Communicating Agency Risks

John Milton

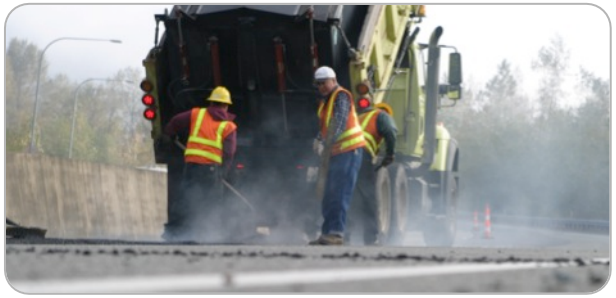
WSDOT Experience

Communicating risks

Considering risk to WSDOT Assets







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AASHTO Enterprise Risk Management Workshop and Peer Exchange

August 24, 2015

Minneapolis, Minnesota

Washington State Department of Transportation

Reporting Performance

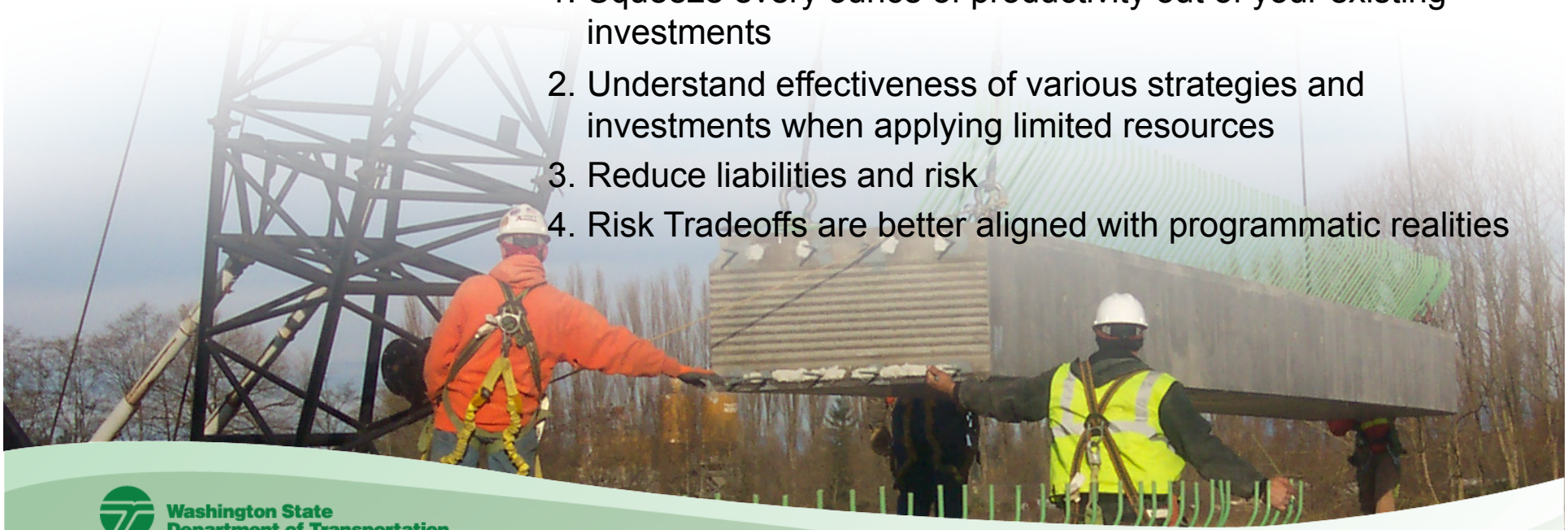
Risk Management and Performance reporting?

Ability to tell your story and report on condition and needs

1. Informed media
2. Informed officials and decision makers
3. Informed managers and employees

Allows for better management of the system and enhanced operations

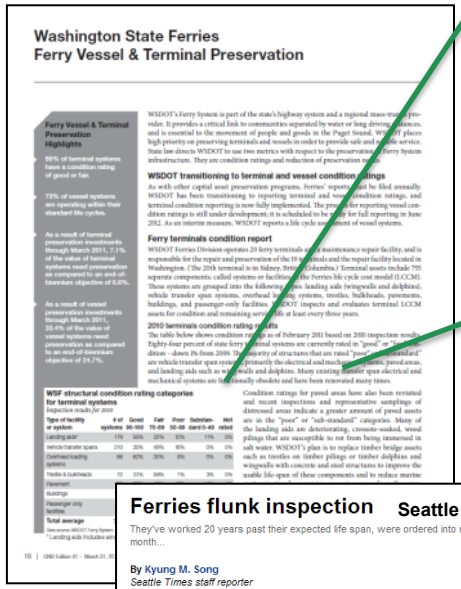
1. Squeeze every ounce of productivity out of your existing investments
2. Understand effectiveness of various strategies and investments when applying limited resources
3. Reduce liabilities and risk
4. Risk Tradeoffs are better aligned with programmatic realities



Telling the story

Ferries:

Terminal condition; Vessel life-cycle



Washington State Ferries
Ferry Vessel & Terminal Preservation

Ferry Vessel & Terminal Preservation Highlights

- 85% of terminal systems have a condition rating of fair or better
- 73% of vessel systems are operating within their standard life cycles.
- As a result of terminal preservation investments through March 2011, 7.1% of the value of terminal systems need preservation as compared to an end-of-biennium objective of 6.6%.
- As a result of vessel preservation investments through March 2011, 33.4% of the value of vessel systems need preservation as compared to an end-of-biennium objective of 24.7%.

WSDOT transitioning to terminal and vessel condition ratings

Ferry terminals condition report

2010 terminals condition rating results

WSF structural condition rating categories for terminal systems

Inspection results for 2010

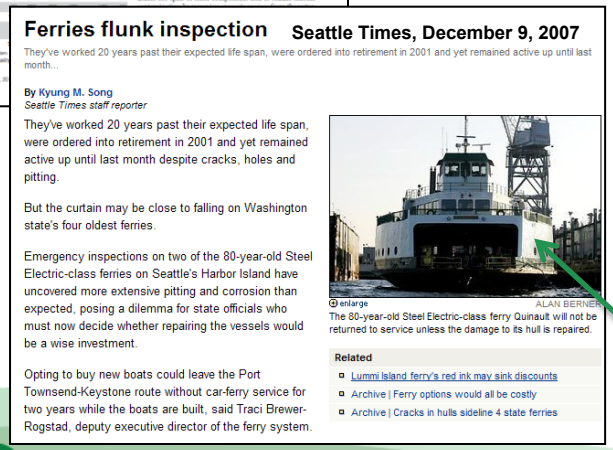
Type of facility or system	# of systems	Good 90-100	Fair 70-89	Poor 50-69	Substandard 0-49	Not rated
Landing aids*	179	55%	22%	12%	11%	0%
Vehicle transfer spans	210	35%	49%	16%	0%	0%
Overhead loading systems	66	62%	30%	8%	0%	0%
Trestle & bulkheads	72	31%	58%	7%	3%	0%
Pavement	77	25%	42%	19%	14%	1%
Buildings	136	45%	54%	1%	0%	1%
Passenger only facilities	15	53%	33%	13%	0%	0%
Total average	755	43%	42%	11%	4%	0%

Data source: WSDOT Ferry System.
* Landing aids includes wingwalls and dolphins.

Condition ratings for paved areas have also been revisited and recent inspections and representative samplings of distressed areas indicate a greater amount of paved assets are in the "poor" or "sub-standard" categories. Many of the landing aids are deteriorating, creosote-soaked, wood pilings that are susceptible to rot from being immersed in salt water. WSDOT's plan is to replace timber bridge assets such as trestles on timber pilings or timber dolphins and wingwalls with concrete and steel structures to improve the usable life-span of these components and to reduce marine

- 85% of terminal systems have a condition rating of fair or better
- Terminal preservation investments result in 7.1% of the value of terminal systems needing preservation, compared to 6.6% target

Vessel preservation: life-cycle assessment



Ferries flunk inspection Seattle Times, December 9, 2007

They've worked 20 years past their expected life span, were ordered into retirement in 2001 and yet remained active up until last month...

By Kyung M. Song
Seattle Times staff reporter

They've worked 20 years past their expected life span, were ordered into retirement in 2001 and yet remained active up until last month despite cracks, holes and pitting.

But the curtain may be close to falling on Washington state's four oldest ferries.

Emergency inspections on two of the 80-year-old Steel Electric-class ferries on Seattle's Harbor Island have uncovered more extensive pitting and corrosion than expected, posing a dilemma for state officials who must now decide whether repairing the vessels would be a wise investment.

Opting to buy new boats could leave the Port Townsend-Keystone route without car-ferry service for two years while the boats are built, said Traci Brewer-Rogstad, deputy executive director of the ferry system.

enlarge ALAN BERNER
The 80-year-old Steel Electric-class ferry Quinault will not be returned to service unless the damage to its hull is repaired.

Related
- Lummi Island ferry's red ink may sink discounts
- Archive | Ferry options would all be costly
- Archive | Cracks in hulls sideline 4 state ferries

- WSDOT tracks the life cycle status of vessel systems in terms of how close systems are to the end of standard life cycle
- Low vessel preservation investments resulted in 33.4% of the value of vessel systems needing preservation, compared to the 24.7% target
- Four vessels pulled from service in 2007. Emergency replacement funds needed: Construction of three new vessels within 2009-2011

Bridge conditions improve slightly from previous year

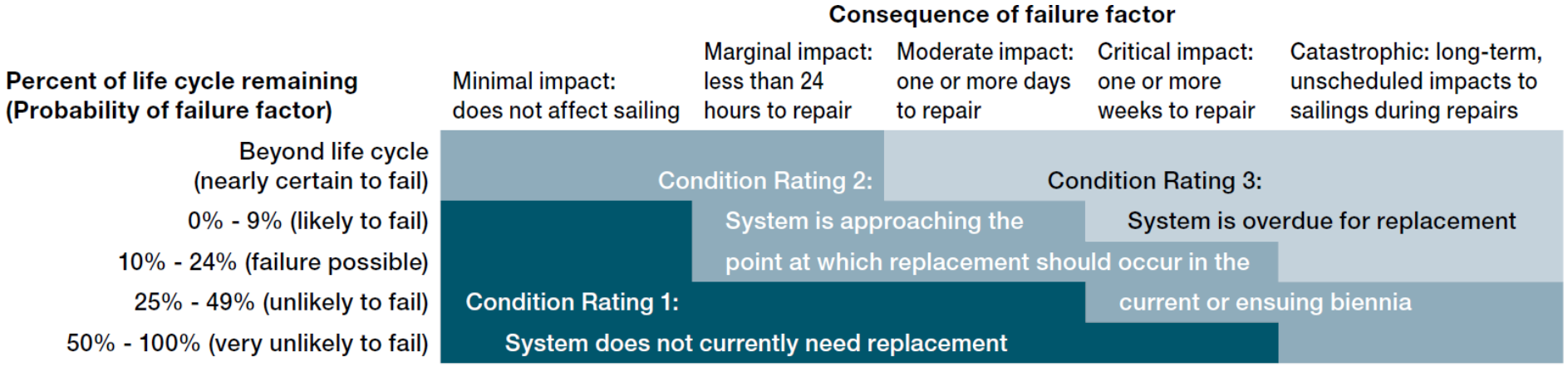
Majority of WSDOT's bridges by deck area are in fair or better condition, meeting performance goals
Number of bridges and percent of bridges by deck area by condition category; Deck area in millions of square feet

STRUCTURAL CONDITION		2010	2014	2015	Trend
GOOD/VERY GOOD[1] Bridges in good condition range from those with no problems to those having some minor deterioration of structural elements.	Bridge deck area	15.6	18.5	19.2	↑
	Percent of deck area	30.2%	34.8%	36.0%	
	Number of bridges[2]	1,419	1,591	1,628	↑
FAIR[1] Primary structural elements are sound; may have minor section loss, deterioration, cracking, spalling or scour. This is the most cost-effective time to rehabilitate before the underlying structure is damaged.	Bridge deck area	31.0	30.4	29.9	↓
	Percent of deck area	60.2%	57.0%	56.1%	
	Number of bridges[2]	1,620	1,554	1,522	↓
GOOD/VERY GOOD & FAIR TOTALS: Goal = 90% or more deck area in fair or better condition	Bridge deck area	46.6	48.9	49.1	↑
	Percent of deck area	90.4%	91.8%	92.1%	
	Number of bridges[2]	3,039	3,145	3,150	↑
POOR A bridge in poor condition has advanced deficiencies such as section loss, deterioration, scour, or seriously affected structural components, and may have weight restrictions. A bridge in poor condition is still safe for travel.	Bridge deck area	4.9	4.4	4.2	↓
	Percent of deck area	9.6%	8.2%	7.9%	
	Number of bridges[2]	145	141	138	↓

Data source: WSDOT Bridge and Structures Office.

WSDOT risk assessment matrix helps prioritize ferry vessel preservation

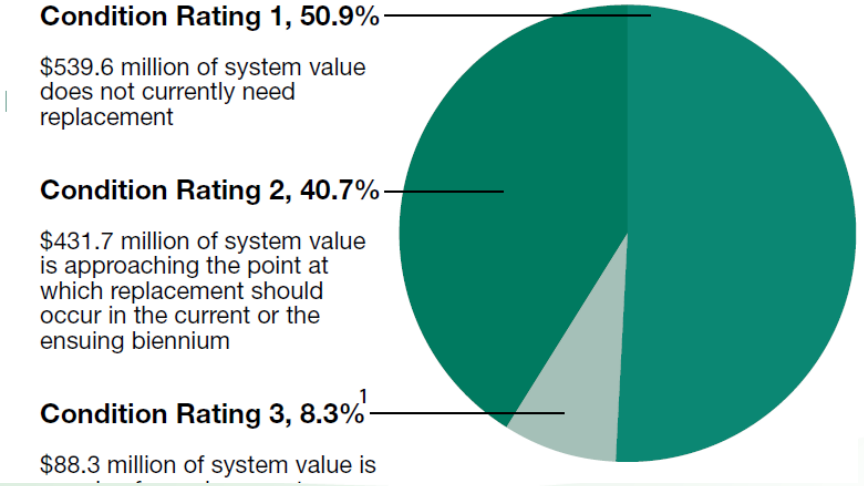
Based on the likelihood of the system failing combined with the likely consequences of the system's failure



Data source: WSDOT Ferries.

More than 91 percent of total value of ferries vessel systems are not currently in need of replacement

Fiscal year 2015; Percent of total dollar value



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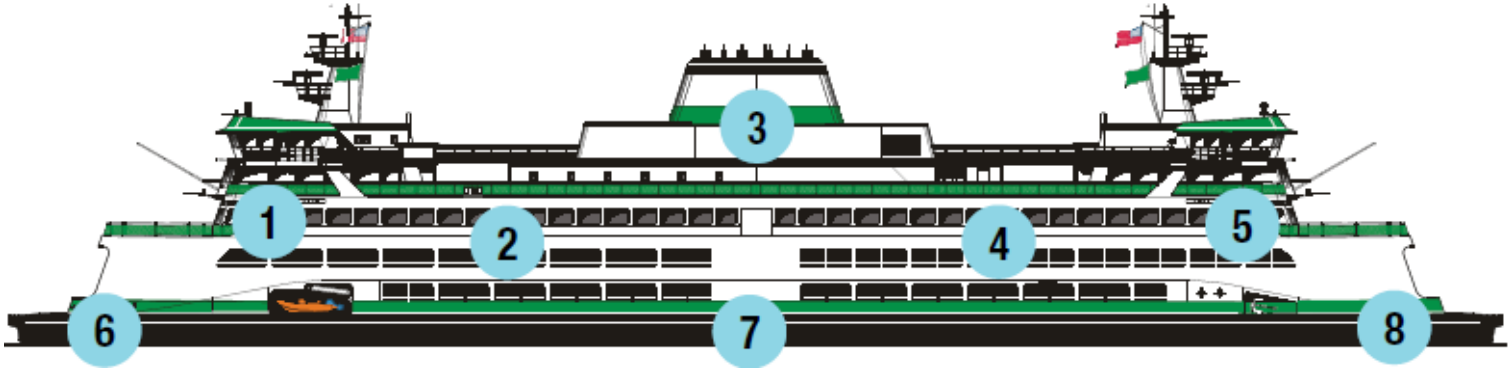
Number of WSDOT ferry vessel systems that do not currently need replacement increases 5 percent

Fiscal years 2014 and 2015; Results by type of vessel system



	Types of ferry vessel systems	Number of systems	Percent of systems in Condition Ratings[1] 1	2	3
1	Communications, navigation, lifesaving systems	656	74%	20%	6%
2	Piping systems	162	39%	41%	20%
3	Structural preservation (paint)	209	64%	34%	2%
4	Passenger and crew spaces	71	55%	45%	0%
5	Security systems	109	77%	23%	0%
6	Steel structures	186	65%	34%	2%
7	Mechanical/electrical systems	345	52%	39%	9%
8	Propulsion systems	297	13%	66%	21%
	Total/average FY2015	**2,035**	**56%**	**36%**	**9%**
	Total/average FY2014	**1,867**	**51%**	**40%**	**9%**

Data source: WSDOT Ferries.

Washington State Department of Transportation