



# COI-Analysis

## CBRN Consequence of Intercept

**TNO** innovation  
for life

COI-Analysis is a Joint development between Bruhn NewTech and TNO of the Netherlands. The software can be stand-alone or as a Module in CBRN-Analysis.

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## Key Features:

### COI-Analysis provides:

- What-if predictions to evaluate consequences of intercepting missiles with WMD payloads
- Planning tool to analyse consequences of possible intercept solutions in relation to the threat
- Warning of military assets and civilian population potentially affected by the consequences of intercept
- Input can be received directly from Link-16 terminal
- Fully interoperable using the NATO ATP-45(E) standard to ensure a common situational picture

### Hazard Prediction

COI-Analysis calculates hazards from missile intercepts using the NATO ATP-45 Edition (E) Version 1 standards and the HAPPIE model from TNO, the Dutch Research Organization. HAPPIE is widely recognized as a leading model for predicting CBRN consequences of missile intercepts.

### Risk Analysis

The HAPPIE model has the capability of predicting hazards in an environment filled with uncertainties. Not all relevant data will be known at the time of intercept and the prediction provides risk areas indicating that a certain risk of contamination exists within a given area. Commanders or Emergency Planners can base their decisions on a more realistic picture than traditional model predictions.

### Interfacing

To achieve the short warning times that is essential in Missile Defense, COI-Analysis is capable of receiving data from the Link 16 network. This allows warning calculations to be triggered by real-time receipt of missile intercept data.

### Intercept Planning

The planning functionality evaluates the consequences of possible intercept locations based on likely missile firing locations and targets. This provides the basis for restrictions on intercepts or redeployment of assets.

### Interoperability

Relevant warning areas also need to be disseminated quickly to Allies and Partners. COI-Analysis provides complete and seamless interoperability by use of the ADatP-3 message formats in accordance with the NATO ATP-45(E) standard.

