

# Quantitative Risk Analysis

## Quantitative Risk Analysis Defined

A quantitative risk analysis (QRA) involves the detailed estimation of the expected frequency and consequences of potential accidents associated with a facility or operation.

## Value of a QRA

A QRA is an invaluable method for making informed risk-based process safety planning decisions, as well as being fundamental to any facility siting decision-making. It enables a detailed understanding of process risks, and where those risks arise from. In conducting a QRA, these risks can be better managed and mitigated.

## Experienced Professionals

ioMosaic has a proven track record of performing QRAs. Our professionals have performed assessments on a wide range of facilities, such as refineries, chemical plants, pharmaceutical plants, tar sands, crude oil refineries, LNG facilities, and rail and marine transportation terminals.

Let ioMosaic help you make risk-based decisions with confidence.

## QRA Tools

ioMosaic uses the state-of-the-art software tool, **SuperChems™**, to conduct QRAs. SuperChems has all the functionality necessary to conduct a QRA and can be used for calculating risk for fixed facilities, pipelines or transportation routes. ioMosaic understands that QRAs consist of two principal steps: *preparation* and *implementation*. SuperChems can help you with both steps:

### Preparation

- Define meteorological and topographical data in SuperChems
- Visually define population data in SuperChems
- Visually define Ignition data in SuperChems
- Define your risk tolerability criteria

### Implementation

- Generate failure scenarios in SuperChems
- Generate results in SuperChems (graphical and tabular)
- Discharge
- Dispersion
- Toxic effects
- Radiation effects
- Explosion effects
- Individual risk
- Societal risk
- Analysis of results
- Risk-ranking of scenarios
- Filtering of results
- What-If scenarios



## About us...

ioMosaic Corporation is the leading provider of safety and risk management consulting services, training and software solutions. Our first-hand knowledge of industry standards and regulations, coupled with decades of experience, provides us the rare ability to understand an issue from both the client's and regulator's perspective. We have industry-adopted tools and methodologies that we can apply to your most basic or complex problems and challenges.

For more information, please visit our website at [www.ioMosaic.com](http://www.ioMosaic.com) or contact us at [sales@ioMosaic.com](mailto:sales@ioMosaic.com) or F 603.386.6522.

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