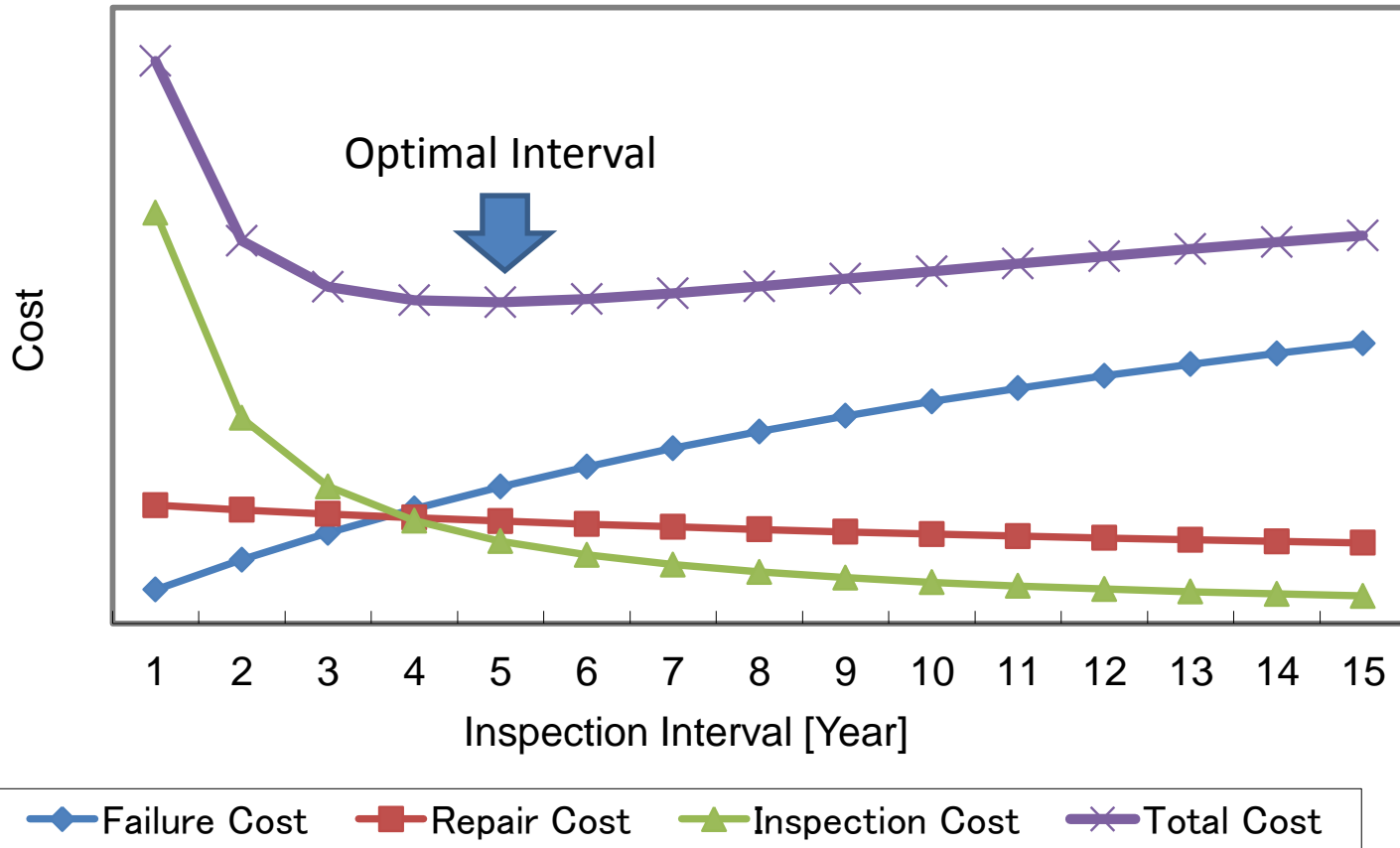
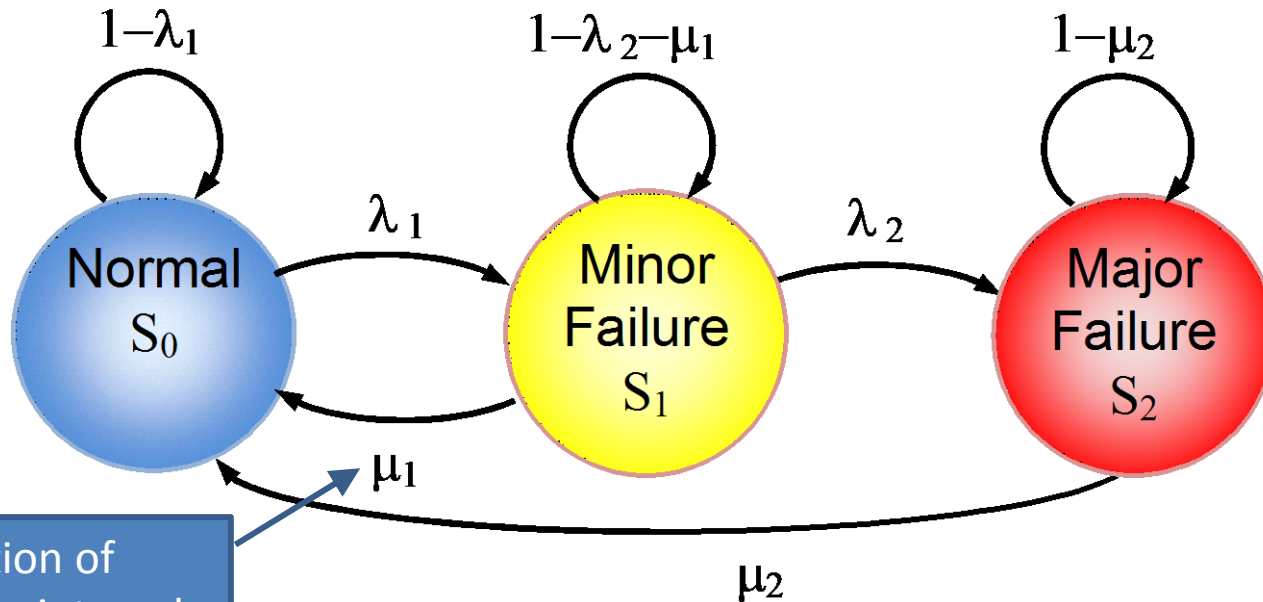


# **Risk-based Asset Management Planning for Power Transformers**

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## Definition of Optimal Inspection Interval



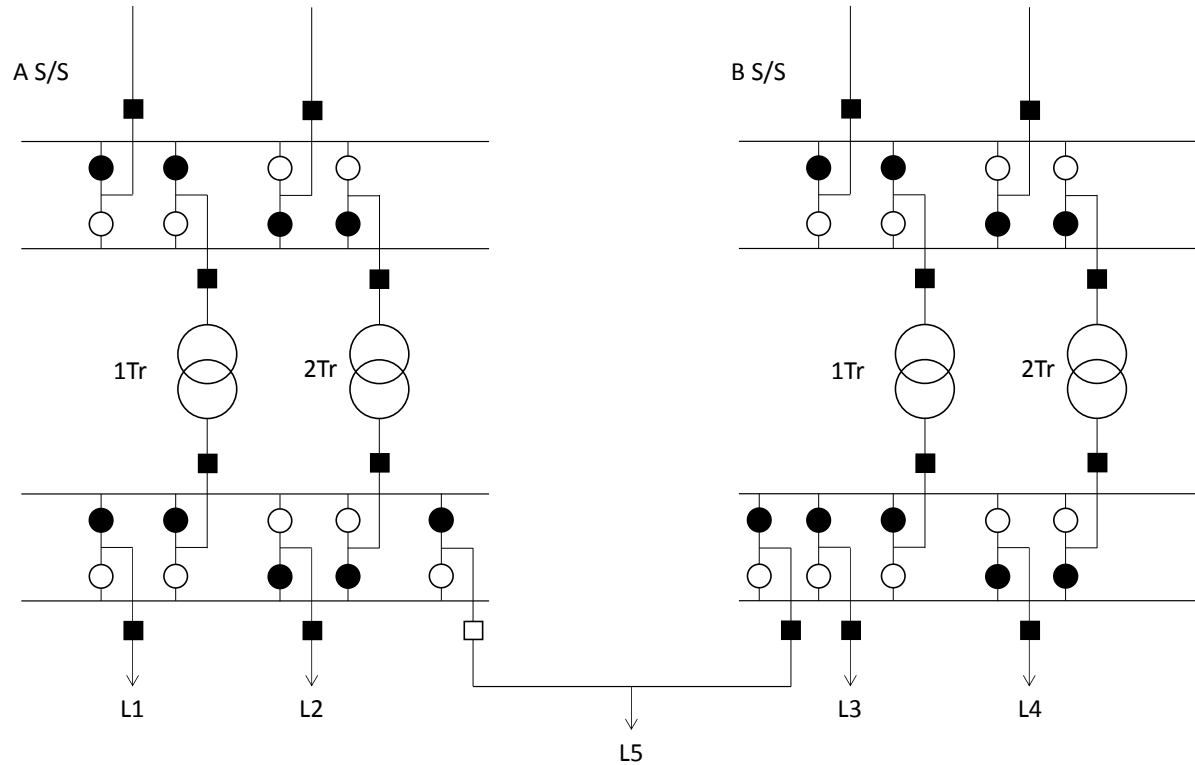


Function of inspection interval

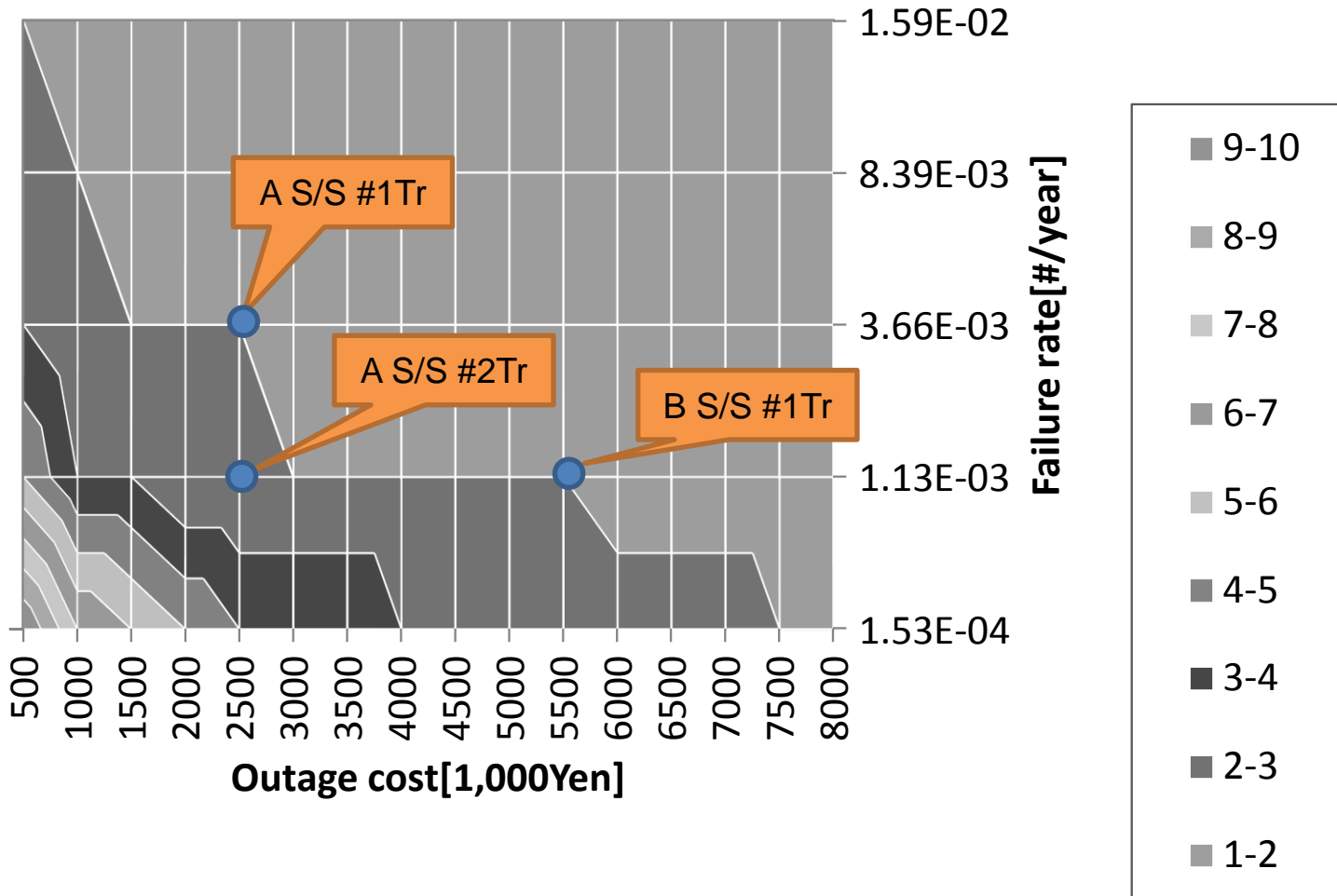
- ◆ The total cost is a function of an inspection interval and the optimal inspection interval can be defined as minimization of the total cost.
- ◆ The inspection interval can be considered as the ranking in maintenance among components.

$$\text{Total Cost} = (\text{Inspection Cost}) + (\text{Repair Cost}) + (\text{Outage Cost}) \rightarrow \min_{\text{Inspection Interval}}$$

# Model Power Network



		Age [Years]	Outage [MW]
A S/S	#1 Tr	30	10
	#2 Tr	20	10
B S/S	#1 Tr	20	20
	#2 Tr	30	20



- The paper describes a method of ranking in maintenance based on stochastic mathematical maintenance model of a system component.
- This model incorporates the states of each stage of deterioration and maintenance activities and an operation risk in outage as well.
- The model provides a quantitative evaluation of the maintenance which is related in the inspection interval.