

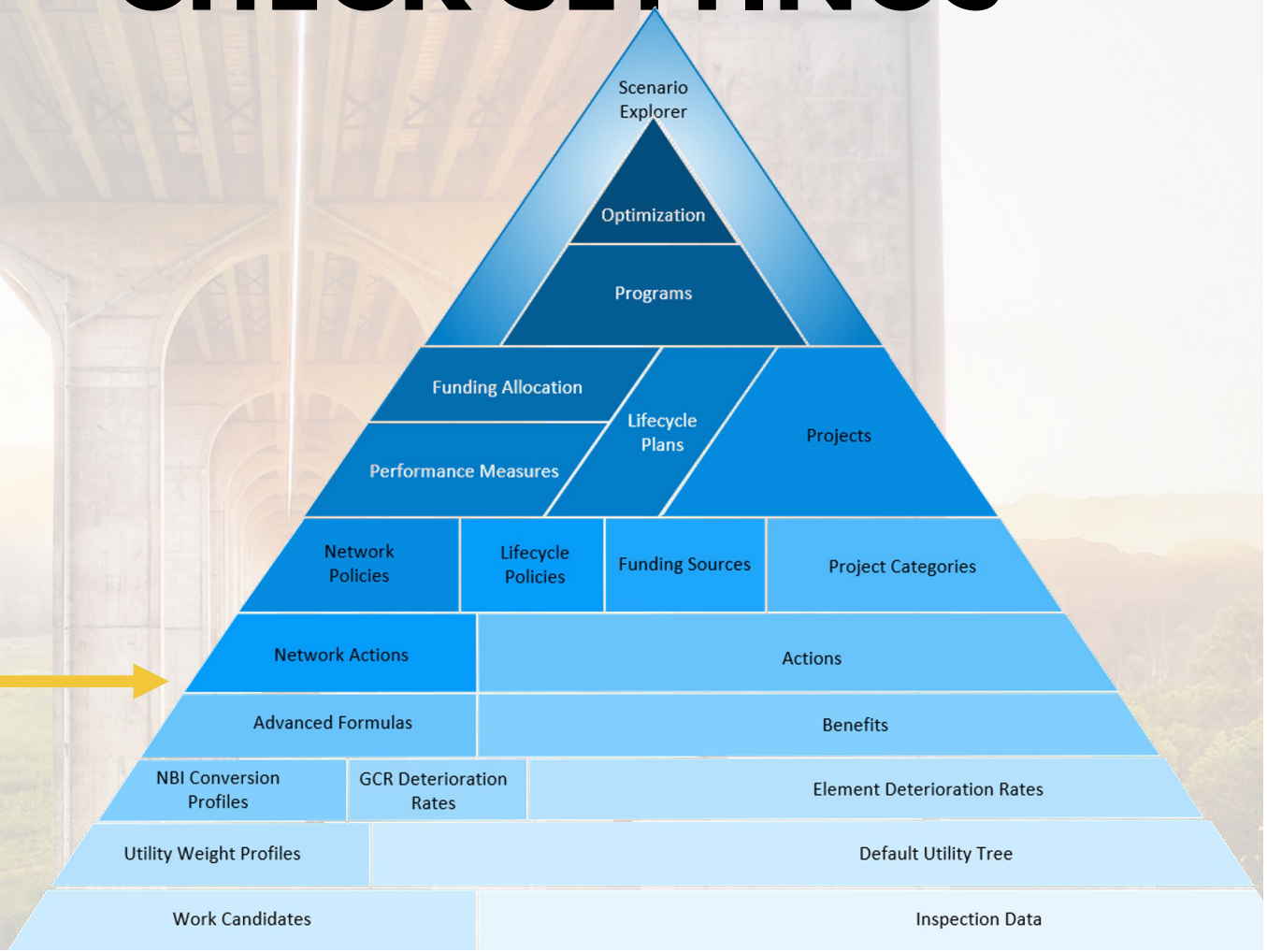
CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

DIFFERENT ACTIONS OR COSTS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > Action Defs

	Seal Deck	Inspector		1	☑	☐	2000	Network	☑	✕
	Sealing Pavement/Curbline	Inspector	No benefit	1	☑	☐		Network	☑	✕
	Steel Repairs-Inspector	Inspector		1	☑	☐	10000	Network	☑	✕
	Sub Patch w Seal & Wash	Substructure Patch w Sea	LCCA	1	☑	☐	$	Network	☑	✕

First | Previous | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | Next | Last

Associated Benefit Groups for Action Sub Patch w Seal & Wash

○ Metric ◉ English

Benefit Groups

Please Select — Add

- Conc Sub CS3&4 to 2 ✕
- Replace Concrete Protective System ✕
- Wash All ✕

Overriding Direct Cost (overrides unit-costs)

Enabled	Field Name	Cost Per Unit	Unit
☐	Deck Area	$	sq.ft

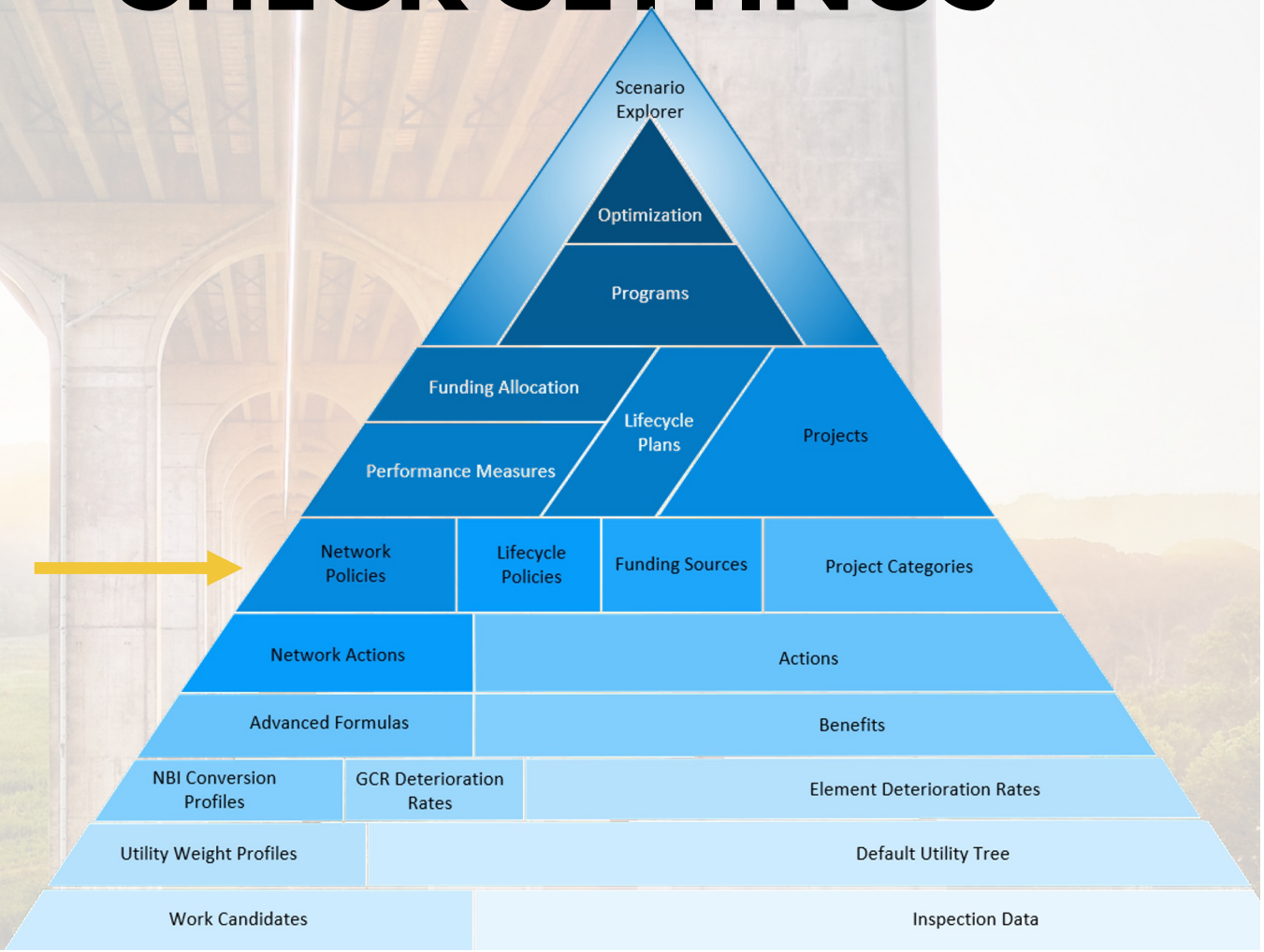
Unit Costs

ID	Element Name	Sepa-rated	Cost Per Unit	Unit	?	
204	Pre Conc Column (Condition improved)	☐	$ 100	each	■	✕
205	Re Conc Column (Condition improved)	☐	$ 100	each	■	✕
210	Re Conc Pier Wall (Condition improved)	☐	$ 50	ft	■	✕
215	Re Conc Abutment (Condition improved)	☐	$ 50	ft	■	✕
220	Re Conc Pile Cap/Ftg (Condition improved)	☐	$ 20	ft	■	✕
226	Pre Conc Pile (Condition improved)	☐	$ 100	each	■	✕
227	Re Conc Pile (Condition improved)	☐	$ 100	each	■	✕
233	Pre Conc Pier Cap (Condition improved)	☐	$ 20	ft	■	✕
234	Re Conc Pier Cap (Condition improved)	☐	$ 20	ft	■	✕

AASHTOWare™ BRIDGE MANAGEMENT

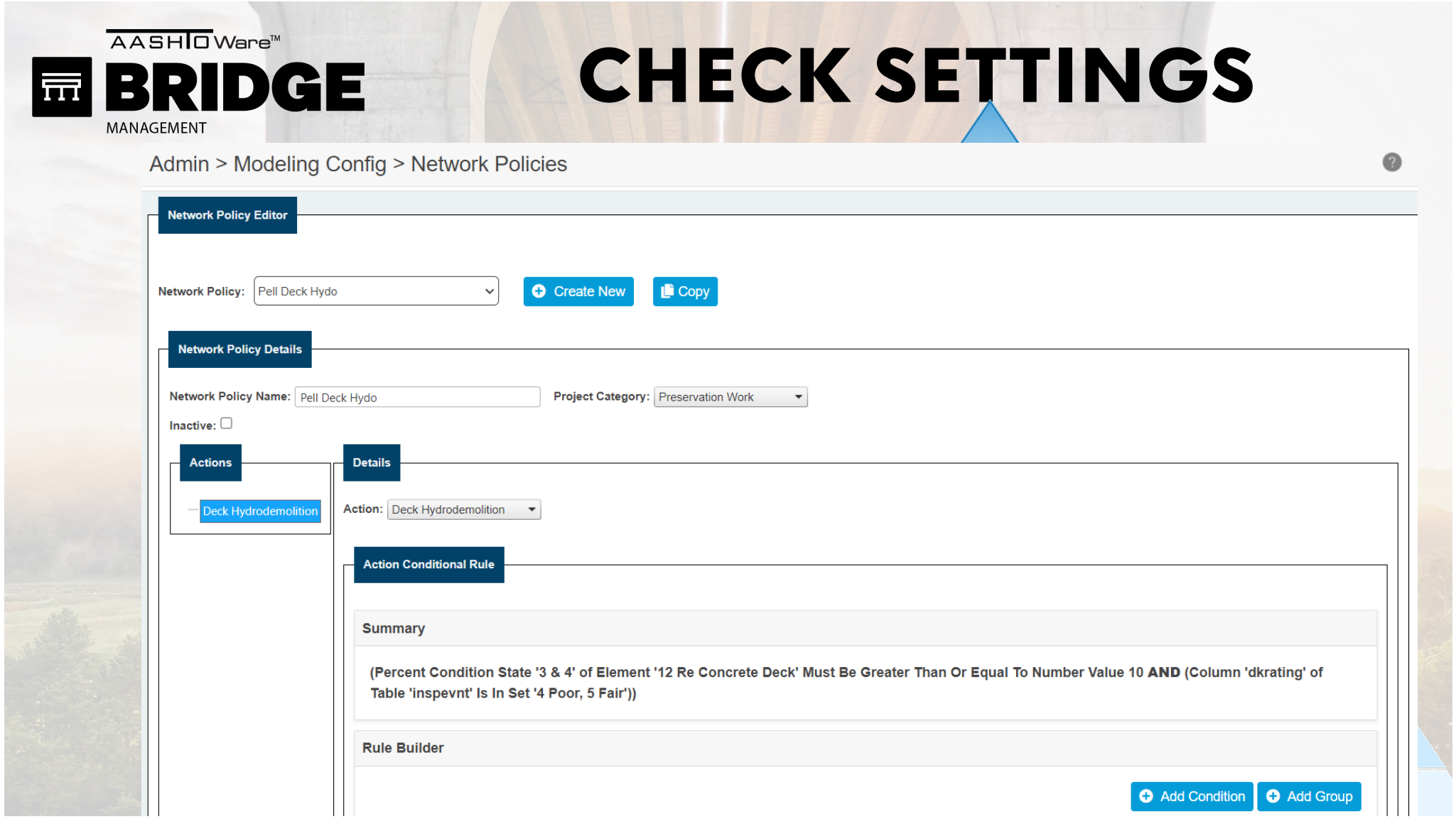
CHECK SETTINGS

DIFFERENT NETWORK POLICY THRESHOLDS



AASHTOWare™ BRIDGE MANAGEMENT

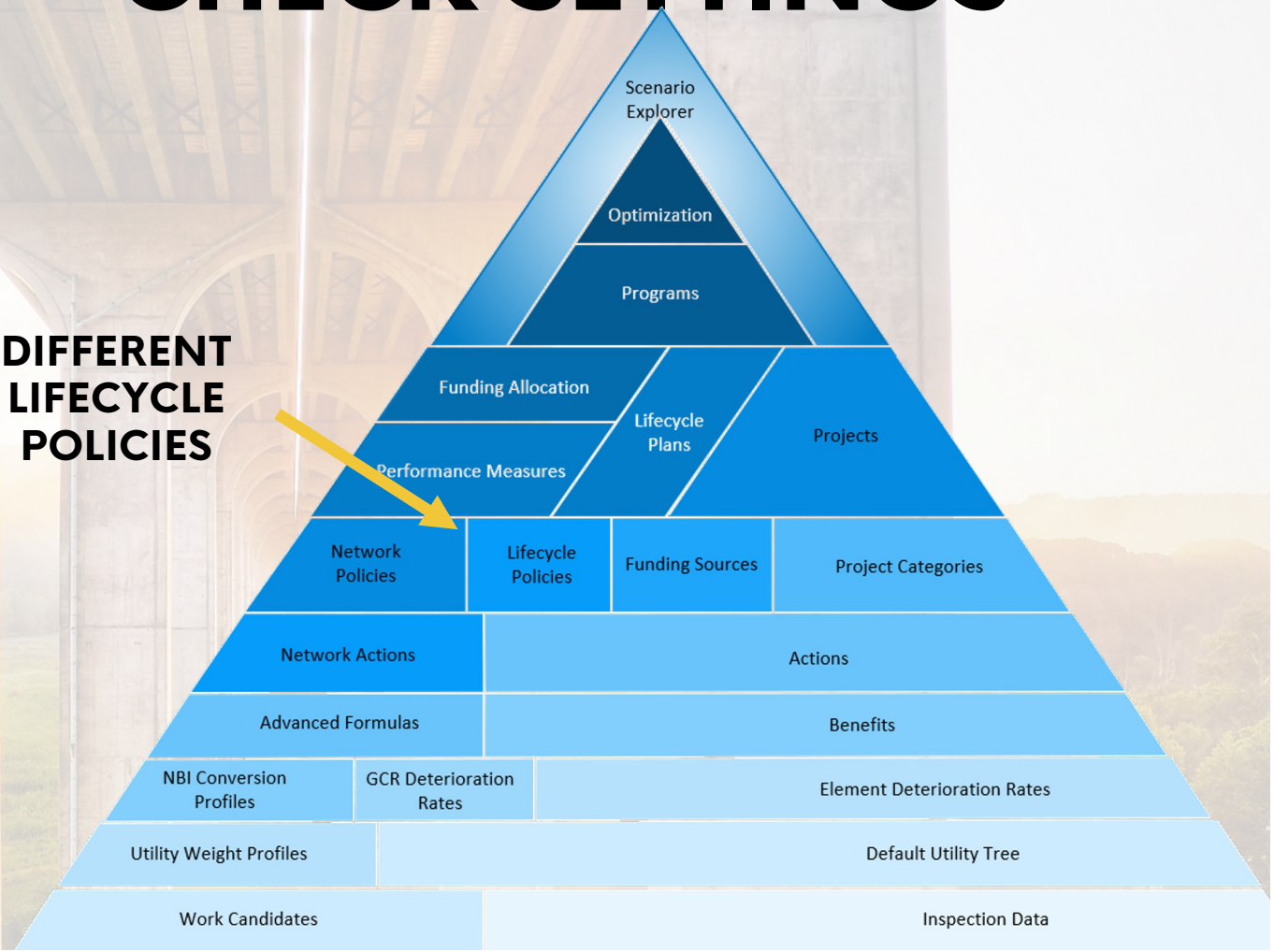
CHECK SETTINGS



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

DIFFERENT LIFECYCLE POLICIES



AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > LCCA Assign Policies

LCCA Assign Policies

Life Cycle Policy:

Assign to All | Assign to Selected

Bridge ID	District	County	LCCA Policy
080001	District 2	Newport	Default Structure Overall

« 1 »

1 item in **1** page

- Bridge Replacement Pell
- Default Deck Policy
- **Default Structure Overall**
- Default Substructure Policy
- Default Superstructure Policy
- Jamestown Deck Care
- Mount Hope Deck Care
- Mount Hope Misc. Repair
- Mount Hope Super(steel CS4)
- Pell Deck Care
- Pell Deck Care Part 3 &4
- Pell Super Care
- Pell Super Care Steel SC4
- RIDOT - Bridge Policy
- RIDOT - Bridge Replacement
- RIDOT - Deck Policy
- RIDOT - Paint Policy
- RIDOT - Seal and Wash Bridge
- RIDOT - Structure Overall
- RIDOT - Substructure Policy

AASHTOWare™ BRIDGE MANAGEMENT

CHECK SETTINGS

Admin > Modeling Config > LCCA Policy Rules

Type: NBI Component Rating | Field: Deck | As Number | Must Be: Less Than or Equal To | Type: Number Value | Number Value: 3 | Remove Condition

OR

Type: NBI Component Rating | Field: Superstructure | As Number | Must Be: Less Than or Equal To | Type: Number Value | Number Value: 3 | Remove Condition

OR

Type: NBI Component Rating | Field: Substructure | As Number | Must Be: Less Than or Equal To | Type: Number Value | Number Value: 3 | Remove Condition

OR

Type: NBI Component Rating | Field: Culvert | As Number | Must Be: Less Than or Equal To | Type: Number Value | Number Value: 4

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BRIDGE
MANAGEMENT
HOW TO USE LCCA
Photo by Igor Oliyamik

AASHTOWare™ BRIDGE MANAGEMENT

HOW TO USE LCCA

Analysis > LCCA

Create/Edit Plan

* **Name:**	2023 Example	**Set as Current Plan:**	☐	Updated by Pontis User on 8/21/2023	
* **Start Year:**	2023	* **Analysis Length:**	30 Years		
* **Inflation Estimation Method:**	Fixed Inflation Rate	* **Inflation %:**	0 %		
* **Nominal Discount Rate:**	0 %				
* **NBI Deterioration Method:**	NBI Converter	**Deck NBI Converter Profile:**	BrM Deck Default	**Substructure NBI Converter Profile:**	BrM Substructure Default
		Superstructure NBI Converter Profile:	BrM Superstructure Default	**Culvert NBI Converter Profile:**	BrM Culvert Default
* **Utility Weight Profile:**	Default				
Estimate Functional User Cost:	☐				
* **Element Deterioration Profile:**	-- none --				
* **Condition Based On Inspection:**	2021-05-17 (UXEO)	* **Residual Value Calculation:**	HI Approximation		

Generated by User: Pontis on 08/21/2023

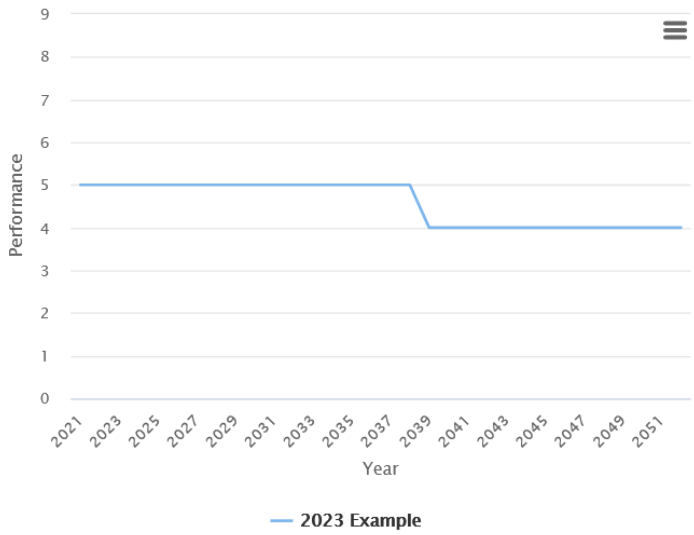
AASHTOWare™ BRIDGE MANAGEMENT

HOW TO USE LCCA

Analysis > LCCA

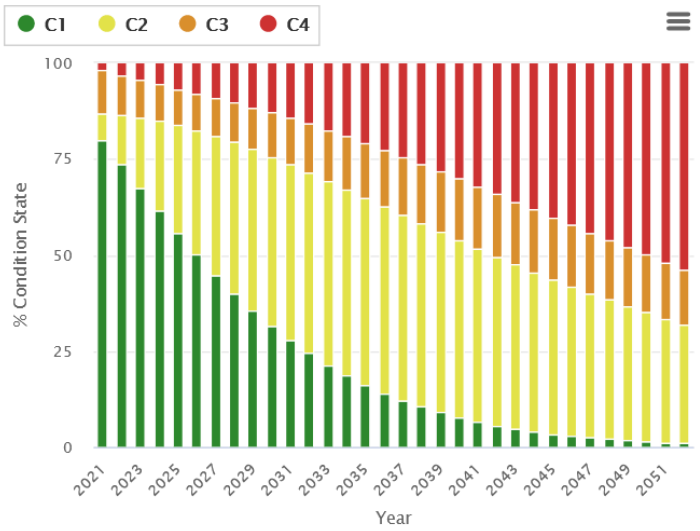
Performance

Performance Measure: Sub Rating



Element

Chart Type: Condition Sta Element: Assem Jnt Wi



Optimization

AASHTOWare™ BRIDGE MANAGEMENT

HOW TO USE LCCA

Analysis > LCCA

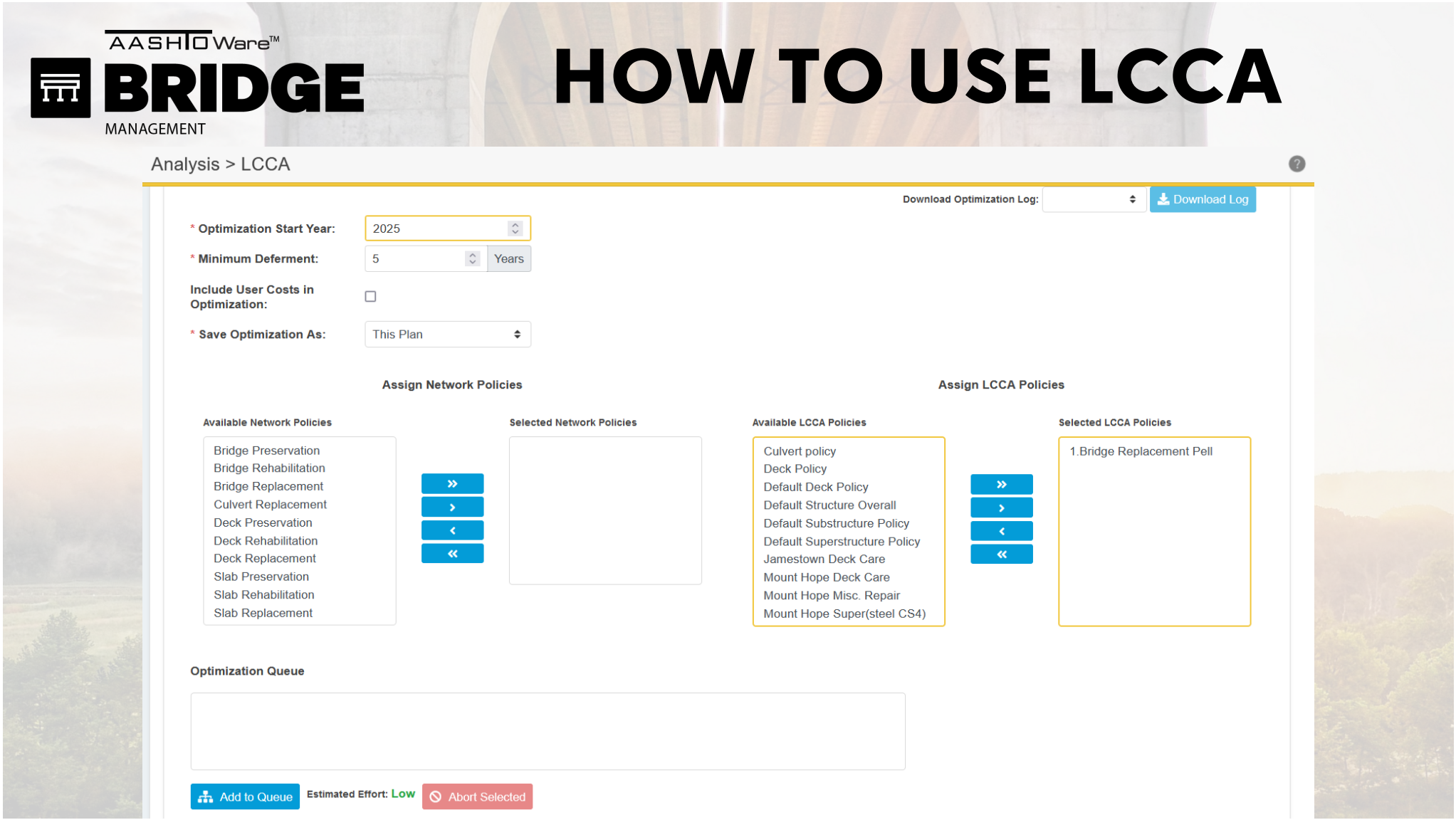
	7	2029	Do Nothing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	8	2030	Do Nothing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	9	2031	Do Nothing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	10	2032	Do Nothing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	11	2033	Do Nothing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	12	2034	Do Nothing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	13	2035	Do Nothing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	14	2036	Do Nothing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	15	2037	Do Nothing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal						$0.00			$0.00			$0.00
Residual Value (Final HI=71.56%)						($330,972,244.87)						
Life Cycle Costs					Agency Life Cycle Cost -$330,972,244.87			User Life Cycle Cost	$0.00		Total Life Cycle Cost -$330,972,244.87	

« 1 2 »

30 items in **2** pages

AASHTOWare™ BRIDGE MANAGEMENT

HOW TO USE LCCA



AASHTOWare™ BRIDGE MANAGEMENT

HOW TO USE LCCA

Analysis > LCCA

Export | Search | Hide years with no actions | Quick Add Action | Detailed Add Action

					Agency Cost			Functional + Action User Cost		
Locked	Year #	Year	Action(s)	Action(s) Added As	2023 $	Inflated $	PV $	2023 $	Inflated $	PV $
🔒	10	2032	Deck Preservation Superstructure Preservation	Network Policy: Deck Preservation	$14,167,498.89	$14,167,498.89	$14,167,498.89	$0.00	$0.00	$0.00
🔒	20	2042	Deck Preservation Superstructure Preservation	Network Policy: Deck Preservation	$13,222,691.96	$13,222,691.96	$13,222,691.96	$0.00	$0.00	$0.00
🔒	30	2052	Deck Preservation Superstructure Preservation	Network Policy: Deck Preservation	$14,952,630.85	$14,952,630.85	$14,952,630.85	$0.00	$0.00	$0.00
Subtotal							$42,342,821.69			$0.00
Residual Value (Final HI=82.02%)							($379,339,107.37)			
Life Cycle Costs						Agency Life Cycle Cost	-$336,996,285.68		User Life Cycle Cost	$0.00

« 1 »

3 items in **1** page

Results

Life Cycle Cost

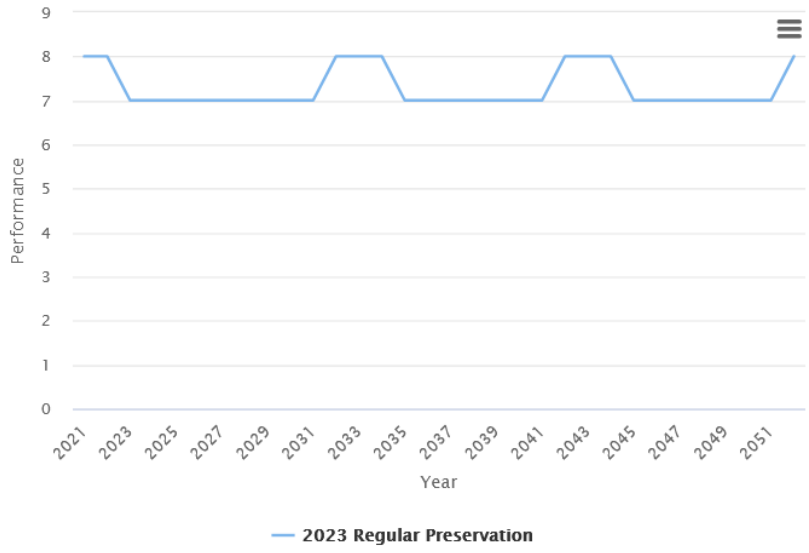
AASHTOWare™ BRIDGE MANAGEMENT

HOW TO USE LCCA

Analysis > LCCA

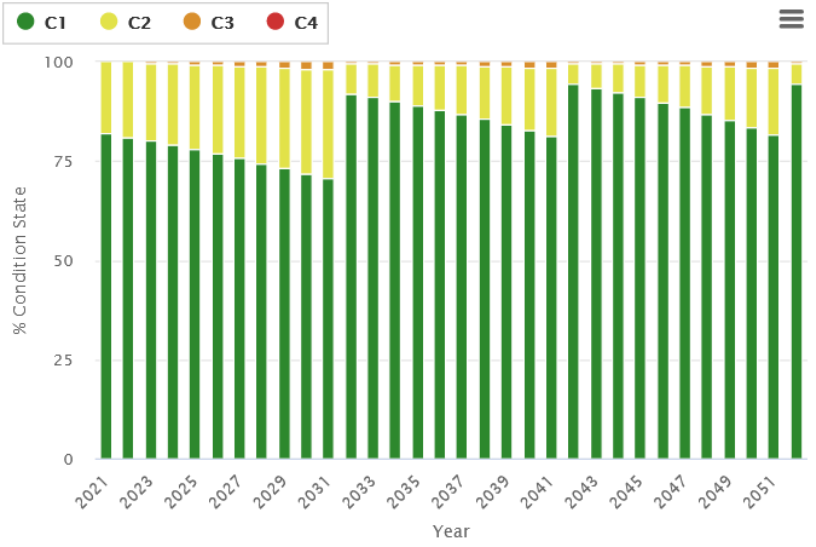
Performance

Performance Measure: Deck Rating



Element

Chart Type: Condition Sta **Element:** Re Concrete I

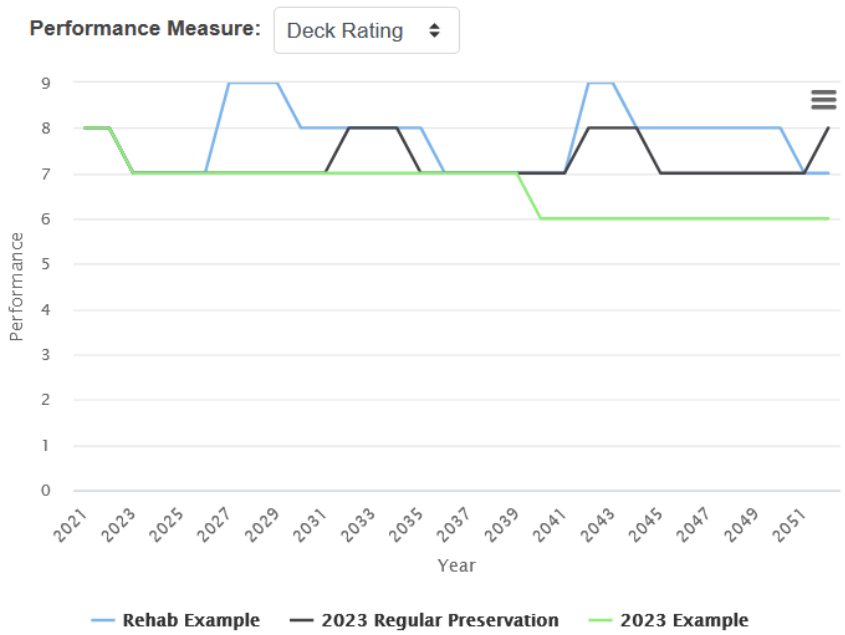


AASHTOWare™ BRIDGE MANAGEMENT

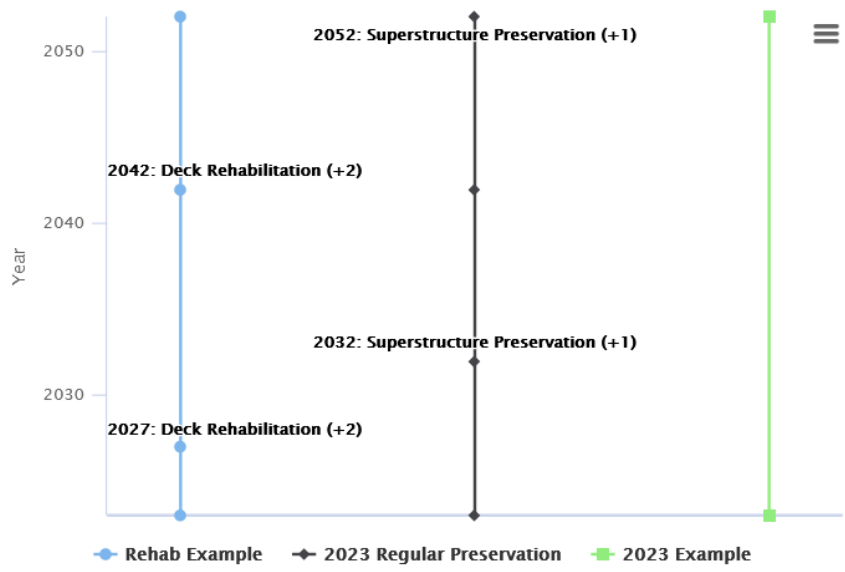
HOW TO USE LCCA

Compare Plans

Performance

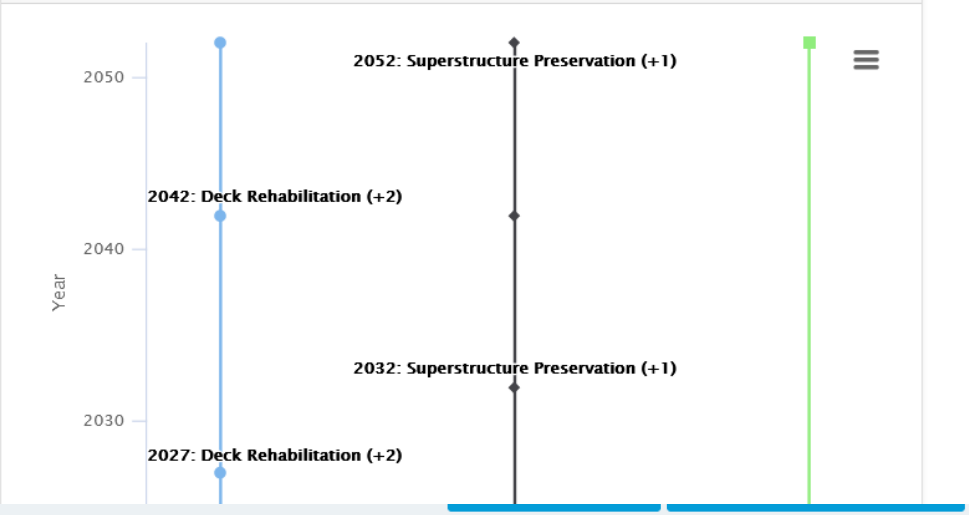


Timing



AASHTOWare™ BRIDGE MANAGEMENT

HOW TO USE LCCA



Current	Sel.	Name	Start Year	End Year	Agency LCC	User LCC	Total LCC	Updated By	Updated On	Notes
★	☐	The 2021 Plan	2021	2050	-$397,132,266.06	$0.00	-$397,132,266.06	Boyle, Zac	11/8/2021	Generated by Boyle, Zac on 11/08/2021 For this mod …
	☑	2023 Example	2023	2052	-$330,972,244.87	$0.00	-$330,972,244.87	User, Pontis	8/21/2023	Generated by User, Pontis on 08/21/2023
	☑	2023 Regular Preservation	2023	2052	-$336,996,285.70	$0.00	-$336,996,285.70	User, Pontis	8/21/2023	Generated by User, Pontis on 08/21/2023
	☑	Rehab Example	2023	2052	-$324,402,748.71	$0.00	-$324,402,748.71	User, Pontis	8/21/2023	Generated by User, Pontis on 08/21/2023

AASHTOWare™ BRIDGE MANAGEMENT

HOW TO USE LCCA

Analysis > LCCA

Export | Search | Hide years with no actions | Quick Add Action | Detailed Add Action

					Agency Cost			Functional + Action User Cost		
Locked	Year #	Year	Action(s)	Action(s) Added As	2023 $	Inflated $	PV $	2023 $	Inflated $	PV $
🔒	10	2032	Deck Preservation Superstructure Preservation	Network Policy: Deck Preservation	$14,167,498.89	$14,167,498.89	$14,167,498.89	$0.00	$0.00	$0.00
🔒	20	2042	Deck Preservation Superstructure Preservation	Network Policy: Deck Preservation	$13,222,691.96	$13,222,691.96	$13,222,691.96	$0.00	$0.00	$0.00
🔒	30	2052	Deck Preservation Superstructure Preservation	Network Policy: Deck Preservation	$14,952,630.85	$14,952,630.85	$14,952,630.85	$0.00	$0.00	$0.00
Subtotal							$42,342,821.69			$0.00
Residual Value (Final HI=82.02%)							($379,339,107.37)			
Life Cycle Costs						Agency Life Cycle Cost	-$336,996,285.68		User Life Cycle Cost	$0.00

« 1 »

3 items in **1** page

Results

Life Cycle Cost

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USER COSTS
Photo by Igor Oliyamik

AASHTOWare™ BRIDGE MANAGEMENT

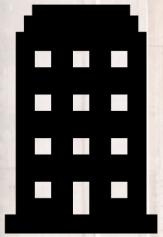
USER COSTS

DOT COSTS
$$$$

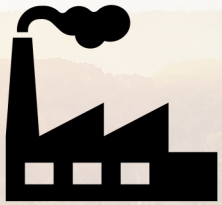
AASHTOWare™ BRIDGE MANAGEMENT

USER COSTS

DOT COSTS
$$$$



SOCIETAL (USER) COSTS
$$$$

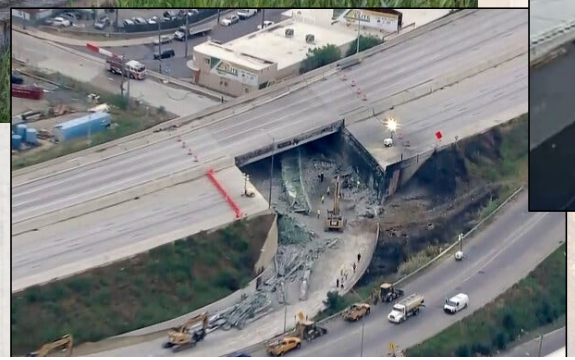


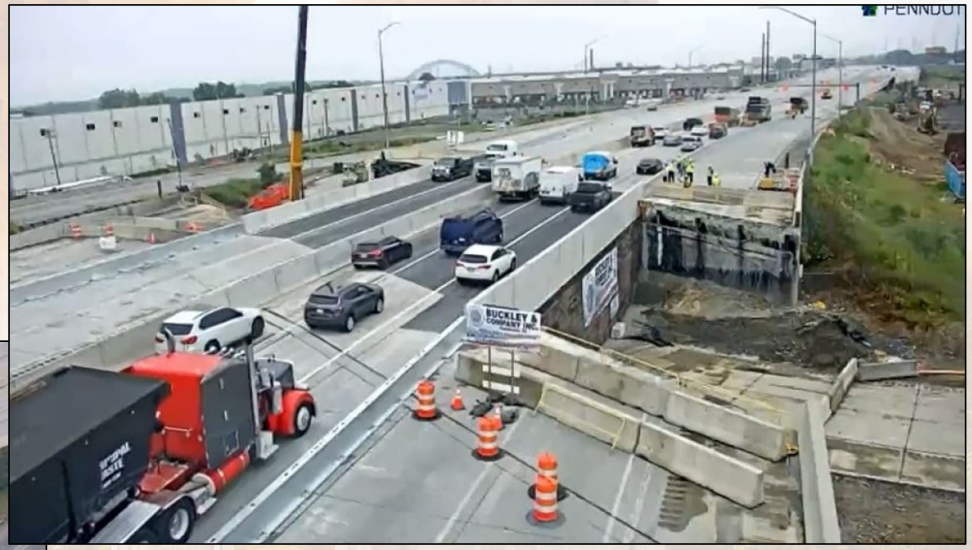
AASHTOWare™ BRIDGE MANAGEMENT

USER COSTS

AASHTOWare™ BRIDGE MANAGEMENT

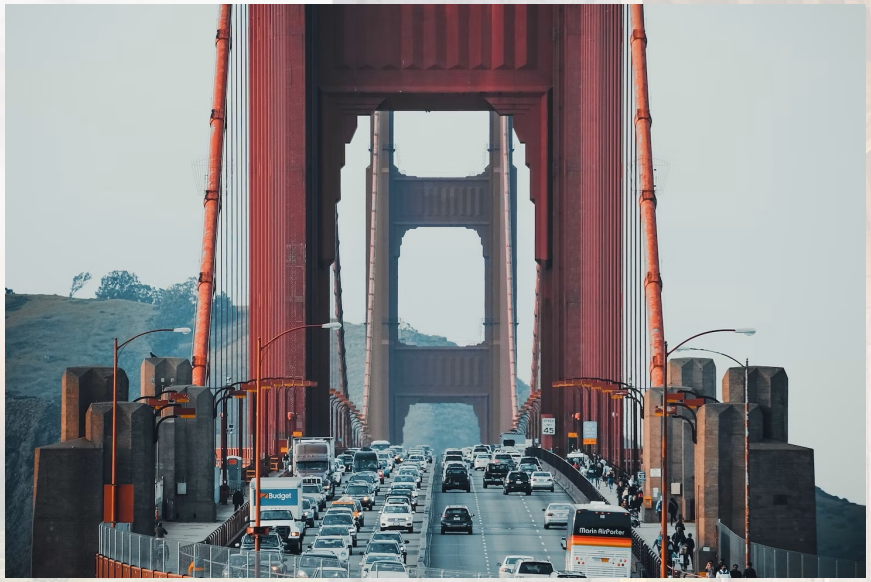
USER COSTS





AASHTOWare™ BRIDGE MANAGEMENT

USER COSTS



Cost to do nothing:

- Capacity (Traffic delay)
- Eventual Closure
- Weight limits

Cost to do something:

- Capacity reduction (phased)
- Detour (closure)
- Production rates

AASHTOWare™ BRIDGE MANAGEMENT

USER COSTS

Analysis > LCCA

Bridge: 080001 Name: Jamestown - Verrazzano Facility Carried (007): RI 138

Create/Edit Plan

* Name:	The 2021 Plan	Set as Current Plan:	☑	Updated by Zac Boyle on 11/8/2021	
* Start Year:	2021	* Analysis Length:	30 Years		
* Inflation Estimation Method:	Fixed Inflation Rate	* Inflation %:	0 %		
* Nominal Discount Rate:	0 %				
* NBI Deterioration Method:	NBI Converter	Deck NBI Converter Profile:	RIDOT - 2021 Zac Deck	Substructure NBI Converter Profile:	BrM Substructure Default
		Superstructure NBI Converter Profile:	BrM Superstructure Default	Culvert NBI Converter Profile:	BrM Culvert Default
* Utility Weight Profile:	Default				
Estimate Functional User Cost:	☑	* Functional User Cost Formula:	Default Functional U		
* Element Deterioration Profile:	-- none --				
* Condition Based On Inspection:	2021-05-17 (UXEO)	* Residual Value Calculation:	HI Approximation		

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FIRST
MODELS
Photo by Igor Oliyamik

AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

CHECK 1: STIP OR LONG-RANGE PLANS

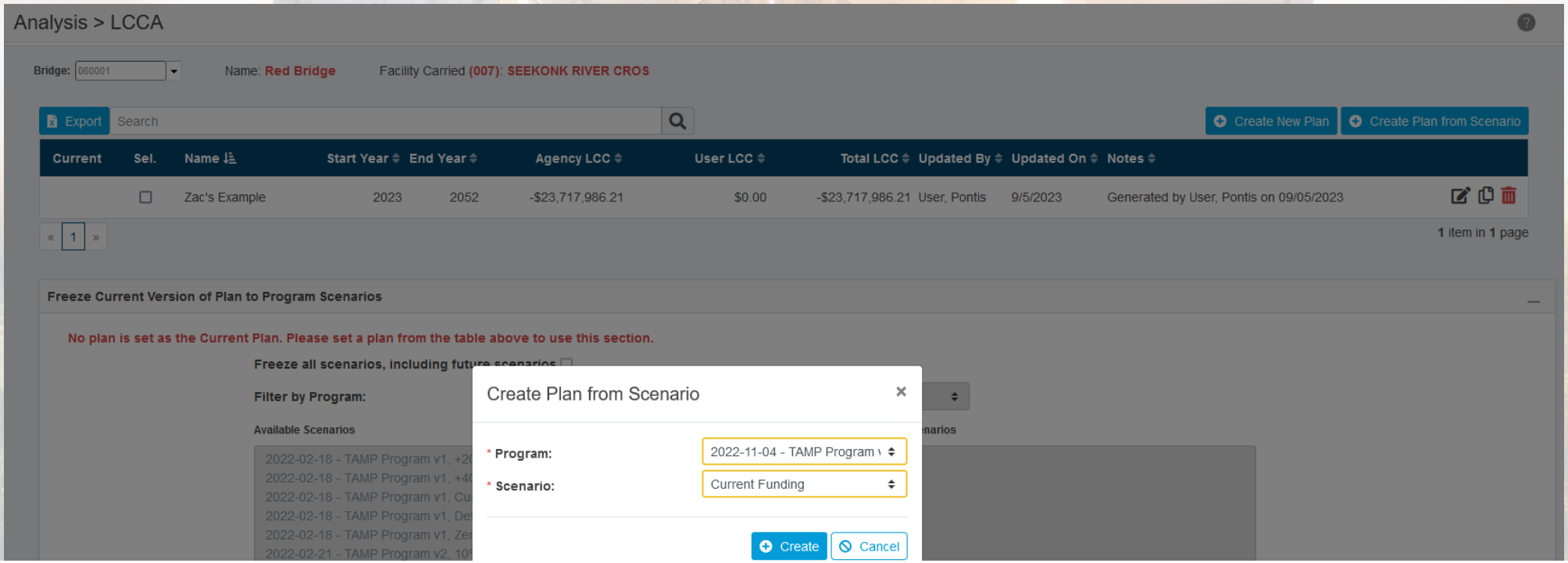
- STIP Projects
- 1 LCCP (prevent collapse)

AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

CHECK 1: STIP OR LONG-RANGE PLANS

- STIP Projects
- 1 LCCP (prevent collapse)



AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

Analysis > LCCA

Optimization

Optimizer Database Connection: Hawaii_67

Download Optimization Log: Download Log

* Optimization Start Year: 2023

* Minimum Deferment: 5 Years

Include User Costs in Optimization:

* Save Optimization As: This Plan

Assign Network Policies

Available Network Policies

- Bridge Preservation
- Bridge Rehabilitation
- Bridge Replacement
- Culvert Replacement
- Deck Preservation
- Deck Rehabilitation
- Deck Replacement
- Slab Preservation
- Slab Rehabilitation
- Slab Replacement

Selected Network Policies

Assign LCCA Policies

Available LCCA Policies

- Culvert policy
- Deck Policy
- Default Deck Policy
- Default Structure Overall
- Default Substructure Policy
- Default Superstructure Policy
- Jamestown Deck Care
- Loomis Test with Calc.
- Mount Hope Deck Care
- Mount Hope Misc. Repair

Selected LCCA Policies

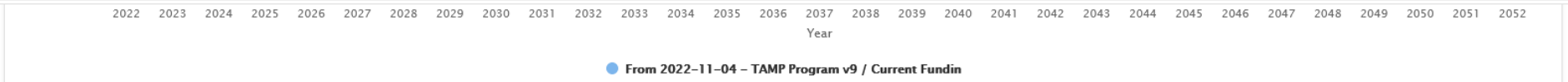
1.Bridge Replacement Pell

Optimization Queue

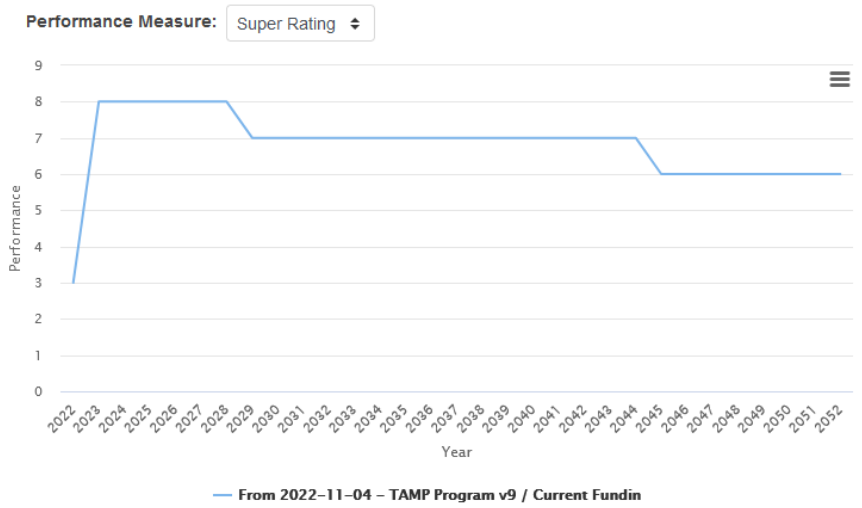
AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

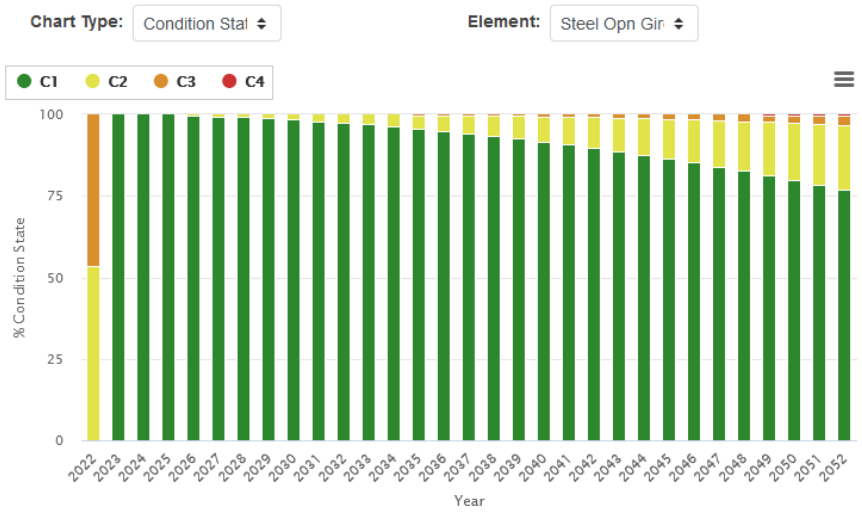
Analysis > LCCA



Performance



Element



Optimization

Optimizer Database Connection: Hawaii_67

AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

CHECK 2: CHECK TRIGGERS & EFFECTS

- 1 LCCP at a time
- Then try one NP at a time.

AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

Analysis > LCCA

Optimization

Optimizer Database Connection: Hawaii_67

Download Optimization Log: Download Log

* **Optimization Start Year:** 2023

* **Minimum Deferment:** 5 Years

Include User Costs in Optimization:

* **Save Optimization As:** This Plan

Assign Network Policies

Available Network Policies	Selected Network Policies
Superstructure Rehabilitation	Cond Membrane & Overlay w/ Patching
Cond Bridge Replace	
Cond Conc Deck Patch	
Cond Culv Replace	
Cond Deck Replacement	
Cond Extend Deck over Backwall	
Cond Membrane Only	

Assign LCCA Policies

Available LCCA Policies	Selected LCCA Policies
Culvert policy	1.Bridge Replacement Pell
Deck Policy	
Default Deck Policy	
Default Structure Overall	
Default Substructure Policy	
Default Superstructure Policy	

Optimization Queue

Add to Queue Estimated Effort: Low Abort Selected

AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

Analysis > LCCA

Optimization

* **Optimization Start Year:** 2023

* **Minimum Deferment:** 5 Years

Include User Costs in Optimization: ☐

* **Save Optimization As:** This Plan

Assign Network Policies

Available Network Policies

Superstructure Rehabilitation
Cond Bridge Replace
Cond Conc Deck Patch
Cond Culv Replace
Cond Deck Replacement
Cond Extend Deck over Backwall
Cond Membrane Only

Selected Network Policies

Cond Membrane & Overlay w/ Patchir

Optimization Queue

Add to Queue | Estimated Effort: Low | Abort Selected

Optimization Progress

Complete!

Progress Messages

Reading the inspection	9/5/2023 07:26:03
Initializing the network and LCCA policy alternatives	9/5/2023 07:26:13
Clearing abandoned and/or old LCCA optimization logs	9/5/2023 07:26:33
Simulating deterioration until the optimization start year	9/5/2023 07:26:33
Starting the recursive optimization	9/5/2023 07:26:33
We estimate 7168 combinations which is a Low level of effort. Actual number of combinations processed will be fewer.	9/5/2023 07:26:33
Inserting results into database	9/5/2023 07:26:33
LCCA optimization is finished	9/5/2023 07:26:41

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Optimization Queue

Estimated Effort: Low

AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

CHECK 3: TRY SOME ALTERNATIVES

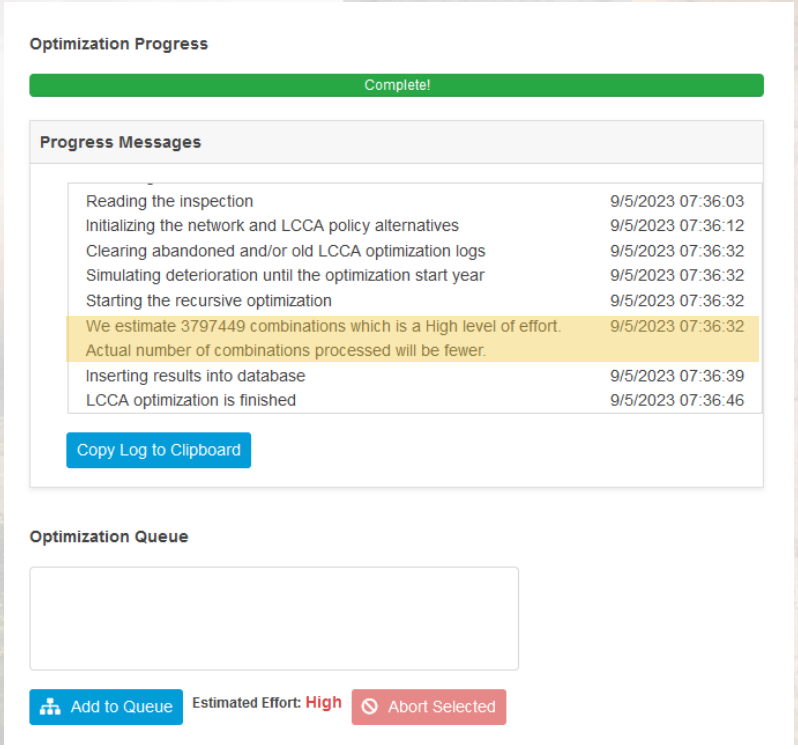
- Most sensible LCCP's
- Try a few NP at once.

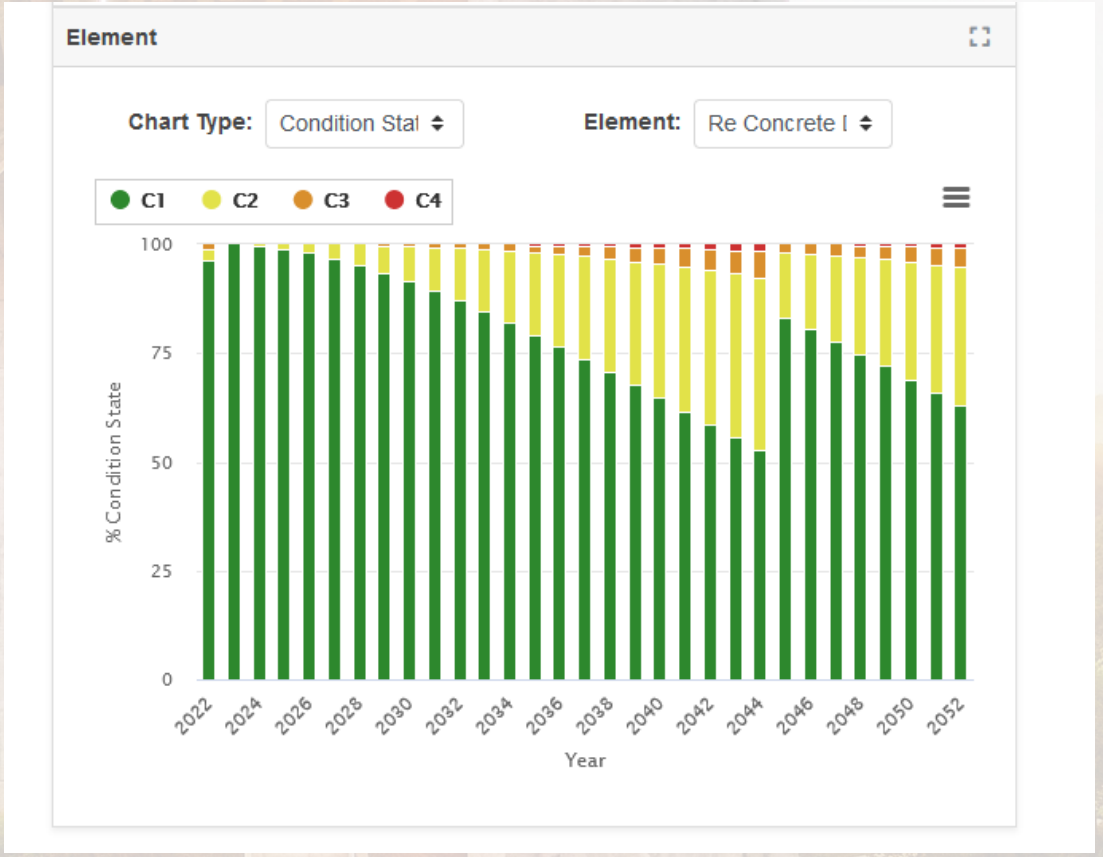
AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

CHECK 3: TRY SOME ALTERNATIVES

- Most sensible LCCP's
- Try a few NP at once.





AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

READY TO LET IT EXPLORE

- Most sensible LCCP’s

AASHTOWare™ BRIDGE MANAGEMENT

FIRST MODELS

READY TO LET IT EXPLORE

- Most sensible LCCP's

Optimization Progress

Progress Messages

Initializing the LCCA infrastructure handlers	9/5/2023 07:41:04
Reading the inspection	9/5/2023 07:41:04
Initializing the network and LCCA policy alternatives	9/5/2023 07:41:13
Clearing abandoned and/or old LCCA optimization logs	9/5/2023 07:41:32
Simulating deterioration until the optimization start year	9/5/2023 07:41:32
Starting the recursive optimization	9/5/2023 07:41:33
Number of possible combinations is too high to estimate (over 2 billion). We estimate a High level of effort. Actual number of combinations processed will be fewer.	9/5/2023 07:41:33

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Optimization Queue

Analysis > LCCA

Notes: Created from Program Optimization 2022-11-04 - TAMP Program v9 / Current Funding

Export | Search | Hide years with no actions

					Agency Cost			Functional + Action User Cost		
Locked	Year #	Year	Action(s)	Action(s) Added As	2023 $	Inflated $	PV $	2023 $	Inflated $	PV $
🔒	1	2023	Super Replacement Deck Replacement Substructure Rehabilitation	Project: 060001(Deck Replacement, Super Replacement, Substructure Rehabilitation)	$42,933,662.00	$42,933,662.00	$42,933,662.00	$0.00	$0.00	$0.00
🔓	26	2048	Superstructure Preservation	Network Policy: Superstructure Preservation	$1,070,822.80	$1,070,822.80	$1,070,822.80	$0.00	$0.00	$0.00
🔓	26	2048	Substructure Preservation	Network Policy: Superstructure Preservation	$1,672,913.36	$1,672,913.36	$1,672,913.36	$0.00	$0.00	$0.00
Subtotal							$45,677,398.15			$0.00
Residual Value (Final HI=85.66%)							($66,414,206.52)			
Life Cycle Costs						Agency Life Cycle Cost	-$20,736,808.37		User Life Cycle Cost	$0.00

« 1 »

3 items in 1 page

AASHTOWare™
BRIDGE
MANAGEMENT
FINAL LCCA
QUESTIONS
Photo by Igor Oliyamik

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