Risk terrain modeling is sometimes used synonymously with predictive analysis, but it is not the same. RTM is more advantageous to practitioners because successful responses to risky places can be measured, regardless of outcomes.

Predictions are deterministic in that an event is assumed to happen unless proper actions are taken; any occurrence of the predicted event connotes a failure of the police who were tasked with prevention, while any absence of the predicted event connotes either an adequate police response or a failed predictive model. Unfortunately, the only true measure of success of a predictive model is for the event to occur, which is generally not in the publics' or practitioners' best interest. This is why most responses to predictive analyses are deemed failures when crime events occur – though the analytical technique itself may be applauded. Activities performed in response to predictions always have the burden of proving that those activities directly resulted in the non-event – while assuming that the event would absolutely have occurred otherwise.

Predictive analytics focus on the presence or absence of an event. In contrast, risk terrain modeling focuses on the dynamic behavior settings where crime events could occur. The unit of analysis is the place, then the event. So, the identification of vulnerable places permits police and other stakeholders to intervene and manage risk at the unit of analysis that they are operationally conditioned for – the geography. In this way, risk management and risk reduction activities performed by public safety practitioners can be appropriately credited with success and judged against the probable consequences of alternative or non-existent engagements.