



**Solutions Track 3:
Weather Insights: Why You Need More
Than A Simple Weather Forecast**

Henk Grouls, Managing Director, Houston

March 15, 2020

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 DRJ SPRING 2020
March 15-18, Orlando

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Agenda

- **Introduction**
- **Understanding** Weather's Impact to Business
- **Assessing** Risks of Weather Impacts
- **Responding** to Weather Impacts Risks
- Wrap Up

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Key Accounts

Healthcare, Insurance, Retail, Finance, Government, Construction, Hospitality, etc.



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Weather's Impact - Business Disruption

Weather is *the* major cause of disruptions to businesses globally

2017/2018: US \$653* bn in overall losses due to natural disasters

(*) Source: Aon

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Losses due to Natural Events 1980-2018

● Geophysical events ● Meteorological events ● Hydrological events ● Climatological events

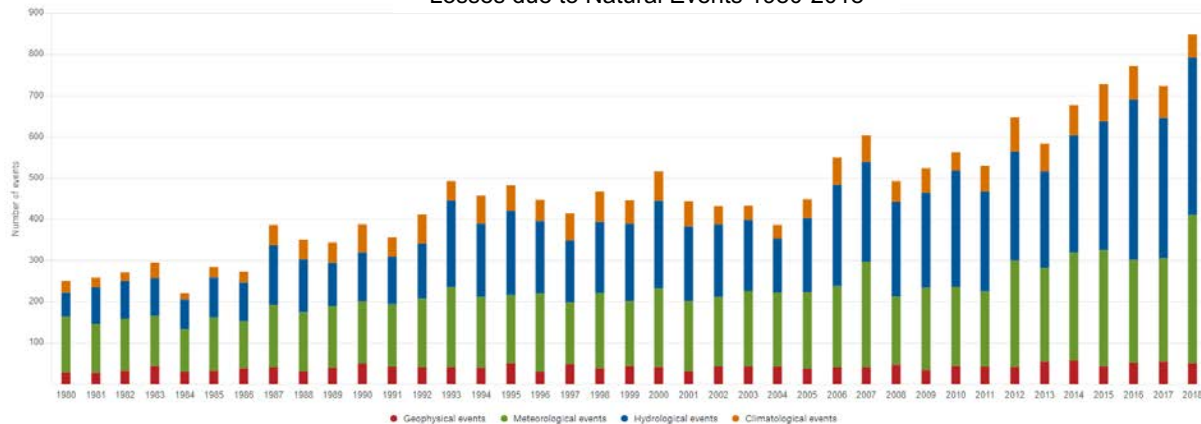
- Munich Re

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Weather's Impact - Business Disruption

Losses due to Natural Events 1980-2018

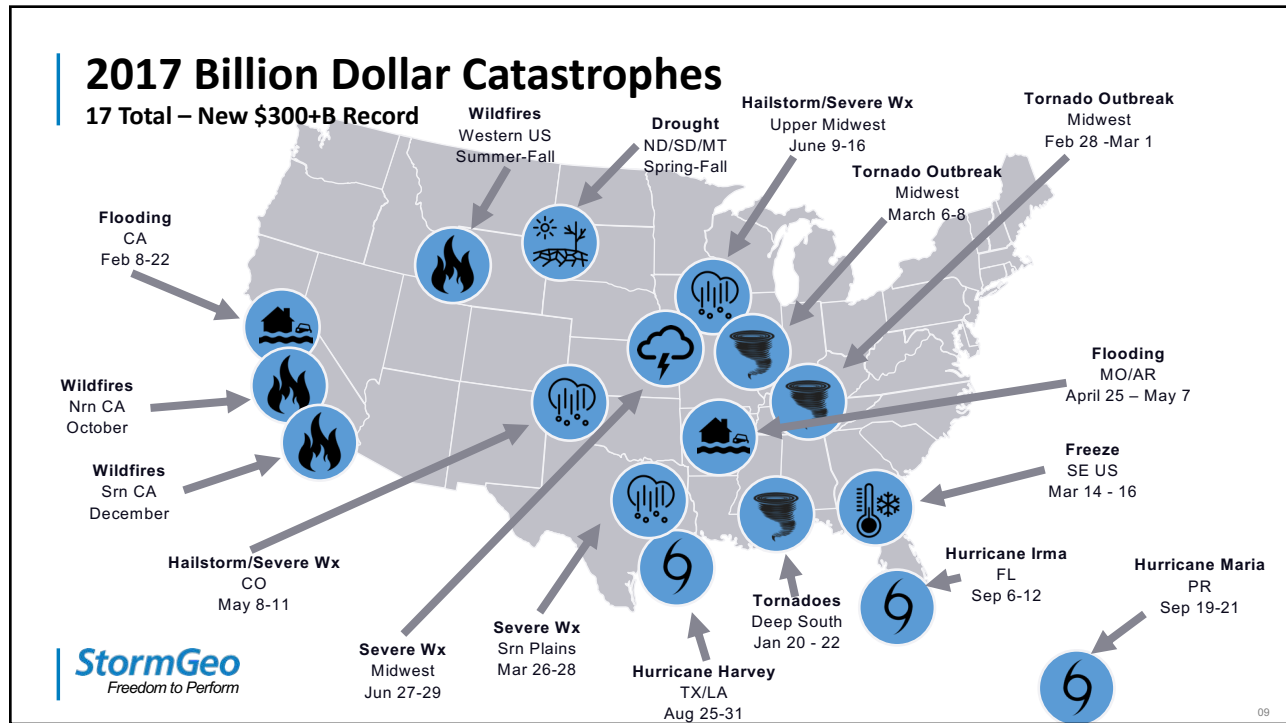


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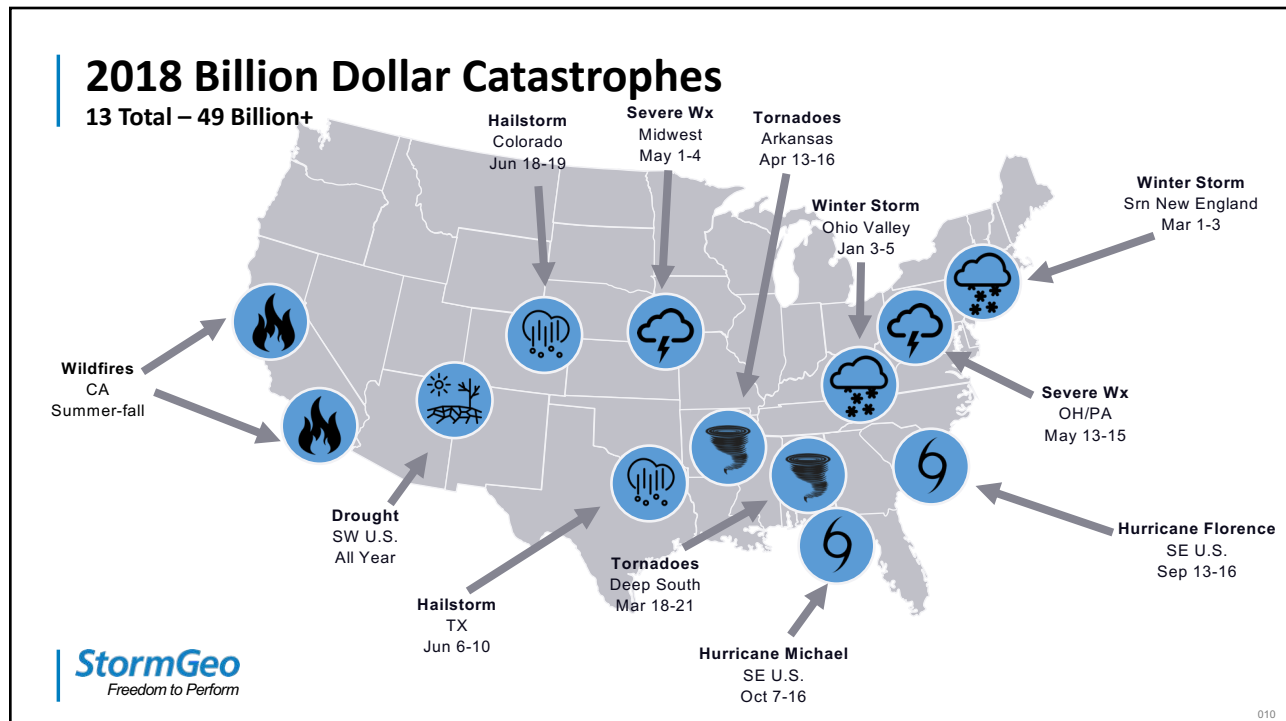
- Munich Re

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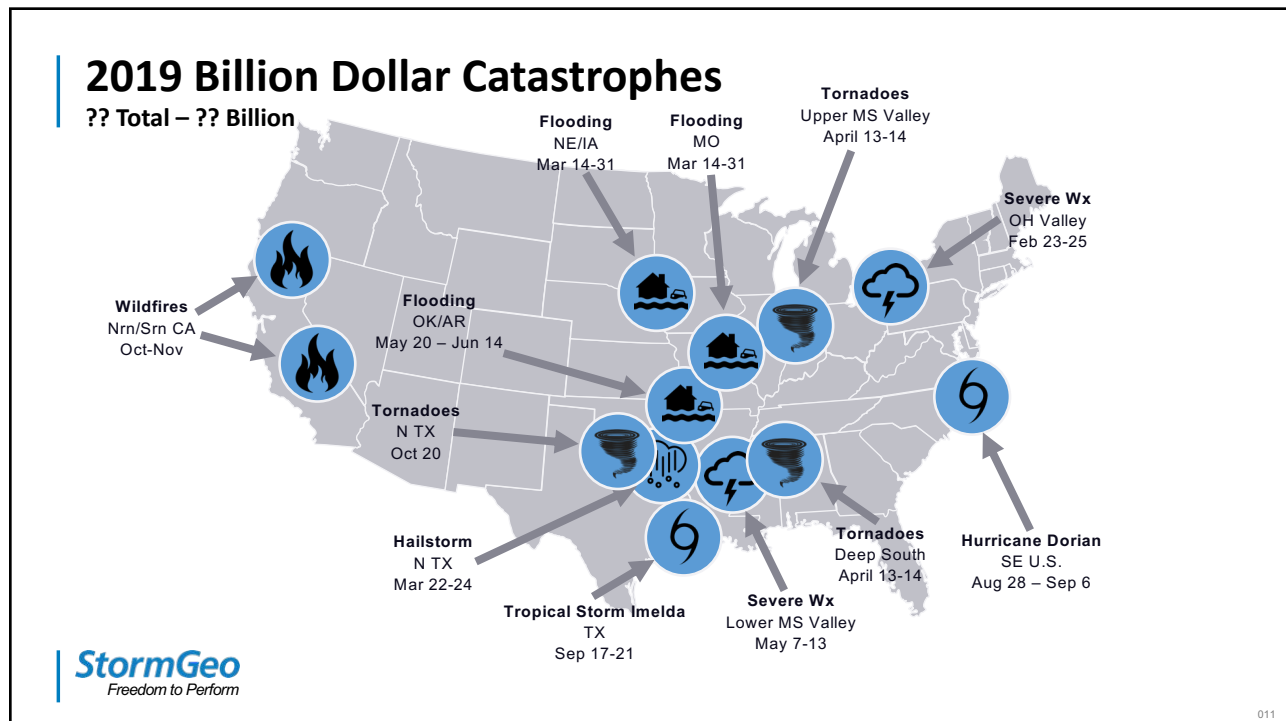
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Weather Challenges

- Disparate Information**
 From: Weather from numerous different sources
 To: Weather from one trusted partner
- Weather Hype vs Science**
 From: "Sky-is-falling", ratings-focused hype
 To: Business-focused, professional straight-talk
- Over/Under Alerting**
 From: Broad-brushed, non-actionable email "filler"
 To: Actionable weather intel down to point assets
- Employee/Customer Safety**
 From: "What/where/who is my liability?"
 To: Comprehensive "Duty of Care" solution

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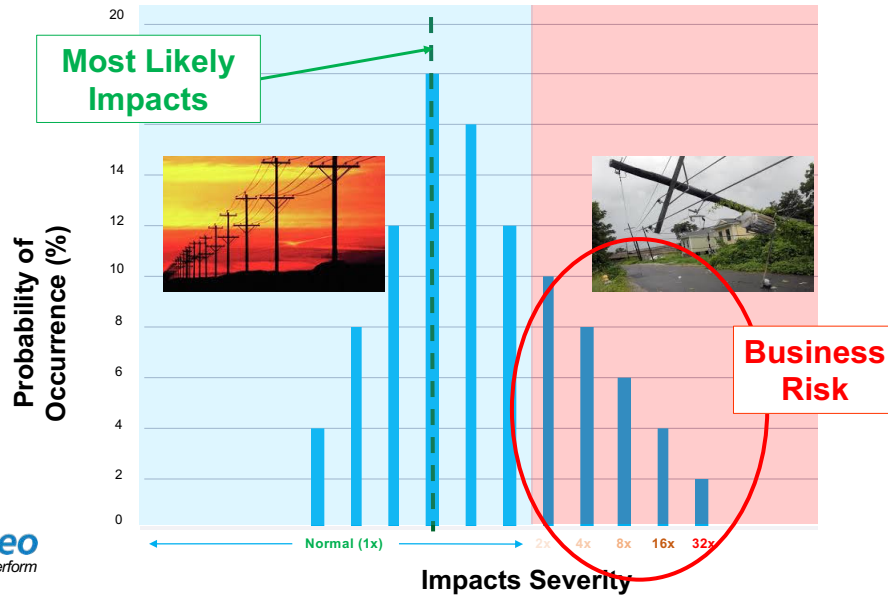
Assessing Business Risk



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Impacts Risk Analysis

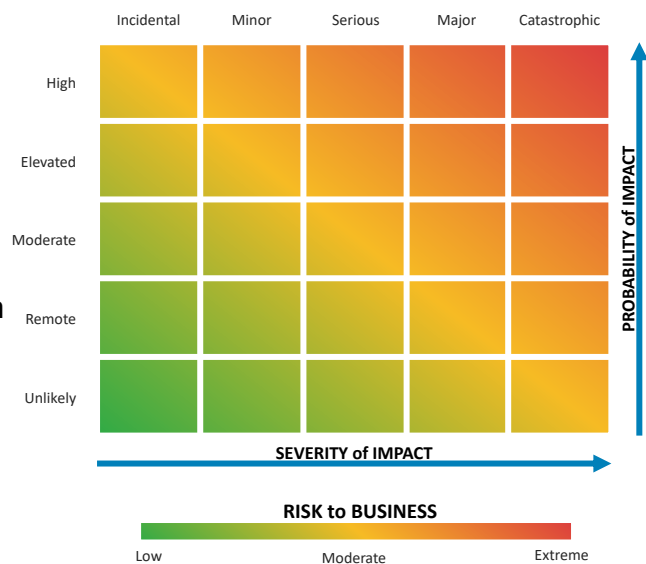


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Impacts Risk Tolerance

- Considerations:
 - Probability of impact
 - Severity of impact (\$\$\$)
 - Potential unmitigated loss (\$\$\$)
 - Cost of mitigating action (\$\$\$)
 - Effectiveness of mitigating action



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StormGeo Long Range Planner

ERECTING CRANE - HIGH WIND

Name

Erecting Crane - High Wind

Weather window

12

h

Setting the thresholds

IF

Wind Gust

>= (greater than or equal)

8

m/s

+ AND

+ OR

Probability colors

25%

75%

☒ Invert colors

Status

☒ Active

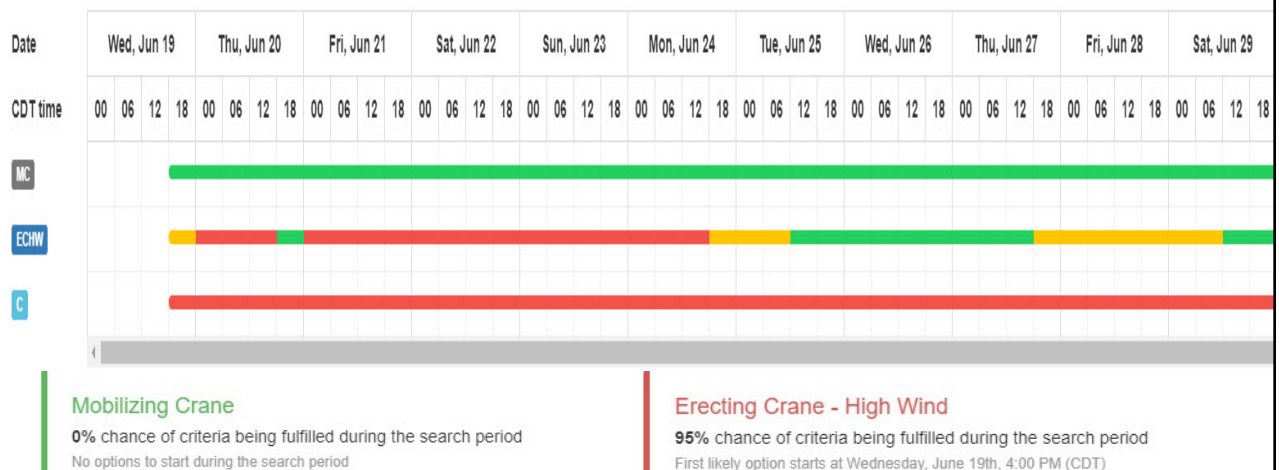
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StormGeo Long Range Planner

Create New Criteria to Automate Your Operations Process Based on Weather Risk



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Time-Phased, Business Risk Response Approach

- Determine when a decision can be made that improves your resilience
 - How long does it take to evacuate?
 - How long does it take to transfer operations to an alternate work location?
 - What are your operating schedules?
 - Are there special/specific events during the year?
- Determine what actions can be taken
 - Start with uncomplicated things
 - Move through time toward more impactful actions

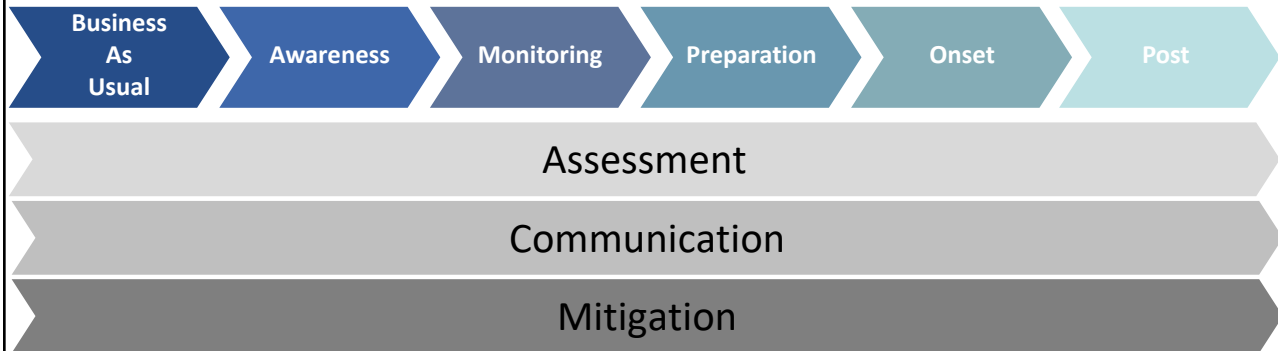


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Business Risk Response Phases



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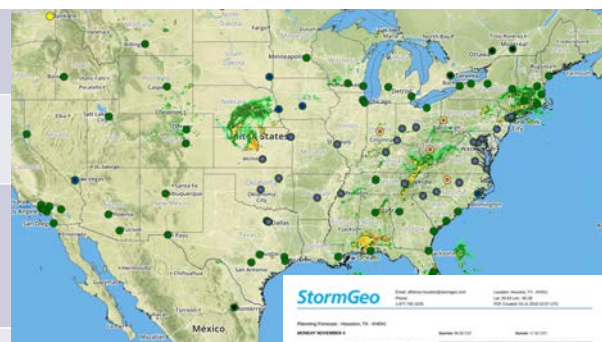
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Business as Usual



	Business as Usual
Assessment	<ul style="list-style-type: none"> ✓ Daily
Communication	<ul style="list-style-type: none"> ✓ "All Clear" messaging as appropriate ✓ Stakeholder alignment on response protocols
Mitigation	<ul style="list-style-type: none"> ✓ Drill co-location ✓ Maintain contact / resource lists ✓ Drill mass communications ✓ Employee preparedness education ✓ Scenario drills / tabletops



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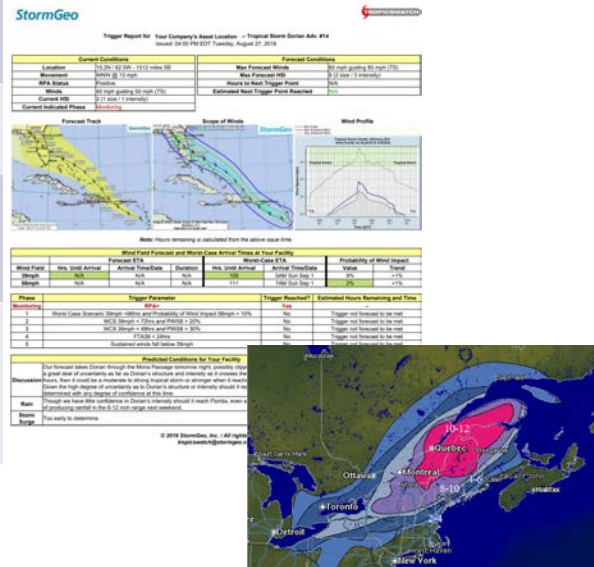
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Awareness



	Wx Hazard Awareness
Assessment	<ul style="list-style-type: none"> ✓ Business hours
Communication	<ul style="list-style-type: none"> ✓ Notify Management ✓ Notify HR ✓ Continue B.A.U. communications
Mitigation	<ul style="list-style-type: none"> ✓ Continue B.A.U. execution ✓ Update / top-off emergency supplies

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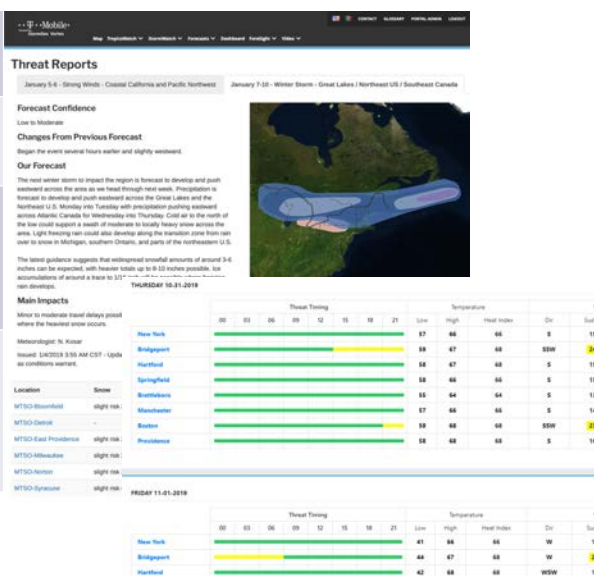
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Monitoring



	Wx Hazard Monitoring
Assessment	<ul style="list-style-type: none"> ✓ Continuous 24/7 (as appropriate)
Communication	<ul style="list-style-type: none"> ✓ Involve Management ✓ Update HR ✓ Notify Employees ✓ Notify IC taskforce ✓ Notify Damage Assessment Team (DAT)
Mitigation	<ul style="list-style-type: none"> ✓ Continue B.A.U. execution ✓ Establish briefings schedule ✓ Operational schedules review

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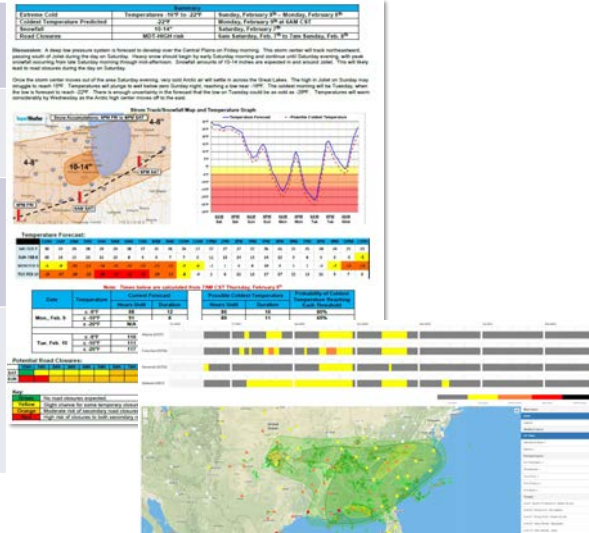
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Preparation



	Wx Hazard Preparation
Assessment	<ul style="list-style-type: none"> ✓ Continuous 24/7
Communication	<ul style="list-style-type: none"> ✓ Involve Management ✓ Involve HR ✓ Update Employees ✓ Activate IC taskforce ✓ Prepare for DAT deployment
Mitigation	<ul style="list-style-type: none"> ✓ Adjust B.A.U. ✓ Secure Co-Lo accommodations ✓ Migrate to Co-Lo ✓ Adjust operational schedules ✓ Response protocols enabled ✓ Encourage employee preparation ✓ Formal remote work instructions

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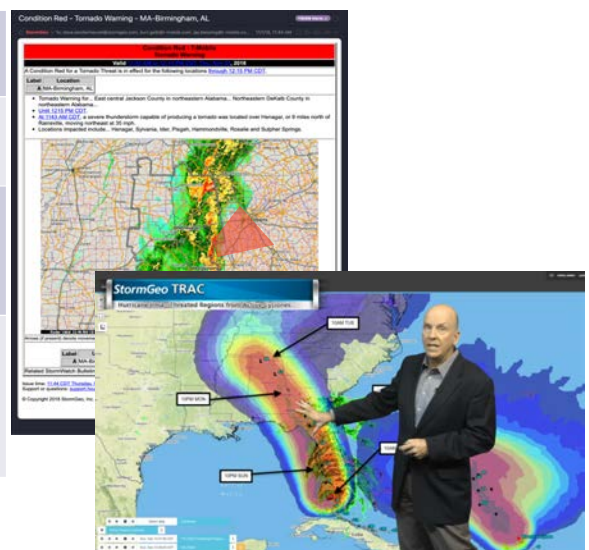
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Onset



	Wx Hazard Onset
Assessment	<ul style="list-style-type: none"> ✓ Continuous 24/7
Communication	<ul style="list-style-type: none"> ✓ Involve Management ✓ Involve HR ✓ Update Employees ✓ Status employees in need of assistance ✓ "Duty of Care" communications
Mitigation	<ul style="list-style-type: none"> ✓ Skeleton crew operations ✓ Deploy DAT Safety First! ✓ Incident / damage recording ✓ Prepare post-event schedules ✓ Prepare Employee Assistance Team

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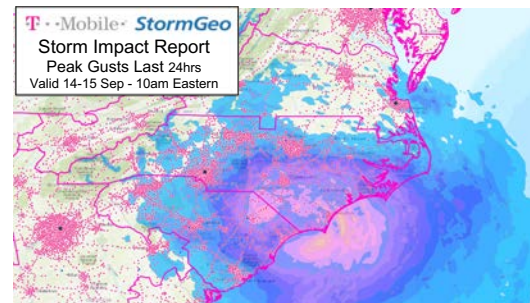
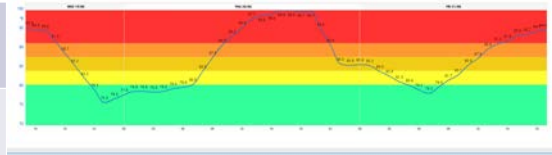
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Post



	Post Wx Hazard
Assessment	<ul style="list-style-type: none"> ✓ Business hours
Communication	<ul style="list-style-type: none"> ✓ Update Management ✓ Update HR ✓ Update Employees
Mitigation	<ul style="list-style-type: none"> ✓ Execute post-event schedules ✓ Continue/support DAT deployment ✓ Deploy Employee Assistance Team ✓ Maintenance deployment (documentation for claims)



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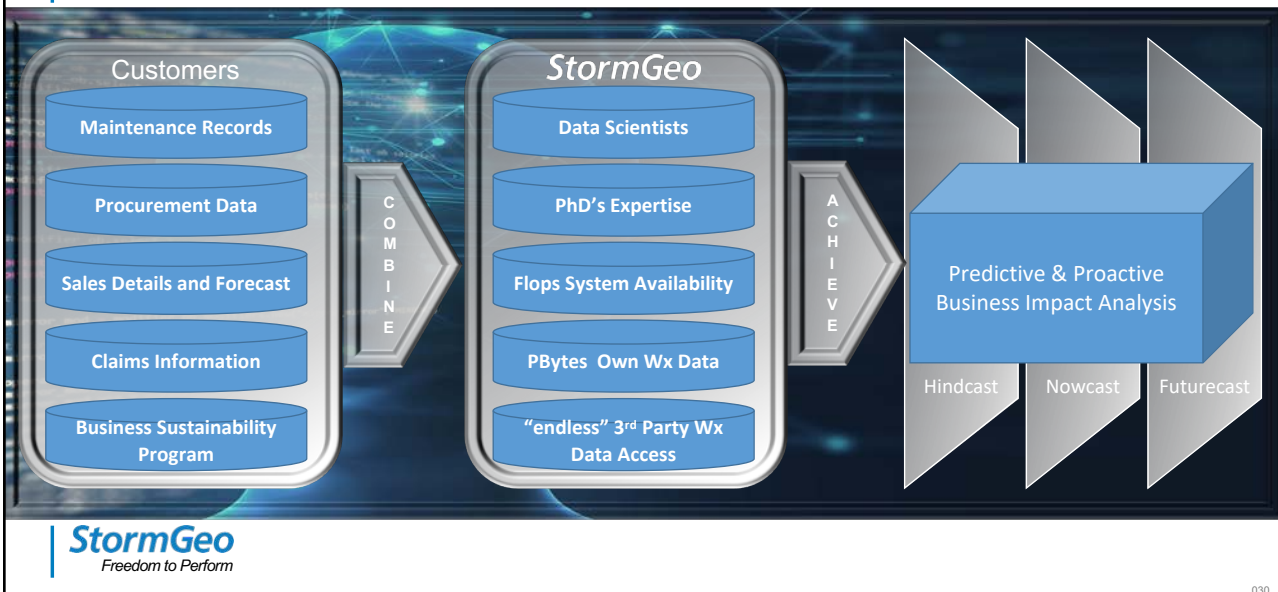
The Right Tools for Each Phase



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Wrap-up Thoughts



- **Understand** weather's impact to your business
- **Assess** continually the risks of impacts
- **Respond** optimally to the risks of impacts
- **Utilize** time-phase tools

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