

VTI Economics Model – Webinar Update 2020

March 25th 2020

Agenda

1. Introduction of ICRI Economics Group and ICRI VTI Economics Model
2. Major Updates since July 2019 ICRI Workshop
3. Demonstration – Online ICRI Economics Software
4. Invitation to Next Steps and Beta Testing

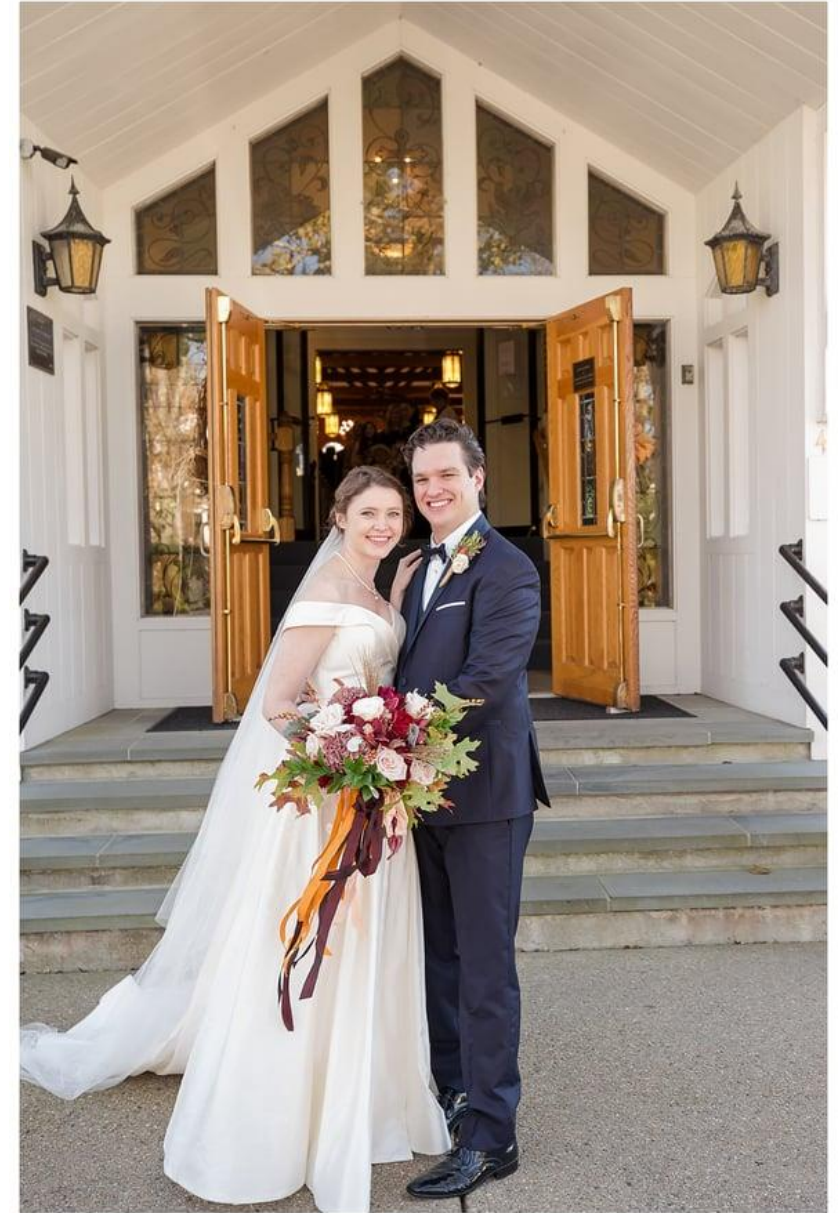
Wesley Thomas

Vice President, Rail – Sentient Science
Boston, MA

wesleythomas@sentientscience.com



VII Economics Model – Webinar Update 2020



ANGELA GREENLAW

ICRI-RCF VTI Economics Group



MONASH University



LBFoster



UNIVERSITY OF LEEDS



Goals of ICRI Economics Model

1. Third Party “Open Source” Model, but Built by Railroads
2. Data Available from Different Departments/Specialties
3. Decision Support Tool of Costs and Benefits

Why use ICRI Economics Model?

1. Find New Savings and Innovations
2. Compete and Protect Important Projects
3. Improve Partnerships of Railroad and Supplier

Learning – Three Questions ICRI Economics Model Can Help Answer

1. Should Railroads Invest More in Preventive Maintenance?
2. Where Should Railroads Invest More in Preventive Maintenance?
3. How Much Should Railroads Invest in Preventive Maintenance?

Main Updates

- **July 2019** – ICRI Economics Model Beta Test Launched as Online Application
- **July 2019 – March 2020:** 12 Beta Tests Complete, 4 Version Updates
- **March 2020:** 22 Total ICRI Economic Models Created and Contributed
 - 5 freight railroads
 - 13 transit agencies
 - 3 universities
 - 1 rail service provider

ICRI Economics Model Demonstration

DigitalClone® Economic Calculation

[Take Tour](#)

All Groups Active ▾

Sentient Science ▾

[Support](#)

Wesley Thomas ▾

[Economic Calculation Home](#) > [EcoWear Demo](#) > **New Economic and Wear Analysis Comparison**

Economic Analysis

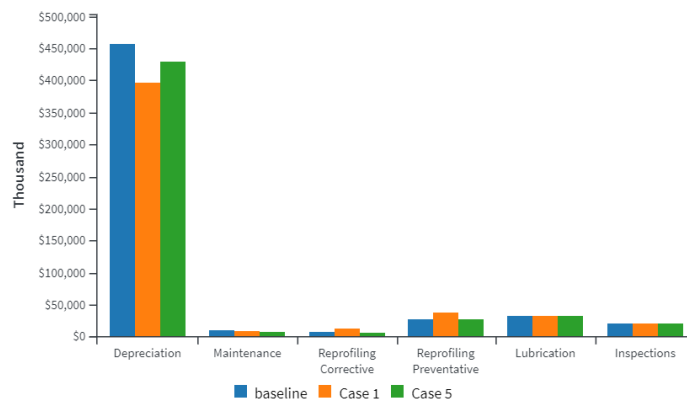
[Wear Analysis](#)

Expenses

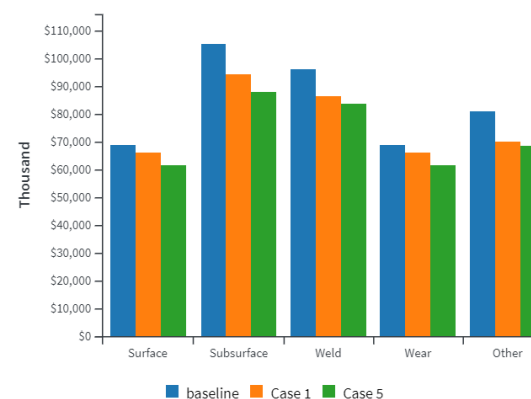
Free Cash Flow

Calculation Name	Life Extension	Total Expenses Savings	Total Expenses	Corrective to Preventative Ratio Expenses
Case 1	15.28%	\$57,586,374.68	\$497,036,354.57	5.27
Calculation Name	Life Extension	Total Expenses Savings	Total Expenses	Corrective to Preventative Ratio Expenses
Case 5	23.61%	\$46,276,251.65	\$508,346,477.59	6.79

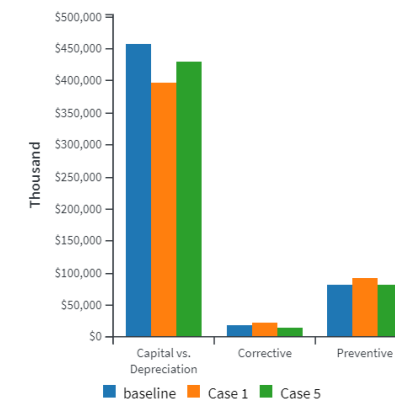
Spending by Category



Corrective Spending by Root Cause



Ratio Corrective vs. Preventive



Next Steps – Engage with Us

1. Beta Testing for ICRI Economics Model Online
2. Add More Users to ICRI Economics Model
 - US Class 1 and Transit Agencies
 - UK and Europe
 - South America
 - Australia and Asia Pacific
 - Universities and Service Providers
3. Use ICRI Economic Model for Decisions
 - Preventive Grinding Optimization
 - Rail Material Decisions
 - Lubrication Investments
 - Wheel Life Extension
4. Add More Factors to Model
 - Fuel Efficiency
 - Fasteners
 - Safety and Risk Management



Wesley Thomas
Vice President, Rail
wesleythomas@sentientscience.com
+1 716.550.0101