



IRF
GLOBAL

Forecasting & Evaluating the Benefits of Road Safety Projects

**Online Training
May 17 - 20, 2021**

Online Training

10 Professional Development Hours



Forecasting and evaluating the benefits of road safety projects

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Online Workshop

Background

Road safety projects often must compete for funding. Sometimes it is for a grant application process, and other times a road authority simply wants to prioritize use of its own funds for maximum impact. After projects are done, there are questions about whether the money spent achieved the desired outcomes. This course introduces scientific principles for forecasting the benefits of road safety projects. The goal is to estimate and defend reductions in fatalities and serious injuries, to assign dollar valuations to proposed improvements, and to compare these benefits to project or program costs. After projects are completed, a good observational before-after study can evaluate interventions and generate learnings that feedback into the next forecast.

The course will primarily focus on predictive techniques in the AASHTO Highway Safety Manual and evaluation techniques from Ezra Hauer's 1997 book "Observational Before-After Studies in Road Safety." These concepts will be introduced, illustrated through examples, and extended into the modern field of surrogate safety data.

Why Online?

- Earn 10 Professional Development Hours
- Expert training by professionals for Professionals: access IRF's unique curriculum and lectures developed by world-class specialists
- Accelerated learning processes: get up to speed and gain new insights in less time and with no travel constraints
- Full access to learning materials and session recordings
- Small classrooms & scheduled One-on-One sessions with instructors
- Self-paced options available
- Interactive group projects and case studies
- Receive IRF Certification

Format

The lectures will be taught over a one-week period with live 2,5-hour on-line sessions held Monday through Thursday. Upon completion of the training program, the IRF will administer an on-line knowledge test. Participants with a score of 80% of the exam will be awarded with a certificate verifying their successful completion of the course.

Target Audience

- National Road & Transport Agency Executives
- International Financial Institutions
- Highway Engineers and Managers
- Federal and State Road Safety Agencies
- Road Safety Professionals
- Private Consultants & Contractors

Structure

Monday through Thursdays (08:00 AM– 10:30 AM US EDT)

Day 1	What is road safety performance. Introduction to safety performance functions. Introduction to collision modification factors. Using project-level prediction methods from the highway safety manual.
Day 2	Economic valuation of changes in road safety: key principles, debates, formulas, and reference values. Calculating benefit cost ratios, net present value, internal rate of return, and first year rate of return.
Day 3	The need for evaluation. Introduction to observational before-after studies. Planning a before-after evaluation study. Evaluating before-after studies. Cross-sectional evaluations. Criteria for inclusion and scoring in the crash modification factor (CMF) clearinghouse. Using the CMF clearinghouse. Applying more than one CMF together.
Day 4	Using surrogate data to improve safety performance forecasts. Using surrogate data to accelerate before-after evaluations in road safety. Linking surrogate data and crash data.

Lead Instructor



Dr. Craig Milligan
Co-founder & CEO, MicroTraffic

Expert road safety engineer applying a proactive and safe systems approach to vision zero. Current chair of TAC Road Safety Standing Committee. Completed road safety audits for more than \$6B of urban and rural road projects at all stages (conceptual design, preliminary design, detailed design, work zone, and pre-opening) covering complex intersections, freeways, bridges, interchanges, and cycling facilities. Road Safety Audit Instructor and Certification Experience Reviewer for the International Road Federation.

Co-Founder and CEO of MicroTraffic, applying the science of surrogate safety to proactively generate intersection risk profiles from overhead traffic video. Emphasis on safe systems diagnostics, injury biomechanics, risk benchmarking, and network-scale applications to augment existing HSM methods.

GLOBAL

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Better Roads. Better World.



IRF[®]
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International Road Federation

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