

Proudly presents...

Session 3B

Man-made Catastrophes

“Terrorism and Political Violence”

Political Violence

&

Terrorism Insurance

CANADIAN RISK AND INSURANCE MANAGEMENT SOCIETY

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Nature of the Peril

- Unique risk:
 - Catastrophic in nature (high severity), little/no frequency prediction
 - Global, with local deployment
 - Information on exposure can't be made public (change of tactics, sheer panic)
- Not new:
 - Mostly politically motivated: Red Brigades (Italy 70's), Baader-Meinhoff (Germany 70's), Shining Path (Peru, mid-80's to present), FARC (Colombia, mid 80's to present), etc.
 - But renewed: Extremist religious groups ; domestic groups and anti-globalization/anti-development agenda; targets shifting from pure political to economical with emphasis; increasing use of suicide bombing (person or vehicle)
- Political Violence (including Terrorism) is a tactic used by a variety of actors to promote and push their agendas. It is not likely to go away with the disappearance of one or more groups. By using violence and terror, these agents try to create a reaction that is many times larger than those towards natural disasters.

Political Violence:

Broadening the peril category

- Includes Terrorism and several other physical damage/operating threats triggered by political motivation (ie. rebellion, insurrection, revolution, civil war, SRCC, terrorism)
- Ability to protect supply of materials and/or delivery of goods/services if infrastructure is affected (ports, airports, road blockages, etc.)
- In frontier emerging markets is sometimes difficult to separate terrorism from general political violence:
 - Terrorist groups with political representation
 - Conventional armies / defence forces fighting asymmetric enemies
 - No specific group assuming responsibility

Coverage Scope

Political Violence vs. other forms



09/11/2001 to 09/11/2012, what changed?

2001

- Coverage carved out from Property policies and reinsurance treaties
- Only named perils coverage available at high cost
- No government support scheme in North America
- Many active groups targeting specific North American interests

2012

- Terrorism slowly re-introducing into Property policies. SRCC available for some Canadian addresses
- Broad coverage available (Physical Damage, Business Interruption, Contingent Business Interruption, Liability) with prices at 20% median 2002 benchmark
- TRIPRA reinsurance support in the US in place until 2014 (extension expected) No government program in Canada
- Interest in SRCC increased compared to Terrorism following Arab Spring movement and Youth Protests globally

Coverage Scope

- Physical Damage
 - Replacement Cost
 - Debris Removal
 - Professional Fees
- Business Interruption
 - Extra Expense
 - Payroll
 - Contingent B.I. with Civil Authority closure (add on)
- Liability
 - Limited markets (up to USD 50 million in limits)

Defining Limit of Liability

1. Total Insured Values:

- All properties in the portfolio (or single property)
- Low probability of losses at the same time in all locations
- Typically a syndicated coverage

2. Maximum Foreseeable Loss:

- Use larger locations and loss scenarios to define most likely worst case
- Can be single market or structured coverage

3. Corporate Governance Limit:

- Define a smaller than MFL limit to satisfy stakeholders / governance needs
- Typically a single market coverage

Why Insure Against Political Violence?

- Severe physical loss and business interruption exposure
- Duty of care
 - Corporate governance
 - Contractual requirement
- Lenders' or shareholders requirements
- Contingent Business Interruption: unintentional target
- Heightened threat: special events, state leadership visits
- Latest threats: government stability (middle east, SE Asia), food security and heightened youth unemployment

Summary

- World events highlight the need for coverage review
 - Political Violence vs Stand Alone Terrorism risk vary depending on geographic location
 - Adequacy of coverage needs to be assessed **vis-à-vis existing Property policy (ies) and overall exposure (ie. proximity to target location)**
- Marketing across Terrorism and Political Risk markets for best option
 - Broader coverage may be available for comparable or lower premium

Thank You for Your Attendance and Participation!

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Standalone Terrorism Market & Underwriting Perspective

John Cogliano

Property Terrorism

LEXINGTON INSURANCE
CHARTIS 

Global Terrorism Risk

Terrorism has been most succinctly defined as “the intentional use of, or threat to use violence against civilians or against civilian targets, in order to attain political aims.”

Global Terrorism Risk

In 2011:

10,283 terrorist attacks in 70
countries resulting in more than
12,500 deaths.

Source: US State Department

Threats to Canadian Security

Sunni Islamist Extremism:

NW Airlines Flight 253 attempted bombing in Canadian airspace; Canadians known to have left to join AQAP

Radicalization of Violent Homegrown Extremists:

18 individuals arrested in bombing attempt of symbolic Canadian institutions in Ontario (2006)

Domestic Issue-based Extremism:

Animal rights activists, white supremacy groups, environmental groups and anti-capitalism movements

Source: Stimson

Global Terrorism Risk

Al Qaeda Operational Costs:

NY Times Square SUV - \$12,500

Ink Cartridges / Cargo Planes - \$4,100

9 / 11 - \$500,000

Potential Losses from a WMD

Sarin gas attack (1,000 kg)	\$28 B
Dirty bomb (15,000 curies of Cesium-137)	\$62 B
Anthrax attack (1 kg anthrax slurry)	\$61 B
Anthrax attack (10 kg anthrax slurry)	\$171 B
Sabotage attack on nuclear power plant	\$217 B
Nuclear bomb (1 kt)	\$240 B
Nuclear bomb (5 kt)	\$450 B

Source: Stimson

Standalone Market Perspective

- Global Capacity
 - Increase in capacity (2006-2010)
 - \$4 Billion Standalone Capacity
- Rates
 - Downward Pressure (2006-2010)
 - Rate increases (2011-2012)
- Increasing coverage T3 – All Risk
- Modeling/Managing Aggregate

Underwriting Perspective

- Risk Assessment
 - Target Occupancy
 - Location
- Modeling
- Business Continuity Plans/Security Efforts
- Coverage Forms (T3, etc), Limits, Deductible

Underwriting Property Terrorism International Exposures

- Country Risk Assessment
 - Counterterrorism capabilities
 - Risk Intelligence Reports
- Target Occupancy, Location, Modeling
- Forms, Limits & Deductibles
 - Aggregate vs. Per Occurrence
- Business Continuity Plans / Security Efforts
- Political Violence Coverage

Underwriting / Pricing Risk Factors

- Geographical spread of risk;
- Exposure type of property; location exposure
- Proximity to other target risks
- Occupancy
- Available capacity; program structure

Key Questions To Ask

- Have there been any threats?
- Any terrorism losses?
- Detail Security Program?
- Who is the owner?

Standalone Terrorism Game-Changers

- Actual US/Canada Terrorism Event
- TRIA 2007 Extension expires 12/31/2014
- Additional Global Catastrophic Events
 - Japan, USA, Thailand, Chile, Australia,...

Thank You for Your Attendance and Participation!

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Property Terrorism

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Protecting Against Terrorism: Mitigating “Terrorist Damage”



Agenda / Topics to discuss

- General Overview – Threat
- Key challenges
- Concentric ring approach
- Terror Damage Assessment

Terrorism & Risk Management - Threat

- ❑ Terrorist aspirational about “spectacular events”
- ❑ Current threat primarily – “ad hoc,” “lone wolf,” & special interest
- ❑ Threat broad across cities, infrastructure, events etc.
- ❑ Government agencies maintain vigilance
- ❑ Private sector still responsible for itself

Terrorism & Risk Management – Key Challenges

- No reliable system to base projection of future terrorism events
- No inducements or incentives for companies to comply
- No market standards – companies have different approaches for doing security reviews/assessments

Terrorism & Risk Management – Key Challenges

- Fiduciary Responsibility – shareholders, lenders & companies' risk managers need to assess terrorism risks (and insurances)
- Developing & Implementing security during:
 - Planning / Construction
 - Operation of facilities / buildings / projects



Terrorism & Risk Management – Key Challenges

Consider:

- Do nothing and accept the risk
- Perform a risk assessment to identify the risk on a prioritized basis
- Protect the facility against reasonable threats to reduce the risk to its lowest level reasonable
- Procure appropriate level of insurance

Terrorism & Risk Management – Concentric Rings

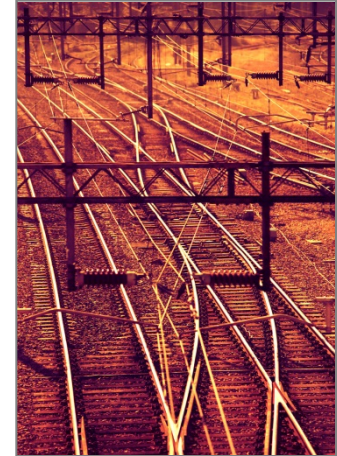
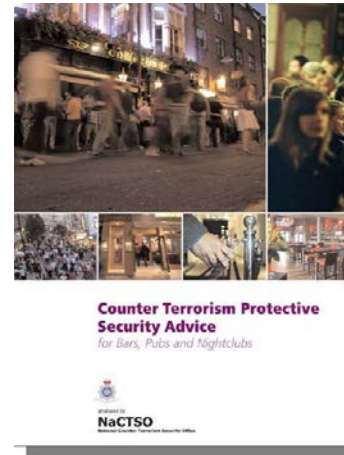
What “needs to” and what “can” be done

☐ Government

- Intelligence
- Mitigation
- Response

☐ Private Sector

- Compliance with building regulations & local emergency laws / guidelines
- Physical & technical security programs
- Business Continuity planning
- Crisis management
- Insurance



Terrorism & Risk Management – Concentric Rings

Theme: Deterrence, Detection & Response

Potential Security Measures:

Perimeter

- ☐ Stand-off distances, bollards, barriers
- ☐ Parking, receiving, messengers, air-intakes location & controls
- ☐ Glazing systems

Interior

- ☐ Building lobby – visitor & employee access controls
- ☐ Tennant space - access controls, emergency egress plans
- ☐ Ensure Business Continuity & Crisis Management plans in place

Terrorism & Risk Management - Terror Damage Assessment

- Threat of terrorist attacks continues to pose a risk to owners, tenants & the insurance industry
- Attacks throughout the world serve as reminders of an on-going problem
- As terrorism landscape evolves a need for seeking to quantify, underwrite, manage, and transfer risk
- TDA provides companies with structured approach for the management of information with respect to an organisation's exposure to terrorism risk
- Measures the risk, i.e. qualitatively assesses the threat, measures the vulnerability of assets and evaluates the probable damage

Terrorism & Risk Management – Terror Damage Assessment

Terror Assessment Program

- TDA is a standardized risk assessment which calculates the threat and vulnerability
- TDA provides for a more secure infrastructure
- TDA supports underwriters in assessing exposure

Terrorism & Risk Management – Terror Damage Assessment

Threat Analysis

Incorporates the country, location and site threat by analysts and security consultants

Vulnerability (Security Assessment)

Looks at standardized factors:

- external security and liaison
- perimeter
- entrances and exits
- access control
- security in depth
- critical assets
- security systems
- communications
- security management and guarding
- contingency & response planning

Terrorism & Risk Management – Terror Damage Assessment

Consequence – (Damage Calculations)

The amount of loss of damage that can be expected or may be expected from a successful attack of an asset.

- Establishes the Maximum Foreseeable Terrorism Loss (MFTL)
- Establishes the Probable Foreseeable Terrorism Loss (PFTL)

Terrorism & Risk Management – Terror Damage Assessment

Example: Terrorist Damage Assessment

Analysis

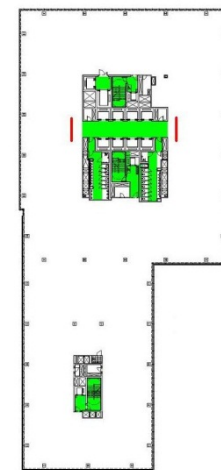
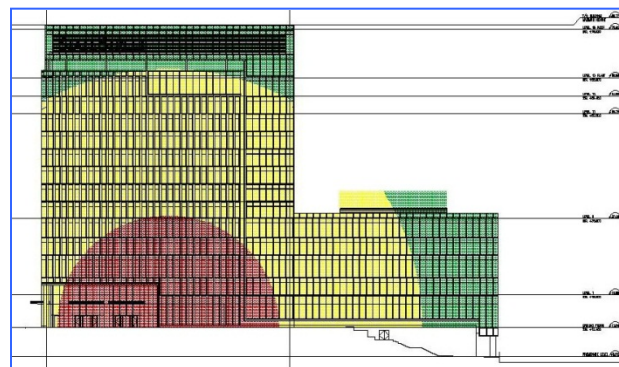
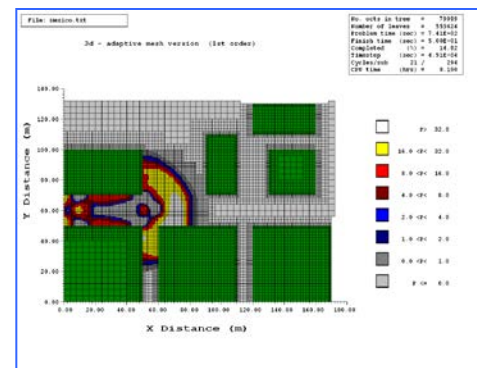
- “Attack” and “Defense” parameters
- Site planning and threat locations
- Blast and ballistic analysis
- Building response and estimated injury levels

Mitigation Measures

- Enhanced glazing and cladding
- HVM measures
- Physical security
- Internal fragment screens
- Scanner rooms
- Bomb Refuge Areas
- Evacuation Plans

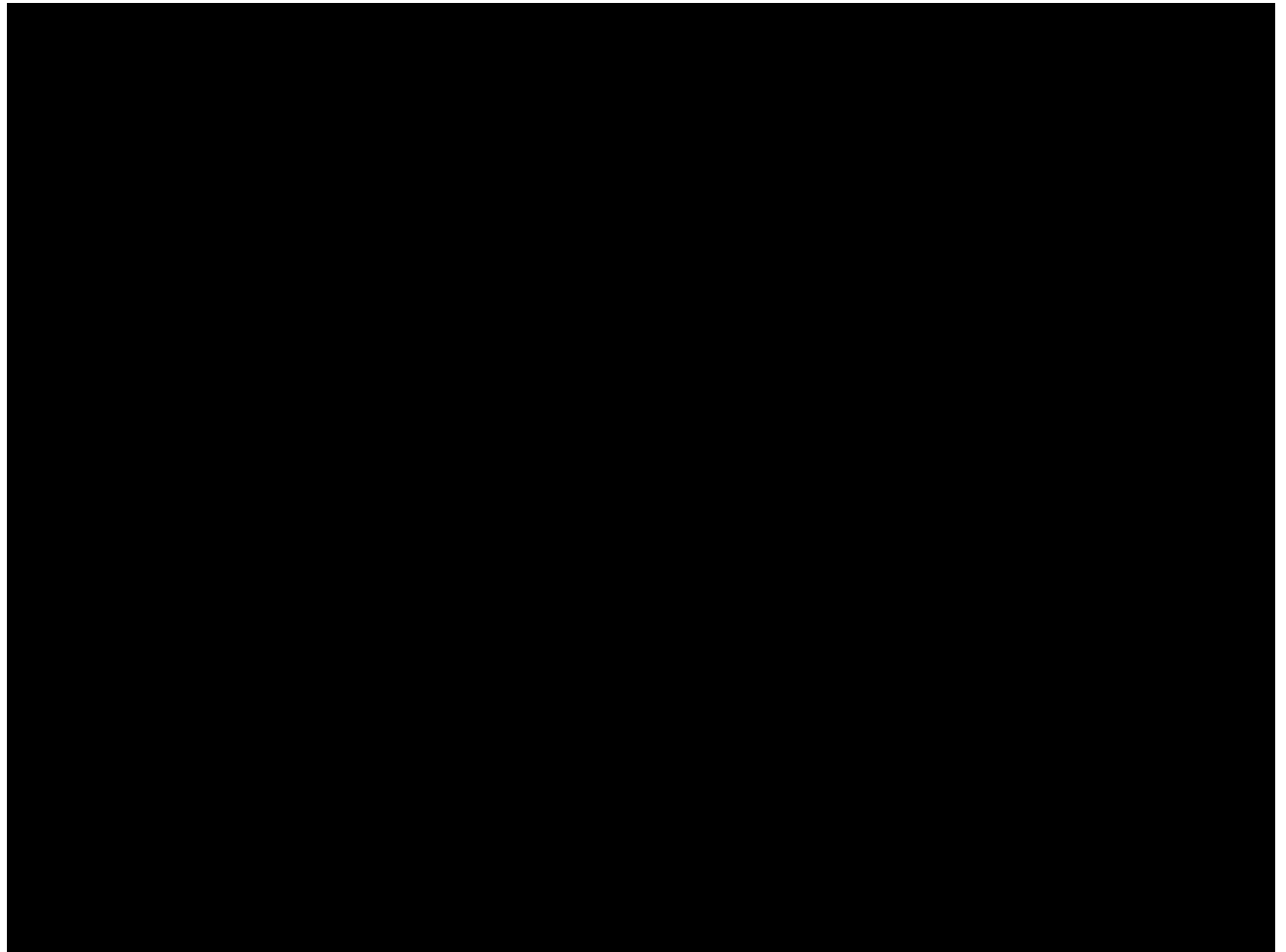
Business Continuity

- Major Incident Contingency Action Plans



Terrorism & Risk Management – Terror Damage Assessment

Resulting
Glazing
Hazard



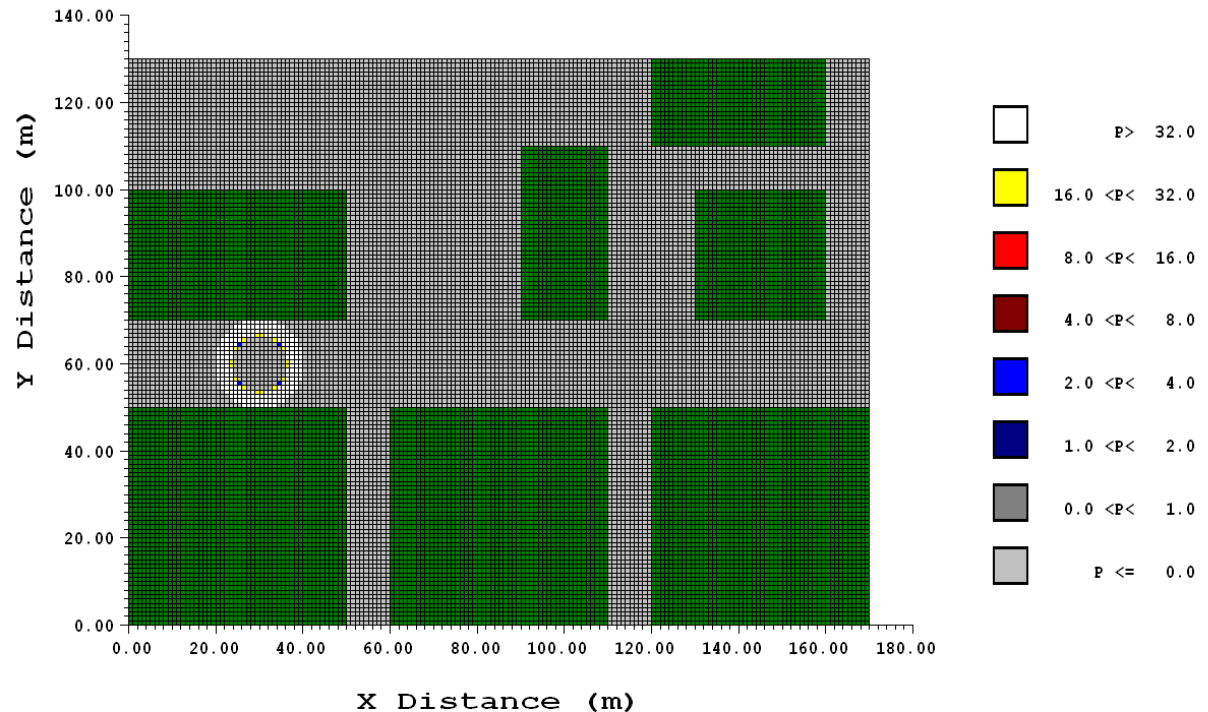
Terrorism & Risk Management – Terror Damage Assessment

Assessment of Blast wave propagation

File: Mexico.txt

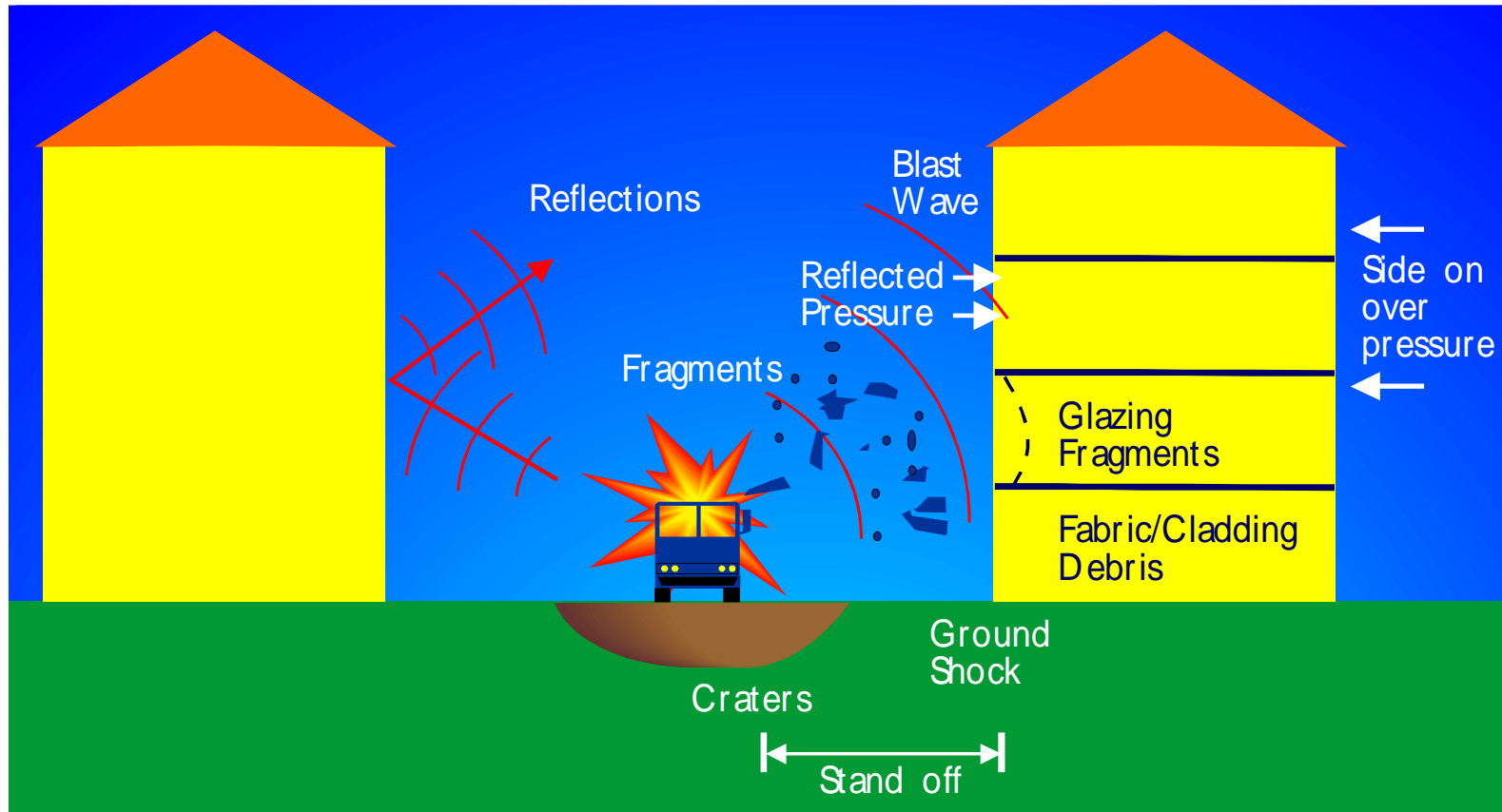
3d - adaptive mesh version (1st order)

No. octs in tree	=	138897
Number of leaves	=	972280
Problem time (sec)	=	5.11E-03
Finish time (sec)	=	5.00E-01
Completed (%)	=	1.02
Timestep (sec)	=	0.00E+00
Cycles/sub	=	0 / 0
CPU time (hrs)	=	0.075



Terrorism & Risk Management – Terror Damage Assessment

Interaction with the Built Environment



Terrorism & Risk Management – Terror Damage Assessment

Assessment

- Threat – Vulnerability Analysis
- Vulnerability – Security & Engineering Assessment
- Consequence – Damage Calculations

Deliverables

- ✓ A safer infrastructure one facility at a time
- ✓ Potential reduced exposure and apply appropriate insurance by accurately understanding exposure

Questions?

