Disaster Risk Assessor

HAZARD

- PAST RECURRENCE INTERVALS
- FUTURE PROBABILITY
- SPEED OF ONSET
- MAGNITUDE
- DURATION
- INTENSITY
- AREA

RISK

VULNERABILITY

- PEOPLE
- PREMISES
- PROCESSES
- PROVIDERS
- PROFILE

Ready.gov
An official website of the U.S. Department of Homeland Security

Hazards

- Fire
- Explosion
- Natural hazards
- Hazardous materials spill or release
- Terrorism
- Workplace violence
- Pandemic disease
- Utility outage
- Mechanical breakdown
- Supplier failure
- Cyber attack

Probability & Magnitude

Assets at Risk

- People
- Property including buildings, critical infrastructure
- Supply chain
- Systems/equipment
- Information Technology
- Business operations
- Reputation of or confidence in entity
- Regulatory and contractual obligations
- Environment

Vulnerability

Impacts

- Casualties
- Property damage
- Business interruption
- Loss of customers
- Financial loss
- Environmental contamination
- Loss of confidence in the organization
- Fines and penalties
- Lawsuits

Hazard Identification

Vulnerability Assessment

Impact Analysis

Select a hazard category (Ref NFPA 1600) – then scroll down to select a hazard to consider.

Reference

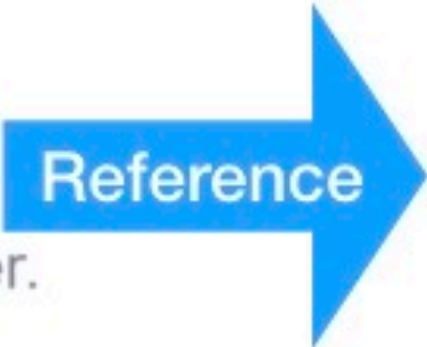|		
🏢 **Geological**	4	⋮
☕ **Meteorological**	9	⋮
⚙ **Biological**	2	⋮

Risks arise at the interface of Threats (Hazards) & Vulnerabilities

Assess risk to the things you care about through the lens of your significant hazards

NFPA 1600

Standard on Continuity, Emergency, and Crisis Management

2019

Hazards

Select a hazard category (Ref NFPA 1600) –
then scroll down to select a hazard to consider.

Geological	4	⋮
Meteorological	9	⋮
Biological	2	⋮
Human Caused	9	⋮
Technological	4	⋮
Economic/Financial	3	⋮
Strategic	7	⋮

NEXT

The hazard list is from internationally respected standards

NFPA 1600 List of Hazards
1. Earthquake
2. Landslide, mudslide, subsidence
3. Tsunami
4. Volcano
5. Drought
6. Extreme temperatures (hot, cold)
7. Famine
8. Flood, flash flood, seiche, tidal surge
9. Geomagnetic storm
10. Lightning
11. Snow, ice, hail, sleet, avalanche
12. Wild land fire / Bushfire
13. Windstorm, tropical cyclone, hurricane, tornado, waterspout, dust storm, sandstorm
14. Food-borne illnesses
15. Infectious *communicable* pandemic diseases
16. Building / structure collapse
17. Entrapment
18. Explosion / fire
19. Fuel/resource shortage
20. Hazardous material spill or release
21. Equipment failure
22. Nuclear reactor incident
23. Radiological incident
24. Transportation incident
25. Unavailability of essential employee(s)
26. Water control structure failure (e.g. Dam or Levee)
27. Misinformation
28. Incendiary fire
29. Bomb threat
30. Demonstrations *civil disturbance* riot/insurrection
31. Discrimination/harassment
32. Disinformation (rumours, false allegations, or accusations)
33. Kidnapping *hostage* extortion
34. Geopolitical risks including acts of war, change in government, and political instability
35. Missing person
36. Cyber security incidents
37. Product defect or contamination
38. Robbery / theft / fraud

Hazard Categories

Select a hazard category (Ref NFPA 1600) –
then scroll down to select a hazard to consider.

⚕	Meteorological	9	⋮
⚙	Biological	2	⋮
🔥	Human Caused	9	⋮
↻	Technological	4	⋮
🏢	Economic/Financial	3	⋮
🏛	Strategic	7	⋮
⌃	Added Category	0	⋮

+

NEXT 🏠 📄 ⓘ ↪

Add New Hazard Category

NAME OF HAZARD CATEGORY

Added Category

Attribute level of significance to
each relevant hazard

0 — 0 ————————————— 10

ADD

CANCEL

+

Add New Hazard

NAME OF HAZARD

New Hazard

Attribute level of significance to
each relevant type of hazard

0 — 0 ————————————— 10

ADD

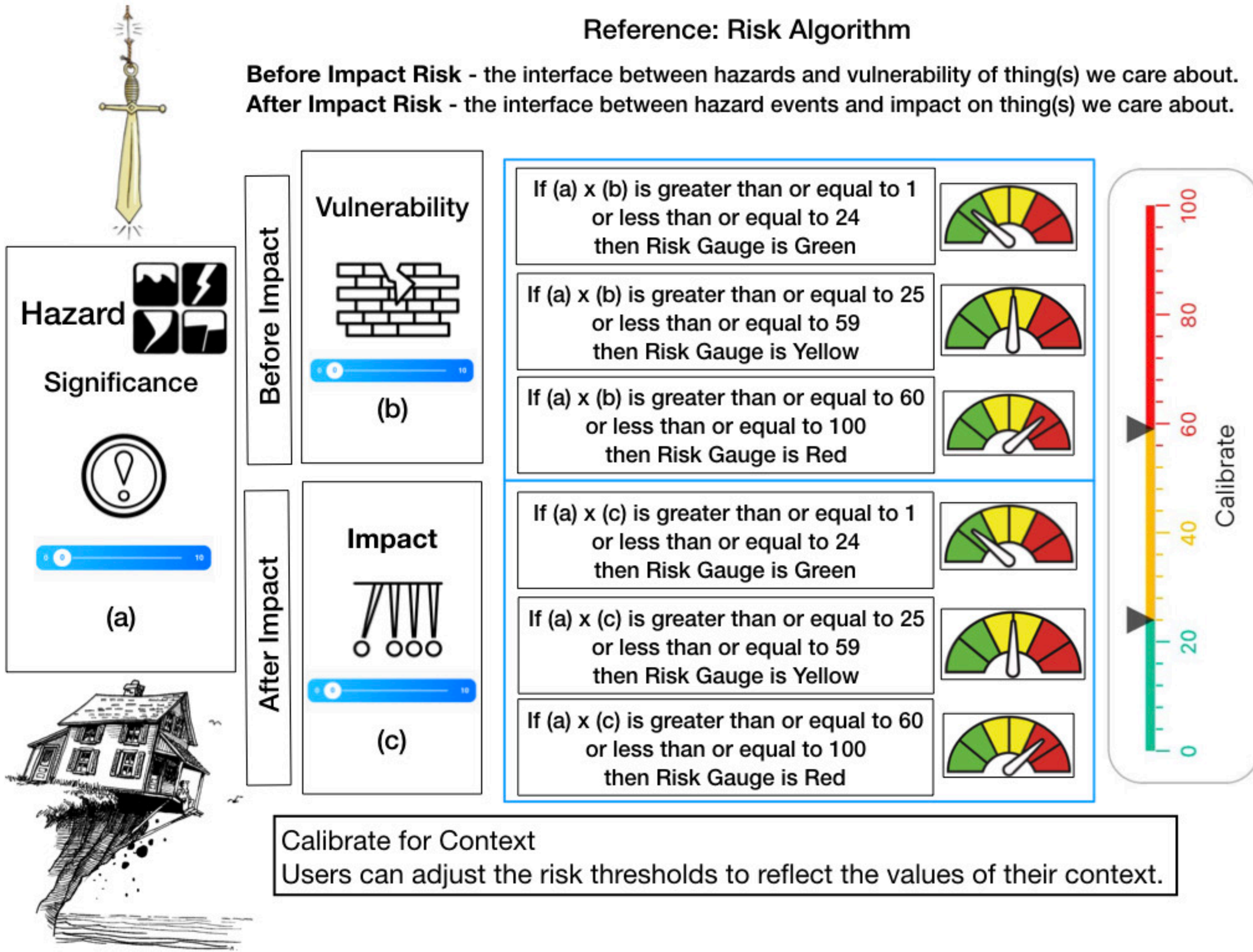CANCEL

No Hazards Selected yet - click on the +
button to add a hazard

The app supports flexibility
- therefore you can adjust the hazard categories
and hazards to align with your context.

Reference: Risk Algorithm

Before Impact Risk - the interface between hazards and vulnerability of thing(s) we care about.
After Impact Risk - the interface between hazard events and impact on thing(s) we care about.

Hazard

Significance

(a)

Before Impact

Vulnerability

(b)

After Impact

Impact

(c)

If (a) x (b) is greater than or equal to 1
or less than or equal to 24
then Risk Gauge is Green

If (a) x (b) is greater than or equal to 25
or less than or equal to 59
then Risk Gauge is Yellow

If (a) x (b) is greater than or equal to 60
or less than or equal to 100
then Risk Gauge is Red

If (a) x (c) is greater than or equal to 1
or less than or equal to 24
then Risk Gauge is Green

If (a) x (c) is greater than or equal to 25
or less than or equal to 59
then Risk Gauge is Yellow

If (a) x (c) is greater than or equal to 60
or less than or equal to 100
then Risk Gauge is Red

Calibrate

Calibrate for Context
Users can adjust the risk thresholds to reflect the values of their context.

Select Hazard

Meteorological

When attributing a level of significance to the "Hazard", consider

Hazard Significance   9 ⌄

Drought
0 ———————————●————— 10
8

Extreme temperatures
0 ——————————————————● 10
10

Famine
0 ———●————————————— 10
4

Flood, flash flood, seiche, tidal surge
0 —————————●——————— 10
5

Reference: Hazard Significance - Criteria

Past recurrence intervals
how many events have occurred in your context in the last 100 years

Future likelihood of occurrence
is frequency increasing

Speed of onset
how quickly might it be upon us

Magnitude
how big will it be

Duration
how long will it stay

Timing
does significance vary at different times of the day/month/year

Intensity
how much energy is released

Potential area of coverage
extent of spatial impact
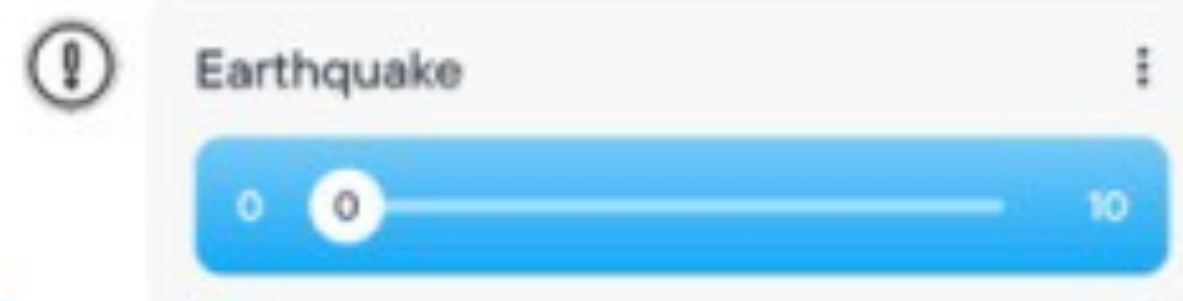
Perception
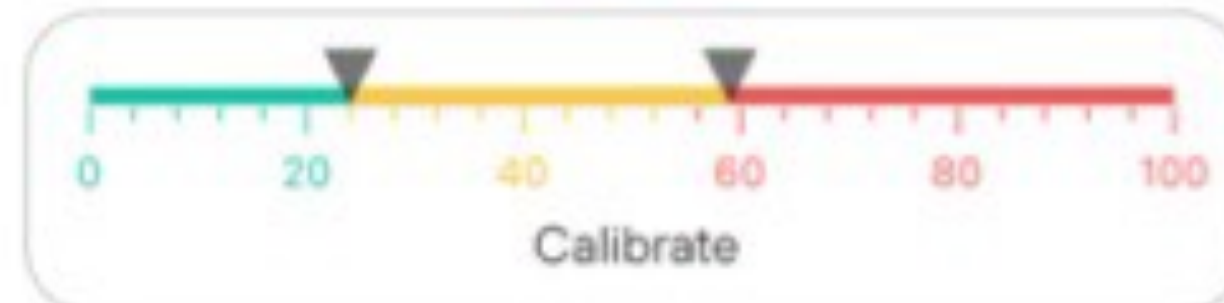level of fear or dread invoked

Toggle between BEFORE and AFTER

Calibrate

0   20   40   60   80   100

Earthquake

0   0   10

Calibrate

0   20   40   60   80   100

Earthquake

0   0   10

Plan on reducing your vulnerability and building your resilience BEFORE impact

- and restoring operability AFTER impact

Note

Note

How Vulnerable Is This Care-About?

Low   Medium   High

0 1 2 3 4 5 6 7 8 9 10

How Impacted Is This Care-About?

Low   Medium   High

0 1 2 3 4 5 6 7 8 9 10

0   10

BEFORE IMPACT RISK

0   10

AFTER IMPACT RISK

Cover prevention, preparedness, response, and recovery

Reference: Vulnerability is a function of many things. It is about the characteristics and features of the thing(s) you care about, and the dependencies and interdependencies associated with it (them), which make it (them) more resilient, or more adaptable, or more fragile.

In a nutshell, vulnerability is about the "**propensity or predisposition to be adversely affected**" *[1]*. It may be summarised as "a measure of the extent to which 'something you care about' such as a community, structure, service or geographical area is likely to be damaged or disrupted (on account of its nature or location) by the impact of a particular event" [2]. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adjust.

Adaptive capacity is the "ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences" *[3]*.

[SOURCE 1: ISO 14091 Adaptation to climate change – Guidelines on vulnerability, impacts and risk assessment].

[SOURCE 2: Glossary of Environment Statistics, Studies in Methods, Series F, No. 67, The Organisation for Economic Co-operation and Development].

[SOURCE 3: ISO 14090:2019 Adaptation to climate change].

If the decision (of what action to take) is complex, consider using our OughtWe app

HEADER

Action Plan

DESCRIPTION

Given the significant risks to the things you care about, action needs to be taken. (Identify, and describe, the things you rely on in your context).
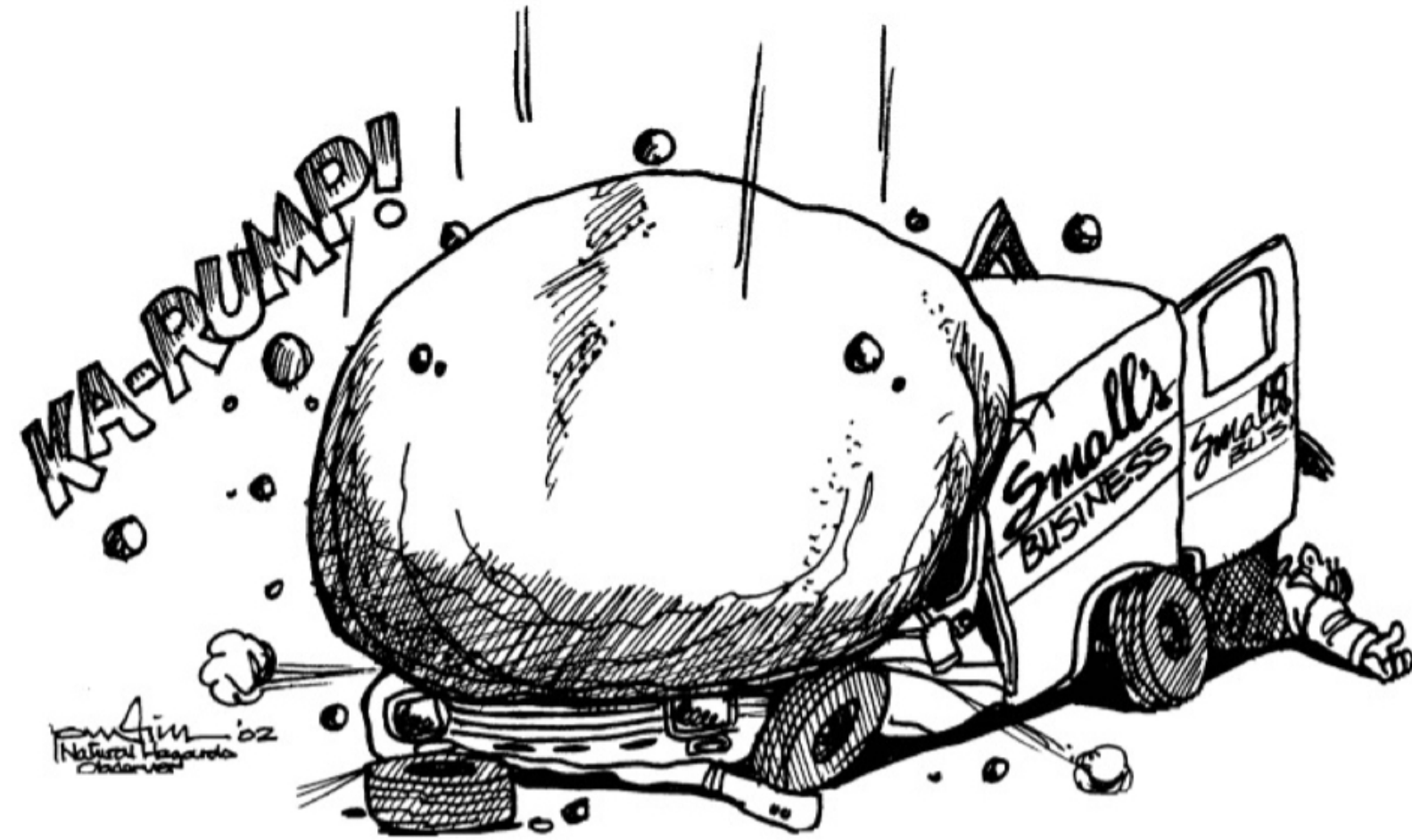Resources – as listed in NFPA 1600

WHAT NEEDS TO BE DONE?

Consider a business continuity plan and/or tools and/or software.

WHAT IS NEEDED TO DO IT?

Consider using the "OughtWe - Disaster Management Decision Maker app"

Consider using the "Disaster Management Decision Maker app".

KA-RUMP!

Small's BUSINESS

When Disasters and Small Businesses Collide

DISASTER REPORTS
DISASTER PAPERWORK
DISASTER RED TAPE
DISASTER DISASTER

The last thing you need is burdensome paperwork

RESPONSIBLE PERSON

Responsible persons name

TRACK
Is this work progressing in a way that is likely to achieve what is required? ✓ ✗

BUDGET
Is this work progressing within the amount you have available to spend? ✓ ✗

TIME
Is this work progressing within the schedule you have agreed to meet? ✓ ✗
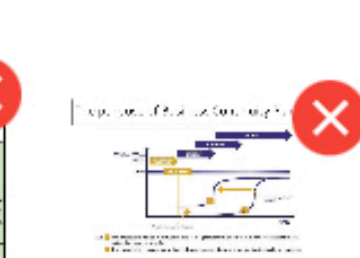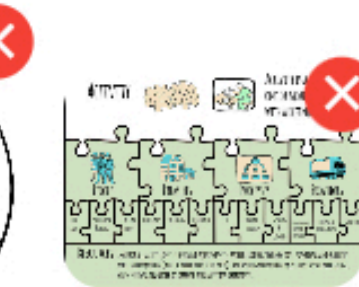
PROPOSED
Has this work been proposed? ✓ ✗

APPROVED
Has this work been approved? ✓ ✗

IMAGES:

+

Maximum 3 images allowed

HAZARDS

● All Hazards

○ Selected Hazards >

RISK LEVLS

● All Risk Levels

○ Selected Risk Levels >

PLANS

● All Plans

○ Selected Plans >

MONITORING

● On/Off Track

● On/Off Budget

● On/Off Time

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✓

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