

What's New in Touchstone

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TOUCHSTONE®



We Have Delivered



Agenda

- Software enhancement and updates
 - Database management
 - User interface update
 - Working with projects
 - New analysis options and loss analytics
 - Export enhancements
- Data and Model Updates
 - Model updates
 - Introducing Model Builder
 - New Geospatial and Hazard Data available
 - Geocoding updates
 - Financial Engine updates
 - Other updates that may impact loss output

Database Management

Exposures Supported in This Year's Release of Touchstone

Format	Version Supported
CSV	N/A
CEDE 2.0 Touchstone Exposure DB (Upgrade)	4.0, 4.2, 5.0, 5.1
CEDE 1.0 CLASIC/2 Exposure DB (Conversion)	No Longer Supported
UPX	No Longer Supported

*** Exposure Database Downgrade scripts from 6.0 to 5.1 are available**

Retained Results from Previous Versions Are Supported in this Year's Release of Touchstone

Version of Results Database	Action
V4.0,V4.2 V5.0,V5.1	<ul style="list-style-type: none">• Upgrade directly in 6.0 via the Data Source Manager• Results will be marked as Version 5.0/5.1

*Older Results - To retain and view results from versions prior to V4.0 or V4.2, users will need to upgrade these up to V4.0 or V4.2 and then transfer over to current version of Touchstone.

Loss Analysis	View Results	Loss Grouping	Comparative Analytics	Exporting CLFs
Contains models that have been updated since the version the analysis was run in	Yes	No	Yes	No
Does not contain models that have been updated since the version the analysis was run in	Yes	Yes	Yes	Yes

Data Source Manager Aids with the Upgrade

- As part of the upgrade to Exposures and Results Databases, there are additional options for Workers Compensation, Geospatial, Hazard where you can choose to delete or retain information.

Upgrade Options

Based on your database selection(s), you may change the following upgrade options:

Exposure Databases

Workers' Compensation Data: ☒ Preserve current values ☐ Upgrade to new values

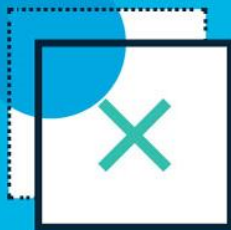
Results Databases

Geospatial Results: ☒ Do not delete ☐ Delete on upgrade

Hazard Results: ☒ Do not delete ☐ Delete on upgrade

Upgrade **Cancel**

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Installation Requirements

Touchstone Only	Touchstone Re Only	Touchstone and Touchstone Re Combined
SQL Server 2014 & 2016	SQL Server 2016 ONLY	SQL Server 2016 ONLY

Flexibility

- Stand alone or combined installations of Touchstone and Touchstone Re
- Benefits of a combined installation:
 - Save on hardware
 - Streamlined data flow between the two applications

User Interface Update

The User Interface Got a Major Refresh!






The screenshot displays the Touchstone software interface. At the top is a dark navigation bar with the 'TOUCHSTONE' logo and menu items: Import, Export, Tools, Admin, and Help. Below this is a 'Home' button and a 'Projects' section. The 'Projects' section includes tabs for 'My Projects', 'All Projects', and 'Hidden Projects'. A table lists projects with columns for Project Name, Status, Project Currency, Exchange Rate Name, Created Date, Modified Date, Created By, and Description. To the right of the table are icons for New, Delete, Refresh, Export, and Hide Project. On the far right is a 'Latest News' sidebar with three articles: 'Western Japan Floods', 'Typhoon Maria', and 'M5.5 Takatsuki Japan Earthquake'.

Project Name	Status	Project Currency	Exchange Rate Name	Created Date	Modified Date	Created By	Description
AirTestProj	Active	USD	AIR Default	07/16/2018 3:48 PM	07/16/2018 3:48 PM	AIR-WORLDWIDE\58147	
Commercial Accounts	Active	EUR	AIR Default	07/21/2018 10:54 AM	07/21/2018 11:50 AM	AIR-WORLDWIDE\62194	
DefaultUW	Active	USD	AIR Default	07/16/2018 11:46 AM	07/16/2018 11:46 AM	DEFAULT	DO NOT DELETE - Default Underwriting Project
Demo	Active	USD	AIR Default	07/17/2018 1:12 PM	07/17/2018 1:22 PM	AIR-WORLDWIDE\20827	
JBH	Active	USD	AIR Default	07/17/2018 2:18 PM	07/17/2018 3:05 PM	AIR-WORLDWIDE\63128	
Ryan	Active	USD	AIR Default	07/16/2018 4:34 PM	07/16/2018 4:34 PM	AIR-WORLDWIDE\62929	
Test Project	Active	USD	AIR Default	07/18/2018 4:38 PM	07/18/2018 4:38 PM	AIR-WORLDWIDE\65544	

- Removal of *File* menu facilitates easy navigation through Business Units and Modes while providing easier access to *Admin* console
- Clean implementation of system level functionality, like *Import* and *Export*
- Menu on left provides quick access to most recently modified data, results, reports, etc.
- Removal of ribbon and updated icons provides a larger and cleaner Touchstone workspace

Working with Projects

New Project Management Features Assist with Managing your Project List

Home								
Projects								
My Projects All Projects Hidden Projects			 New  Delete  Refresh  Export  Hide Project					
	Project Name ▲ ▼	Status ▼	Project Currency ▼	Exchange Rate Name ▼	Created Date ▼	Modified Date ▼	Created By ▼	Description ▼
	AirTestProj	Active	USD	AIR Default	07/16/2018 3:48 PM	07/16/2018 3:48 PM	AIR-WORLDWIDE\58147	
▶	Commercial Accounts	Active	EUR	AIR Default	07/21/2018 10:54 AM	07/21/2018 11:50 AM	AIR-WORLDWIDE\62194	
	DefaultUW	Active	USD	AIR Default	07/16/2018 11:46 AM	07/16/2018 11:46 AM	DEFAULT	DO NOT DELETE - Default Underwriting Project

- Users can clean up their project list using the *Hide Project* capability to display projects as desired
- Projects are retained in the AIRProject database so no data is lost through the *Hide Project* feature
- *Hide / Show Project* applies across the application
- **It is not specific to the user**

Exporting Projects Streamlines Data Transfer

- Streamlines process to get data out of Touchstone
- Provides a single package of all project data
- Enables you to retain the structures of your exposure data
- You can select what specific artifacts to export

Manage Projects

Choose Project

Export will include: ☒ Exposure Data ☐ Results (CLF) ☐ Unicede/2

	Name ▾	Created Date ▾	Created By ▾	Description ▾
<input type="radio"/>	DefaultUW	07/16/2018 11:46 AM	DEFAULT	DO NOT DELETE - Default Underwriting Proje...
<input type="radio"/>	AirTestProj	07/16/2018 3:48 PM	AIR-WORLDWIDE\58147	
<input type="radio"/>	Ryan	07/16/2018 4:34 PM	AIR-WORLDWIDE\62929	
<input type="radio"/>	Demo	07/17/2018 1:12 PM	AIR-WORLDWIDE\20827	
<input type="radio"/>	JBH	07/17/2018 2:18 PM	AIR-WORLDWIDE\63128	
<input type="radio"/>	Test Project	07/18/2018 4:38 PM	AIR-WORLDWIDE\65544	
<input type="radio"/>	Commercial Accounts	07/21/2018 10:54 AM	AIR-WORLDWIDE\62194	

Select Loss Results (CLF) ▾

⚠ Confirm Exposure & Select Formats ▾

UNICEDE/2 & LOB Mapping ▾

⚠ Export Options ▾

☒ Close on Export

Cancel Export

Importing Projects Simplifies Exposure Management

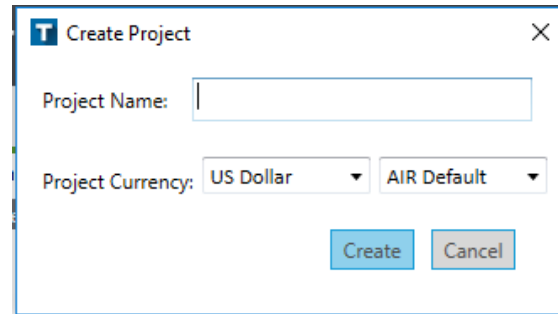
- Enables you to seamlessly recreate exposure structures (project, exposure views, exposure sets)
- Single path for everything including exposure, RPX files and CLFs (Touchstone Re import)

The screenshot shows the 'Import Project' dialog box with the following fields and options:

- Project File Location:** A text input field with a red border and a 'Browse' button.
- Project Name:** A text input field with a red border.
- Help Text:** 'You may change the project name (optional)'
- Data Selection:** A tabbed interface with 'Exposure Views' selected. Other tabs include 'Loss Templates', 'Currency Tables', and 'Reinsurance Programs'.
- Data Table:** A table with two columns: 'Exposure View Name' and 'Database Name'. The table is currently empty.
- Exposure Summaries:** A section with a checked checkbox 'Create Exposure Summaries on Import'.
- Additional Options:** A section with 'Scheduling' options: 'Execute Immediately' (selected) and 'Schedule on:' (with a date/time picker).
- Footer:** A checked checkbox 'Close on Import' and 'Cancel' and 'Import' buttons.

Project Currency Makes It Easier to Work with Currency in Touchstone

- Everywhere that you can create a project, you will be able to assign a project currency
- The project currency will be the default analysis currency for any analyses run in that project
- Defaults to Business Unit (BU)-level analysis currency for ease-of-use



T Create Project X

Project Name:

Project Currency: US Dollar ▼ AIR Default ▼

Create Cancel

New Analysis Options and Loss Analytics

New Analysis Options and Loss Analytics

Zonal Losses

Storm Surge and Precipitation Flood LOB %

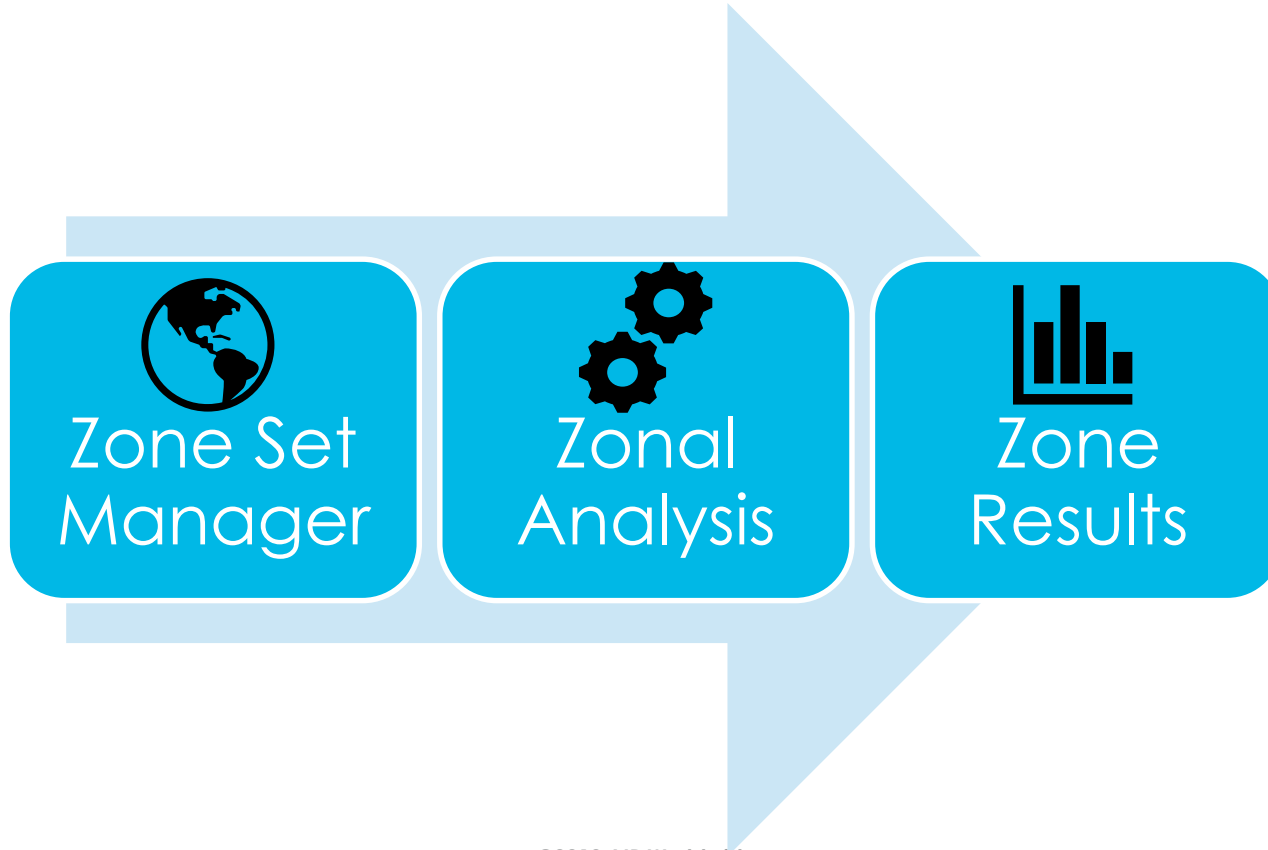
Contract and Location Summary AAL by Peril

Contract-level analytics

Modeled Exposure Widget in Loss Dashboard

Layer and Treaty losses by Peril and Model

Zonal Analytics



Zonal Analytics - Creating Zones

The screenshot shows the 'Zone Set Manager' window within the 'Administration Console'. The window has a header bar with the title 'Zone Set Manager' and a breadcrumb 'Object Management > Data Quality Analysis Template'. Below the header, there's a sidebar on the left with a 'Zone Set Manager' section containing icons for adding, deleting, and refreshing, and a 'Display' dropdown set to 'All Objects'. The main area is divided into sections for 'Name' (State zones), 'Description', 'Created' (07/04/2018 by AIR-WORLDWIDE\82464), 'Modified' (07/04/2018 by AIR-WORLDWIDE\82464), 'Zone' (states), 'Compatibility' (Detailed Loss, Aggregate), 'Global Region' (North America), and a list of 'Country' and 'State' zones. The 'State' list includes Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming. A blue callout box points to the 'State' list with the text: 'Choose a region for easy navigation to countries of interest'. Another blue callout box points to the 'Zone' field with the text: 'Create your Zone in the Admin Console for use when running a detailed loss analysis'. A third blue callout box points to the 'Bulk insert' button with the text: 'Use the Bulk insert for quick zone creation, all the selected resolution or finer'.

Administration Console

Zone Set Manager
Object Management > Data Quality Analysis Template

Zone Set Manager
+ - Refresh
Display: All Objects
Sort: Date Modified - newest

State zones
Earthquake Territories

Name: State zones
Description:
Created: 07/04/2018 by AIR-WORLDWIDE\82464
Modified: 07/04/2018 by AIR-WORLDWIDE\82464

Zone: states
Compatibility: Detailed Loss Aggregate ?

Global Region: North America

Country: *
State
County

Alaska Offshore
Anguilla
Antigua and Barbuda
Aruba
Bahamas
Barbados
Bermuda
Canada
Canada Offshore
Cayman Islands
Cuba
Dominica
Dominican Republic

Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
Dist of Columbia
Florida
Georgia
Hawaii
Idaho

Kent
New Castle
Sussex

Zone Count: 1
Zones
New Zone +
states
US-Alabama
US-Delaware
US-Dist of Columbia
US-Florida
US-Georgia
US-Hawaii
US-Idaho
US-Illinois
US-Indiana
US-Iowa
US-Kansas

Use the Bulk insert for quick zone creation, all the selected resolution or finer

The screenshot shows a 'State' selection dialog box. It has a list of states with checkboxes next to them. A blue callout box points to the 'Bulk insert' button with the text: 'Use the Bulk insert for quick zone creation, all the selected resolution or finer'. Another blue callout box points to the 'Selection' dropdown with the text: 'Create Zones from checked geographies at this resolution'. The 'Selection' dropdown is open, showing options: Selection, Subarea, Postal, and Subarea2.

State

Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
Dist of Columbia
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas

Selection
Subarea
Postal
Subarea2

Zone Set Manager Gives You Control

Touchstone and Touchstone Re will have a single Zone Set Manager to create Zones.

Create Zones

Delete Zones

Edit Zones

Copy Zones

Search Zones

Check
Compatibility

Share Zone Sets

More...

Zonal Analytics - Setting Up an Analysis

The screenshot shows the 'New Detailed Loss Analysis' window. The 'Analysis Target' is 'August 2018'. The 'Template' is 'AIR Default Loss Template'. The 'Percent of Non-Geocoded Exposure' is 0%.

Output Options

Summary (AAL Only): ☐ Contract Summary ☐ Location Summary

Additional Details: ☐ Coverage ☐ # Claims ☐ Injury Type ☐ MAOL ☐ EP by Peril ☐ EP by Model

☒ Zone ☐ Zones By Peril ☐ Retain Annual EP Table By Zone ?

Zone Sets: [Search bar]

Available Zone Sets: Earthquake Territories

Selected Zone Sets: State zones, US-Alabama, US-Alaska, US-Arkansas, US-California, US-Colorado, US-Delaware, US-Dist of Columbia, US-Florida, US-Georgia

Analysis Name: August 2018 - Loss Analysis **Run**

For losses by Peril by Zone to be saved in the results DB you must specify the Zone By Peril checkbox

This will enable a full Annual EP table (all return periods) in addition to an EP Summary table which is generated by default

When setting up an analysis add or remove zones to visualise results in the user interface.

Zonal Analytics – Viewing Results

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Import Export Tools Admin Help

Display Currency: *Saved Currency

Home Live Portfolio

Project Data

August 2018 - Zone...

August 2018 - Zone Loss Analysis

Results

All Results

Recent

August 2018 - Zone Loss Analysis

Loss Analyses

Data Quality Analyses

Hazard Analyses

Geospatial Analyses

Marginal Impact

Loss Groups

Loss Comparative Analyses

CATXOL Analyses

Reports

Reinsurance

Target	Perspective	By Peril	AAL(EV)	SD
All Exposed Areas	Ground Up	All Perils	17,618,675	17,138,739
All Exposed Areas	Gross	All Perils	8,098,808	9,138,341
US-Delaware	Ground Up	TC	1,088	15,363
	Gross	TC	634	9,390
US-Alabama	Ground Up	TC	48,882	258,295
	Gross	TC	23,724	168,051
US-Dist of Columbia	Ground Up	TC	203	2,002
	Gross	TC	114	1,256
US-Florida	Ground Up	TC	2,883,966	10,038,116
	Gross	TC	1,627,400	5,127,104
US-Georgia	Ground Up	TC	24,488	147,470

Run Analysis

Streamlined Storm Surge / Precipitation Flood LOB Mapping

Administration Console

Loss Analysis Template

Object Management > Loss Analysis Template

Loss Analysis Template

Display: All Objects

Sort: Date Modified - newest

AIR Default Loss Template

Florida Rate Filing Analysis

Name: AIR Default Loss Template

Description:

Created: 06/06/2018 by AIR-WORLDWIDE\81313

Modified:

Set as default

Loss Diagnostics

Analysis Settings

Output

Analysis Management

Model: AIR Default

Catastrophe Peril Analysis

Event Set: 10K US AP (2018) - Standard

Perils:

- ☒ Earthquake
- ☒ Tropical Cyclone
- ☒ Wind
- ☒ Storm Surge(AIR)
- ☒ Precipitation Flood
- ☒ Severe Storm
- ☒ Severe Thunderstorm
- ☒ Winter Storm
- ☒ Earthquake Shake
- ☒ Fire Following
- ☒ Sprinkler Leakage
- ☒ Landslide
- ☒ Tsunami

Event Set Filter: Filters not applied

Demand Surge: ☒ With ☐ Without

Financial Settings:

Correlation: Off

Disaggregation: Off

Average Properties: Off

For Invalid Con/Occ Pairs: Ignore

Apply location terms for residential contracts: AIR default behavior

Flexibility:

Loss Modification Factor: None

Baseline Analysis:

☐ Move Marine Craft Geocodes to Coast

Loss Analysis Options: Storm Surge Options

☐ Single Storm Surge % 5.00 Apply

☒ Storm Surge % by LOB

Total Records: 3 of 3 Update %: 0.00 Apply

Line of Business	Storm Surge %
Residential	10.00
Commercial	5.00
Utility	20.00

OK Cancel

Streamlined Storm Surge / Precipitation Flood LOB Mapping

Loss Analysis Options: Storm Surge Options

☐ Single Storm Surge % 5.00 Apply

☒ Storm Surge % by LOB

Total Records: 3 of 3 Update %: 0.00 Apply [Red X]

Line of Business	Storm Surge %
+	
Residential	10.00
Commercial	5.00
Utility	20.00

OK Cancel

- Copy and paste LOBs commonly found in your exposure data or from Excel
- Assign a Storm Surge/ Precipitation Flood % to the LOB – when running an analysis defaults to this value

Location and Contract Summary (AAL) Results Tables Are Now Available in SQL by Peril and Model

All Exposure Views x August 2018 - Zon... x New Detailed Los... x +

New Detailed Loss Analysis Template: AIR Default Loss Template

Analysis Target: August 2018 Percent of Non-Geocoded Exposure: 0 %

Loss Diagnostics

- Analysis Settings
- Reinsurance
- Output**
- Analysis Management

Output Options

Portfolio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Contract	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contract	<input type="radio"/>			
Layer	<input type="radio"/>			
Line of Business	<input type="radio"/>			
Contract UDF	None			
Location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Location	<input type="radio"/>			
Location UDF	None			
Geography	Event Total	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CLF Compatibility Note: None

Summary (AAL Only):

- ☒ Contract Summary
- ☐ Location Summary

Additional Details:

- ☐ Coverage
- ☐ # Claims
- ☐ Injury Type
- ☐ MAOL
- ☒ EP by Peril
- ☐ EP by Model
- ☐ Zone

Analysis Name: August 2018 - Loss Analysis **Run**

To generate Contract and Location Summary Tables by Peril and Model select Contract and/or Location Summary and EP by Peril/Model

Enhancements to Contract-Level Analytics

- You can now run all types of analysis at the Contract level
 - Hazard
 - Geospatial
 - Data Quality

The screenshot displays the TOUCHSTONE software interface. The top navigation bar includes 'Import', 'Export', 'Tools', 'Admin', and 'Help'. The main content area shows a 'Contract List' with 367 contracts. A dropdown menu is open under the 'Run Analysis' button, listing four options: 'Contract Data Quality Analysis', 'Contract Loss Analysis', 'Contract Geospatial Analysis', and 'Contract Hazard Analysis'. The table below the menu shows contract details for 'DARDEN RESTAURANTS INC' and 'ACCENTURE'.

Contract ID	Exposure Set	Insured Name	Expiration Date	Perils	Location Count	Layer Count
1	WindAllLines	DARDEN RESTAURANTS INC	12/31/2010	CF,EQ,FF,IF,LS,NC,PF,S	15	
10	WindAllLines	ACCENTURE	12/31/2010	CF,EQ,FF,IF,LS,NC,PF,S	16	
100	WindAllLines	X	12/31/2010	TC	1	
101	WindAllLines	X	12/31/2010	TC	1	

You Can Add a Prefix when Running Multiple Contracts or Exposure Views

- This makes it easier to identify your results
- E.g., 'With Demand Surge' or 'Without Demand Surge'

The screenshot shows the 'New Detailed Loss Analysis' window in the AIR software. The left sidebar contains 'Project Data', 'All Exposure Views', 'Recent', 'August 2018', 'Results', 'Reports', and 'Reinsurance'. The main window has a 'New Detailed Loss Analysis' header with a 'Template' dropdown set to 'AIR Default Loss Template'. Below this is the 'Analysis Target' dropdown set to 'AY 2016_8_277,VOLKSWAGEN GROUP VICO 2017_8_277'. The 'Percent of Non-Geocoded Exposure' is 'Unknown'. The 'Analysis Management' section includes 'Currency & Rate' (US Dollar, AIR Default), 'Number of Cores' (Min: 1, Max: 32, Advise...), 'Scheduling' (Execute Immediately selected), 'Priority' (Normal selected), 'Result Server' (LON-TSP17-DB01), and 'Result Database' (AIRResult_Live). At the bottom, the 'Analysis Prefix (Optional)' field is highlighted with a blue box and contains the text 'With Demand Surge'. The 'Analysis Name' field is 'Auto name(3 items)' and the 'Run' button is visible.

New Exposure Summary Widget Provides a Overview of What Was Modeled

- New loss widget identifies how much of your exposure has been modeled
- Highlighting for example:
 - Exposure not covered by an event set
 - Locations not valid for loss
 - Exposure not covered by licensed models / regions

Exposure Summary	Target Exposure View	*Modeled Exposure Data
Total Replacement Value	179,867,129,261	49,643,203,854
Total Replacement Value Building	91,109,087,480	19,345,314,253
Total Replacement Value Structures	5,301,891,900	1,891,900
Total Replacement Value Contents	59,803,963,121	15,812,263,939
Total Replacement Value Time	23,652,186,760	14,483,733,762
Total Insured Value Building	11,504,448,849	2,876,862,485
Total Insured Value Structures	3,611,891,900	1,891,900
Total Insured Value Contents	3,302,934,363	2,332,934,363
Total Insured Value Time	2,347,621,998	2,255,861,998
Number Of Contract Records	1272	694
Number Of Location Records	15790	6664
Number Of Risks	17936	6664
Reinsurance Terms Applied	No	No

In this example Global portfolio run against a U.S. All Perils Event set – highlighting the number of location in the U.S.

Exposure Summary	Target Exposure View	*Modeled Exposure Data
Total Replacement Value	49,643,203,854	49,643,203,854
Total Replacement Value Building	19,345,314,253	19,345,314,253
Total Replacement Value Structures	1,891,900	1,891,900
Total Replacement Value Contents	15,812,263,939	15,812,263,939
Total Replacement Value Time	14,483,733,762	14,483,733,762
Total Insured Value Building	2,876,862,485	2,876,862,485
Total Insured Value Structures	1,891,900	1,891,900
Total Insured Value Contents	2,332,934,363	2,332,934,363
Total Insured Value Time	2,255,861,998	2,255,861,998
Number Of Contract Records	694	694
Number Of Location Records	6664	6664
Number Of Risks	6664	6664
Reinsurance Terms Applied	No	No

Just U.S. locations – highlighting the locations not valid for loss

You Can Now View Layer Losses by Peril and Model...

Target	Perspective	By Peril	AAL(EV)	SD	20	50	100	250	500	1,000
World_wide_Contract_1_2	Ground Up	All Perils	6,839,477	14,050,613	30,533,092	51,809,097	70,705,362	94,494,409	115,355,026	145,920,709
		EQ	2,412,470	8,770,858	12,057,008	28,225,435	43,388,880	64,910,983	80,280,308	96,603,768
		TC	4,427,007	11,131,602	20,584,182	37,787,877	53,716,547	82,879,808	103,328,720	132,015,150
	Gross	All Perils	872,213	4,303,313	2,830,072	19,912,113	29,719,114	29,998,097	30,000,603	30,109,113
		EQ	357,928	2,821,936	3,289	3,058,248	16,282,554	29,680,256	29,997,462	29,998,849
		TC	514,285	3,293,781	357,132	7,823,133	22,392,153	29,994,577	29,997,776	29,999,114
World_wide_Contract_1_1	Ground Up	All Perils	6,839,477	14,050,613	30,533,092	51,809,097	70,705,362	94,494,409	115,355,026	145,920,709
		EQ	2,412,470	8,770,858	12,057,008	28,225,435	43,388,880	64,910,983	80,280,308	96,603,768
		TC	4,427,007	11,131,602	20,584,182	37,787,877	53,716,547	82,879,808	103,328,720	132,015,150
	Gross	All Perils	2,889,898	4,484,225	11,522,237	15,993,567	19,525,603	21,865,417	24,492,314	26,751,068
		EQ	955,221	2,710,167	9,137,620	9,999,803	10,398,620	14,302,871	19,478,562	19,999,532
		TC	1,934,678	3,604,437	10,018,320	12,288,257	15,494,284	19,574,518	21,198,551	23,610,204

Target	Perspective	By Peril	By Model	AAL(EV)	SD	20	50	100	250	500	1,000
World_wide_Contract_1_1	Ground Up	All Perils	All Models	6,839,477	14,050,613	30,533,092	51,809,097	70,705,362	94,494,409	115,355,026	145,920,709
		EQ	All Models - EQ	2,412,470	8,770,858	12,057,008	28,225,435	43,388,880	64,910,983	80,280,308	96,603,768
			M11 US EQ	2,412,470	8,770,858	12,057,008	28,225,435	43,388,880	64,910,983	80,280,308	96,603,768
		TC	All Models - TC	4,427,007	11,131,602	20,584,182	37,787,877	53,716,547	82,879,808	103,328,720	132,015,150
			M23 Haw TC	114,221	1,846,557	0	44,501	538,493	8,134,322	20,407,337	34,256,680
			M27 NorAtl TC	4,312,786	10,968,646	20,099,817	36,258,229	53,307,070	82,761,098	99,649,427	132,015,150
	Gross	All Perils	All Models	2,889,898	4,484,225	11,522,237	15,993,567	19,525,603	21,865,417	24,492,314	26,751,068
		EQ	All Models - EQ	955,221	2,710,167	9,137,620	9,999,803	10,398,620	14,302,871	19,478,562	19,999,532
			M11 US EQ	955,221	2,710,167	9,137,620	9,999,803	10,398,620	14,302,871	19,478,562	19,999,532
		TC	All Models - TC	1,934,678	3,604,437	10,018,320	12,288,257	15,494,284	19,574,518	21,198,551	23,610,204
			M23 Haw TC	46,413	619,361	0	18,363	240,386	6,320,763	9,994,144	9,999,987
World_wide_Contract_1_1	Gross	TC	M27 NorAtl TC	1,888,264	3,549,723	10,006,992	12,113,251	15,277,196	19,332,627	20,664,192	23,610,204

And Treaty Losses by Peril and Model, Too

Summary EP Table											
	Target ▼	Perspective ▲	By Peril ▲	AAL(EV)	SD	20	50	100	250	500	1,000
►	QS_Quota Share	Treaty Ground Up	All Perils	2,417,362	5,830,974	9,753,563	27,563,181	34,495,210	36,361,071	39,346,073	44,161,137
			EQ	962,564	4,031,697	4,364,794	9,671,987	23,753,080	34,342,462	34,725,185	41,207,780
			TC	1,454,798	4,271,714	5,708,270	13,709,035	27,750,686	34,716,323	35,762,791	36,957,588
		Treaty Gross	All Perils	604,341	1,457,743	2,438,391	6,890,795	8,623,803	9,090,268	9,836,518	11,040,284
			EQ	240,641	1,007,924	1,091,198	2,417,997	5,938,270	8,585,616	8,681,296	10,301,945
			TC	363,699	1,067,929	1,427,068	3,427,259	6,937,672	8,679,081	8,940,698	9,239,397

Summary EP Table											
	Target ▼	Perspective ▲	By Model ▲	AAL(EV)	SD	20	50	100	250	500	1,000
	QS_Quota Share	Treaty Ground Up	All Models	2,417,362	5,830,974	9,753,563	27,563,181	34,495,210	36,361,071	39,346,073	44,161,137
			M11 US EQ	938,819	4,025,136	4,336,957	9,671,987	23,753,080	34,342,462	34,725,185	41,207,780
			M13 Haw EQ	18,470	218,996	0	69,573	400,606	1,389,687	2,323,582	3,867,860
			M14 Ala EQ	5,276	70,586	0	54,454	144,800	270,888	421,067	718,151
			M23 Haw TC	41,849	801,917	0	9,306	124,975	2,683,839	5,025,562	13,893,388
			M27 NorAtl TC	1,412,949	4,188,291	5,460,483	12,511,378	27,665,067	34,716,323	35,762,769	36,596,060
		Treaty Gross	All Models	604,341	1,457,743	2,438,391	6,890,795	8,623,803	9,090,268	9,836,518	11,040,284
			M11 US EQ	234,705	1,006,284	1,084,239	2,417,997	5,938,270	8,585,616	8,681,296	10,301,945
			M13 Haw EQ	4,617	54,749	0	17,393	100,152	347,422	580,896	966,965
			M14 Ala EQ	1,319	17,646	0	13,614	36,200	67,722	105,267	179,538
			M23 Haw TC	10,462	200,479	0	2,327	31,244	670,960	1,256,390	3,473,347
►	QS_Quota Share	Treaty Gross	M27 NorAtl TC	353,237	1,047,073	1,365,121	3,127,845	6,916,267	8,679,081	8,940,692	9,149,015

Export Enhancements

Export Enhancements

Loss and exposure transfer to Touchstone Re

Streamlined CLF and UNICEDE/2 LOB Mapping

Removing SIDs from Exposure Exports

All Analysis Types Available in tAnalysis Table

Loss and Exposure Transfer to Touchstone Re

New Detailed Loss Analysis

Analysis Target: United States_August

Loss Diagnostics

- Analysis Settings
- Reinsurance
- Output**
- Analysis Management

Output Options

Loss Perspectives:

☒ Ground Up ☐ Pre-Layer Gross ☒ Net of Pre-CAT
☒ Retained ☒ Gross ☐ Post-CAT Net

Able To Generate

Save Loss By:	Event Detail	Summary EP	Annual EP	TVAR
Portfolio	✓	✓	✓	✓
Contract	○			
Contract	○			
Layer	○			
Line of Business	○			
Contract UDF	None			
Location				
Location	○			
Location UDF	None			
Geography	Sub Area (e.g.)	✓	✓	✓

CLF Compatibility Note: **Supports One Line of Business** ☒ Export Analysis

Configure Export...

☐ Contract Summary ☐ Location Summary
☐ Coverage ☐ # Claims ☐ Injury Type ☐ MAOL
☐ EP by Peril ☐ EP by Model
☐ Zone

To export loss and exposure to Touchstone Re either configure on analysis or Export Express

AIR ExportExpress

Export Type: Company Loss File (CLF)/Associat

Contains losses by line of business, area, and subarea for each event.

☒ Source Results ☒ Options ☒ LOB Mapping

Set All Countries To: Commercial if valid

0 User LOBs must be mapped to valid AIR Industry LOBs

Country	User LOB	Industry LOB
United States	PP:Unknown	Commercial

☒ Save to CLF

Destination Path: C:\Program Files\AIR\Touchstone

Base File Name: US - Loss Analysis

☒ Associate Loss to Company

Loss Set Name: US - Loss Analysis

Business Unit: TouchstoneReDefault

SQL Instance: LON-TSIR18-DB01

Company: Example Company

☒ Close on Export

Increased Functionality for CLF LOB Mapping

Use the Apply to All functionality on the LOB Mapping for CLF export. Also ability to choose a Default LOB where valid in the Admin Console

AIR ExportExpress

Export Type: Company Loss File (CLF)/Associat

Contains losses by line of business, area, and subarea for each event.

☒ Source Results ☒ Options ☒ LOB Mapping

Set All Countries To: Commercial if valid **Apply**

0 User LOBs must be mapped to valid AIR Industry LOBs

Country	User LOB	Industry LOB
Antigua and Barbuda	PP:Commercial	Commercial
Netherlands Antilles	PP:Commercial	Commercial
Aruba	PP:Commercial	Commercial
Barbados	PP:Commercial	Commercial
Bermuda	PP:Commercial	Commercial
Bahamas	PP:Commercial	Commercial

☒ Save to CLF ☐ Associate Loss to Company

Destination Path: \\FT01\CloudShare\RIK_Conf Browse

Base File Name: ABC_Insurance - Loss Analysis

☒ Close on Export **Export** **Cancel**

Administration Console

Global Defaults <

Default LOB Mapping Global Defaults > Default LOB Mapping

CLF Default LOB: Commercial

UNICEF/2 Default LOB: Commercial

.....

- User Administration
- Global Defaults**
- Event Set Management
- Loss Defaults
- License Management
- HPC Resource Management
- Server Administration
- Data Quality
- Object Management

Save **Reset**

CLF Updates

- Correct analysis options for invalid Construction / Occupancy Pairs is now reflected in CLFs
- Full currency table is now populated in the comments section of the .evi file



Removing Appended SIDs from Exposure Exports

- When exporting exposure to CSV, the Contract SIDs are no longer appended to the Contract IDs
- When exporting multiple Exposure Sets to a single Set in a new Exposure Database, the Exposure Set SID is no longer appended to the Exposures Set Name

All Analysis Types Available in AIRResult...tAnalysisResults

ResultSID	AnalysisName	AnalysisTypeCode	CurrencyExchangeRateSet	CurrencyCode
1	August Live - Loss Analysis	LOSS	AIR Default	USD
2	August Live - Hazard Analysis	HAZ	AIR Default	USD
3	August Live - Data Quality Analysis	DQ	AIR Default	USD
4	August Live - Geospatial Analysis	EC	AIR Default	USD
5	August Live -CAT XOL Analysis	CATLOSS	AIR Default	USD
6	Loss Comparative Analysis	CMPLOSS	AIR Default	USD
7	August Live - Marginal Impact Analysis	IMPACT	AIR Default	USD

Model Updates

2018 Model Releases



**US Wildfire
(13 states)**



**European Severe
Thunderstorm**

**European Extratropical
Cyclone**

**Southeast Europe
Flood and Earthquake**

European Earthquake



**China Typhoon
(January 2019)**

Update

New

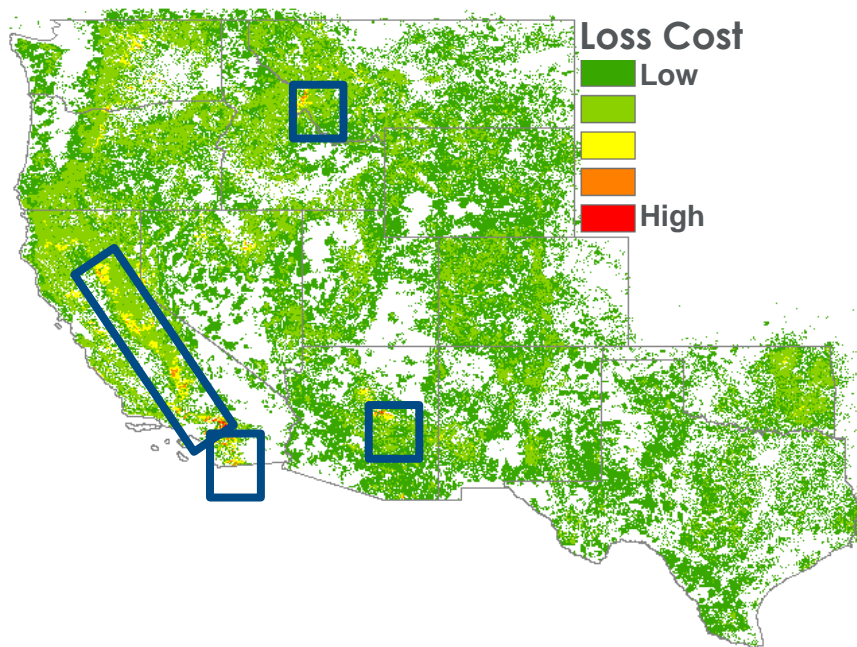
Added

Coming Soon

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Expansion of Wildfire Model for the United States



- 1.) California
- 2.) Texas
- 3.) Colorado
- 4.) Arizona
- 5.) Idaho
- 6.) Washington
- 7.) Oklahoma
- 8.) Oregon
- 9.) Utah
- 10.) Montana
- 11.) New Mexico
- 12.) Nevada
- 13.) Wyoming

Expansion to 13 states in Western U.S.

10k catalog

Available in World AP and US AP Event Sets

17 historical events including multiple 2017 events

Updated European Extratropical Cyclone Model

- **Model Domain**

- Extended model domain to include 4 additional countries (**Slovakia, Slovenia, Hungary and Liechtenstein**), to cover 22 countries

- **Catalogs**

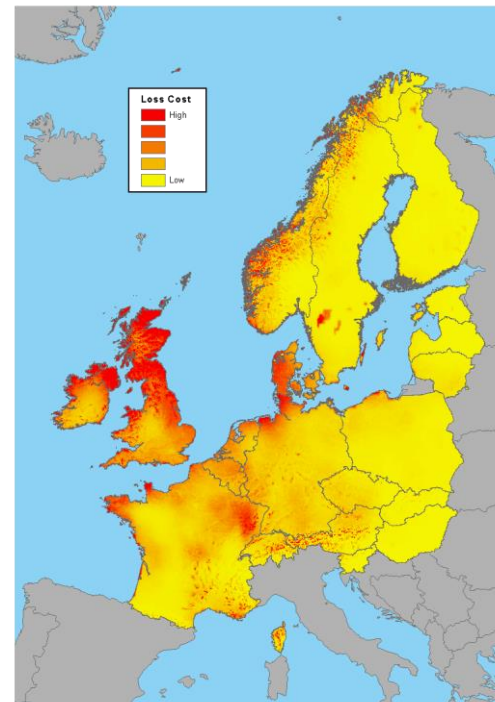
- Support for 33 historical events between 1976 and 2015
 - 5 EDS scenarios

- **Hazard**

- Expanded from winter season to year-round catalog
 - Enhanced spatial-temporal clustering techniques
 - Explicit modelling and tagging of NAO phase

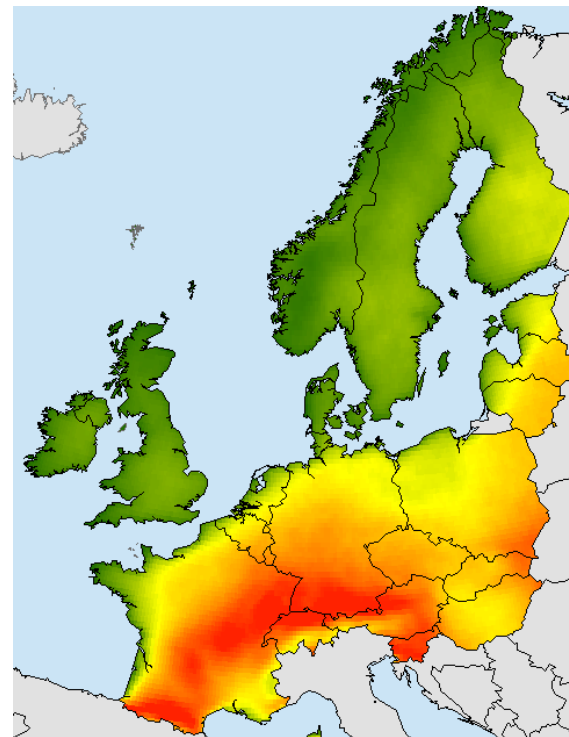
- **Vulnerability**

- Updated unknown damage functions at CRESTA level
 - Updates to contents vulnerability
 - New Construction and Occupancy Codes
 - Industrial Facilities
 - Marine Cargo
 - Wind Turbines



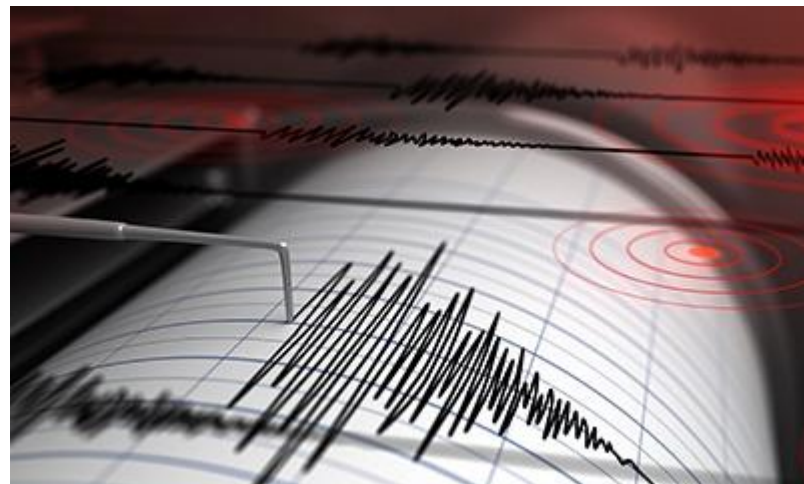
New European Severe Thunderstorm Model

- Model Domain
 - Same model domain as EU ETC
- Catalog
 - 6 historical events
 - 5 EDS events
- Hazard
 - Support for straight line winds and hail
- Occupancy/Construction Codes
 - Same as support for EU ETC



Update to European Earthquake Model

- **No Hazard or Stochastic Catalog Changes**
- **New occupancy classes available:**
 - Marine Cargo
 - Industrial Facilities
 - Builder's Risk
- **New construction classes available:**
 - Confined masonry
 - Steel reinforced concrete



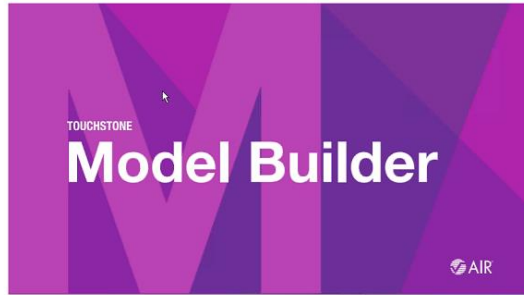
Southeast Europe Earthquake and Inland Flood Models Now Available in Touchstone

- **Model Domain**
 - Albania, Macedonia and Serbia
- **Catalogs**
 - 10k stochastic catalog
 - Available within World AP Catalog or as a stand-alone catalog



Introducing Model Builder

Touchstone Model Builder Helps You Assemble Your Own Models



Simple yet
Powerful

Touchstone Model Builder

TOUCHSTONE Model Builder

Create New Model

Step 1 - Define Metadata

Step 2 - Provide Catalog

Step 3 - Configure Intensities

Step 4 - Specify Damage

Step 5 - Create Model

Modify Existing Model

Settings

Use Model Template: [dropdown]

Step 1 - Define Metadata

Provide Model ID * [input] Model ID must be a numeric value

Select Perils: *

Select up to five perils per model

<input type="checkbox"/> Wind	<input type="checkbox"/> Earthquake Shake	<input type="checkbox"/> Landslide	<input type="checkbox"/> Winter Storm	<input type="checkbox"/> Terrorism
<input type="checkbox"/> Storm Surge	<input type="checkbox"/> Fire Following	<input type="checkbox"/> Tsunami	<input type="checkbox"/> Inland Flood	<input type="checkbox"/> Coastal Flood
<input type="checkbox"/> Precipitation Flood	<input type="checkbox"/> Sprinkler Leakage	<input type="checkbox"/> Severe Thunderstorm	<input type="checkbox"/> Wildfire/Bushfire	

Select Regions: *

Regions: [dropdown: Central America]

Countries: [input: Search] [button: +]

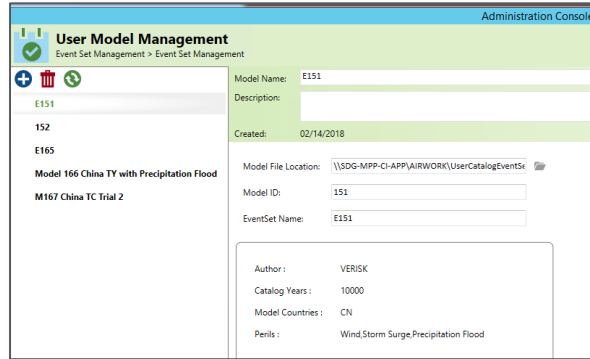
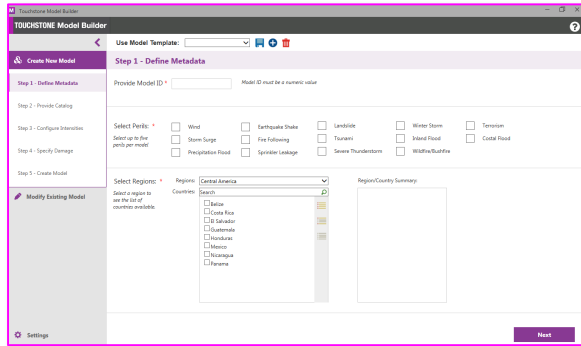
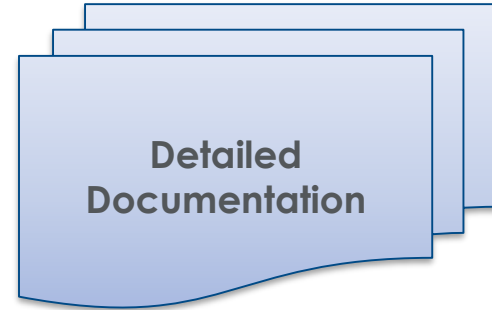
- ☐ Belize
- ☐ Costa Rica
- ☐ El Salvador
- ☐ Guatemala
- ☐ Honduras
- ☐ Mexico
- ☐ Nicaragua
- ☐ Panama

Region/Country Summary:

[input area]

Next

Model Builder Toolkit Includes Everything You Need to Get Started



Geospatial Updates

Recent Enhancements for Geospatial Analytics

Performance

**User
Experience**

**GIS
Capabilities**

Performance Has Been Significantly Improved...



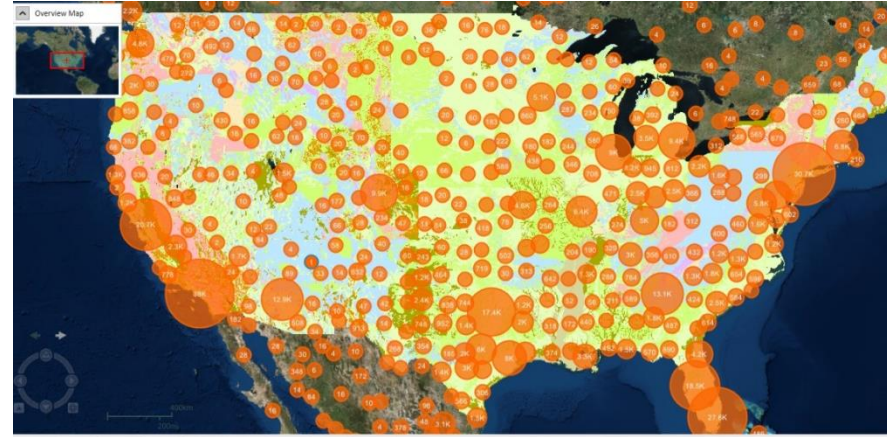
Bring in larger GIS data sets



Import and render GIS data on maps faster



Run geospatial analysis faster



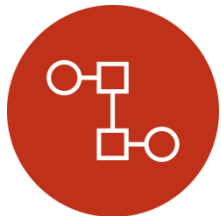
And So Has the User Experience



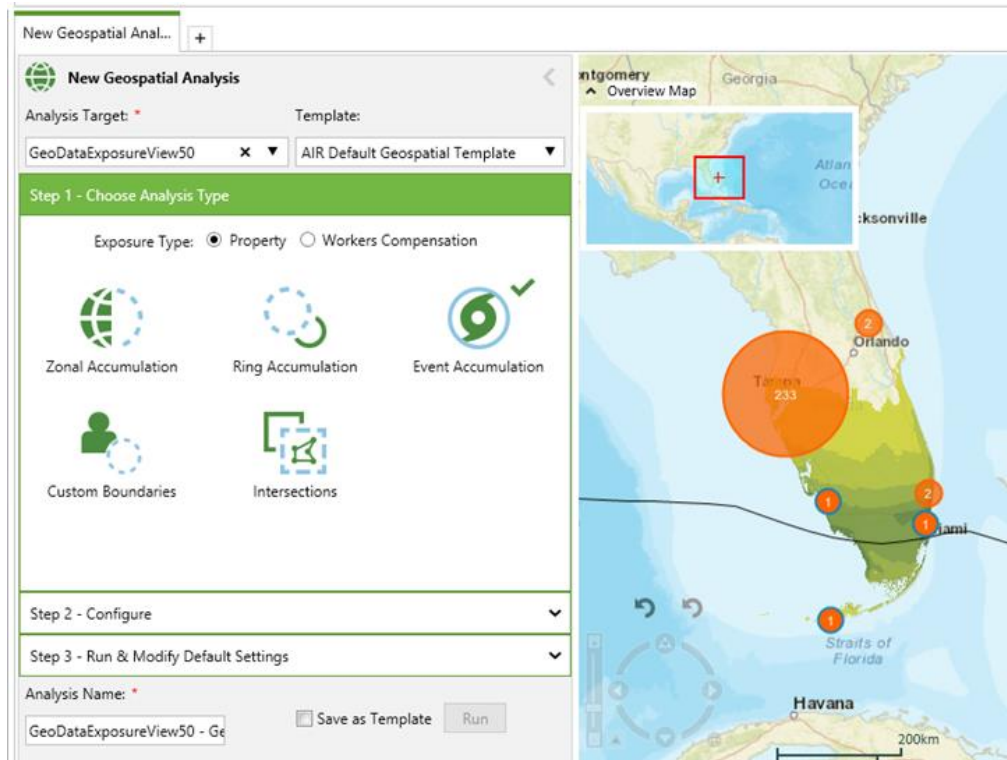
Intuitive and
workflow-oriented
experience



Streamlined analysis
setup



Standardized user
experience



Additional GIS-Related Functionalities Are Included



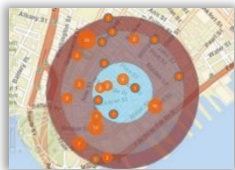
Support for additional GIS file formats and map projections



Web map layers lets you consume GIS data from third parties



New drawing tool to define custom boundaries



Visualisation of ring centroids
Dynamic ring analysis enhancements

New and Updated Geospatial Layers Have Been Added

- **Event Footprints:**

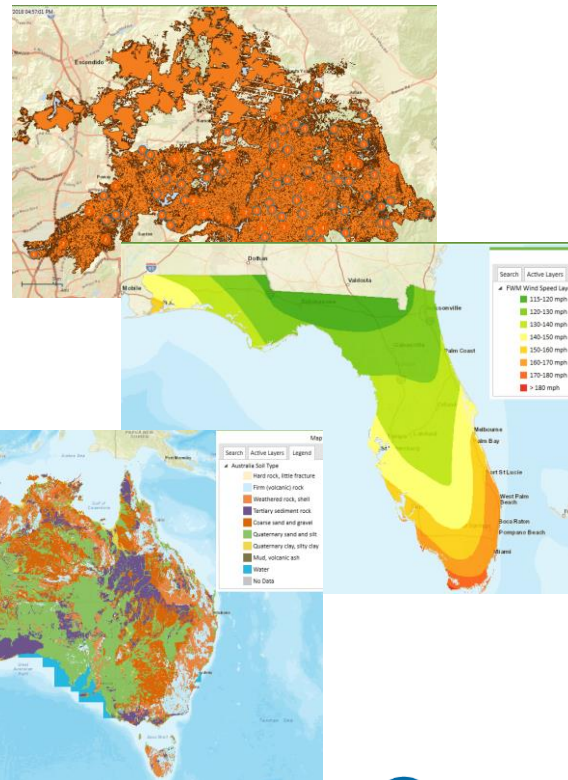
- 17 U.S. Wildfire historical events, including 2017 events
- 23 New European extratropical cyclone historical events
- 10 US Hurricane Extreme Disaster Scenario events
- 27 Australia Earthquake Historical events
- 9 Australian Tropical Cyclone Historical events

- **Florida Wind Mitigation:**

- Windspeed Layer
- Windborne Debris Layer
- Terrain

- **Previously available layers updated:**

- 10 European ETC Historical Events
- US Storm Surge Depth RPs
- FEMA Flood Zones
- Alquist-Priolo Fault Zone



Data Updates

New and Updated Location-Level Event Intensity (LLEI) Data Is Available

New

Southeast Europe Earthquake

Southeast Europe Inland Flood

Updated

European Extra-Tropical Cyclone

European Geocoding Updates

- 30 European countries were updated
- European exposure data will need to be re-geocoded on up or down grading exposure DBs, to capture changes
- CRESTA Codes and CRESTA Names now reflect CRESTA.org updates.
- On import, CRESTA is now backfilled when importing Area
- Disaggregation occurs automatically (no user choice) at CRESTA resolution
- Disaggregation is supported at Postal Code level
- Offshore Wind Turbines are now supported for 13 European countries
- Update to backfilling logic for postal code etc. if a user specified lat / long is provided to use point in polygon method

Summary of Geocoding Updates for Europe









































































Country	Geocoding Update
Belgium	Area codes used to be 2-digits-now 5 digits
Bulgaria	All CRESTA names have been replaced with codes
France	Subarea2 is now supported in France – INSEE codes are now supported as centroids
Germany	Germany subareas are remapped to Postal Codes
Ireland	Area codes have changed from previous versions. For example, area code 27 used to be associated to 'Galway County', and is now associated with 'Waterford County Borough'
Israel	Gaza area and its postal codes are no longer supported
	CRESTA 'Judea and Samaria' has been renamed to 'West Bank' in order to match with CRESTA.org
	Israel's 5-digit postal codes have not been updated, due to a lack of source data
Latvia	Subarea codes have changed, and are now 7 digits long with a leading zero, compared to 6 digits in previous versions
Liechtenstein	Liechtenstein is a new country for Touchstone 2018, containing its own CRESTA and postal codes
	Liechtenstein Postal Codes were formally supported for Switzerland, but these 13 codes will now be supported for Liechtenstein
Luxembourg	The previous areas (Luxembourg-ville and Luxembourg-Campagne) have now been merged into one, meaning that area codes have been reordered. Area names have remained the same
	Luxembourg has new Postal Code data, increasing the number of supported postal codes from 118 to 4,149
Sweden	Sweden has had a significant change and increase in supported CRESTAs
	Subarea codes are now remapped to CRESTA. In previous releases, they were remapped to postal codes
Turkey	Some Subareas have been reassigned from previous releases
UK	1.7 million Postal Code records were updated
	Postal Codes in Northern Ireland, Isle of Man, Jersey and Guernsey were not updated due to a lack of source data
US	Update to the street address geocoding to reflect 2017 Census data and ZIP code update

Expansion of Industrial Facilities 400-Series Codes

Region	Newly Supported Large IFM
Europe	Extra-Tropical Cyclone Severe Thunderstorm Earthquake
U.S.	Wildfire

- 400-Series IFM codes should be used for large scale plant-type facilities
- 300-Series codes should be used for building-type facilities

Continued Expansion of Marine Cargo Codes

Construction	U.S.*	Southeast Asia	Japan**	China	South America	Australia	Europe
Conveyor Systems	 	 					
Canals & Earth Retaining Structures		 					
Waterfront Structures	 	 					
Offshore Structures		 					
Transit Warehouse		 	  				 
Marine Hull		 	  				 
Pleasure Boats & Yachts	 					 	
Carpool		 	  				 
General and Containerized Cargo							
Heavy Cargo							
Refrigerated Cargo							
Dry Bulk Cargo		 	  	 *China early 2019			 
Liquid Bulk Cargo							
New Unknown Marine Cargo Code							
Builder's Risk	 	 	  	 			 
Offshore Platforms and Mobile							

 Earthquake

 Wind

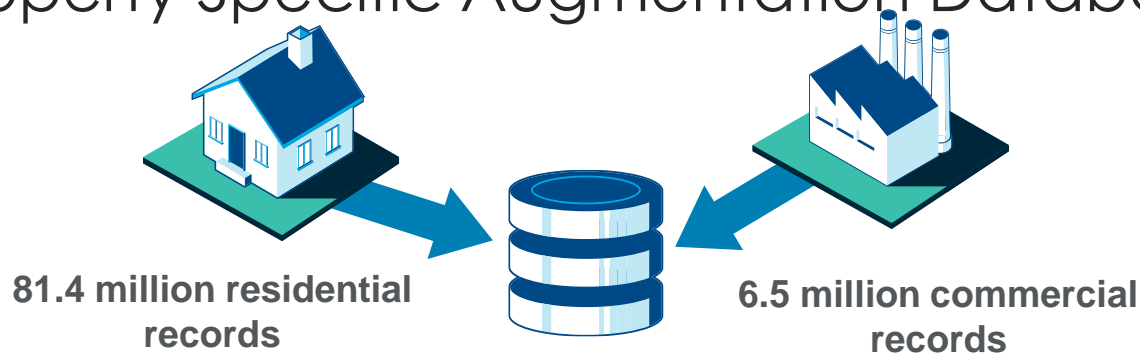
 Flood


Potential Sources of Loss Change

- Hawaii Earthquake – minor change to how unknown construction was mapped
- Hawaii Tropical Cyclone – minor changes to assigned height bands
- Japan Earthquake – update to vulnerability code 479 (**Electric Substation**)
- U.S. Flood – minor updates to BFE (**Base Flood Elevation**)
- U.S. Flood – updated automobile damage functions
- Foundation type – loss is now produced if supplied for unsupported models
- Canada Severe Thunderstorm – update to wind speed zone assignment to be in line with U.S.
- The AIR default currency exchange rate table has been updated
- Default Oil and Gas price update
- Offshore Industry Exposure Database updated
- Updated default severity rates and payroll update for Workers' Comp analyses

Data Quality Updates

Property Specific Augmentation Database updates



-  | 360Value property-specific construction cost estimates updated to reflect construction cost changes
- Introduction of parcel-level geocodes

EDM Conversion Tool Updates

- Stop conversion before CSV file export- allowing edits to be made while the files are still in SQL
- The EDC now retains the numeric geocode match level from the EDM together with a description of the geocode match level for the new Exposure Summary Widget
- Support for different MDF and LDF paths
- Ability to Custom name the EDC therefore the ability to have more than one EDM Data Converter on the same Server
- Update to Database Owner and Untrustworthy Flag- to avoid a common install error

New and Updated Touchstone APIs

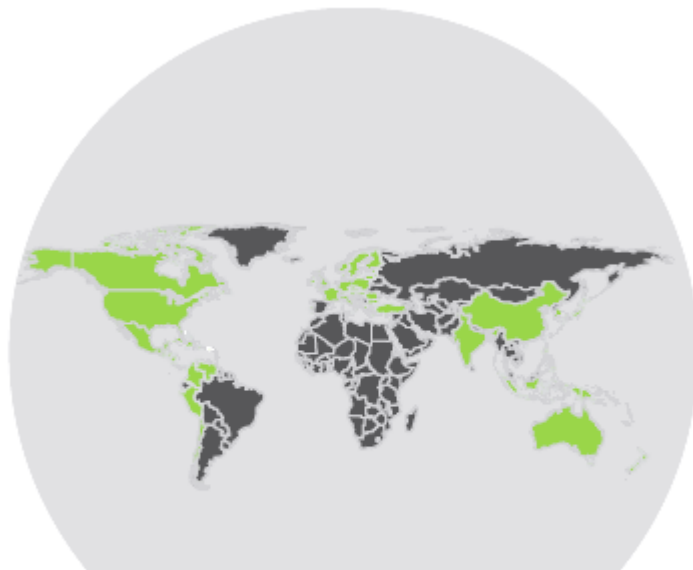
- Expanded the Hazard Analysis API to enable you to include event intensity data as part of your hazard analysis results
- Added support for a Default Project Currency
- Create, Get, Update, and Delete Zone Sets
- Model Builder API
- Replaced the RegisterDataSource() method with the asynchronous SubmitRegisterDataSource() method to ensure that any databases that you attempt to register with the application include the correct indices and are version compatible

Industry Exposure Database Updates

Full IED updates to:

- United States
- Europe

IED documentation available
on the AIR website



More than 90 countries, each featuring a high
resolution industry exposure database

Full Detailed Model and Software Documentation is
Available on the Website

Release Notes

Touchstone 6.0



