



20
19

AIR European
Seminars

London

What's New in Touchstone and Touchstone Re

Katharine Stevens
Colette Karakashian

Agenda

Touchstone®

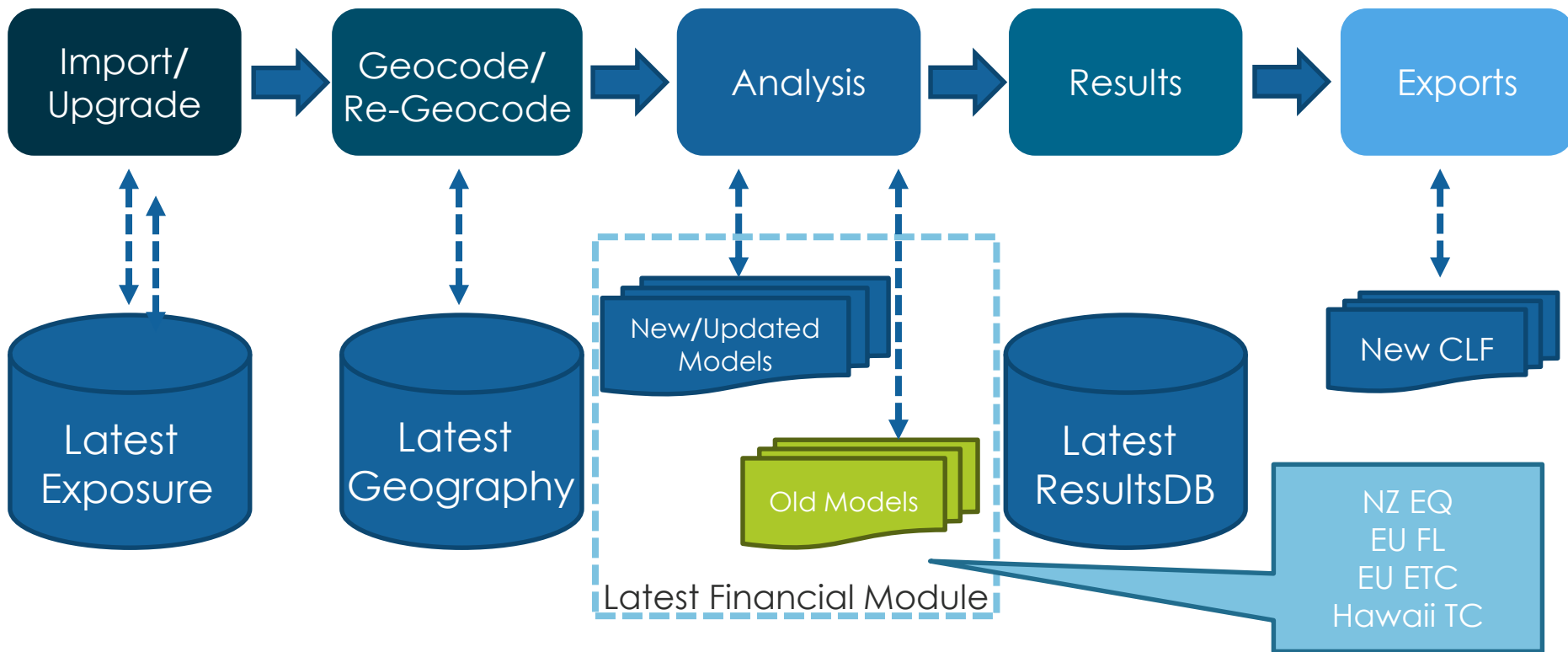
Sequel
Impact
Integration

Touchstone
Re™

Automating
Workflows
with APIs

Touchstone

Run Prior Model Versions in the Latest Software



Prior Version Model Event Sets Available

Analysis Settings

Model: AIR Default

☒ Catastrophe Peril Analysis

Region: Europe

Event Set: 10K European AP (2019) - Standard

Perils:

- ☒ Earthquake
- ☒ Tropical Cyclone
- ☒ Severe Storm
- ☒ Other Perils:
- ☒ Earthquake Shake
- ☒ Wind
- ☒ Severe Thunderstorm
- ☒ Inland Flood
- ☐ Fire Following
- ☒ Storm Surge
- ☐ Wildfire/Bushfire
- ☐ Sprinkler Leakage
- ☐ Precipitation Flood
- ☐ Winter Storm
- ☐ Terrorism
- ☐ Landslide
- ☐ Tsunami
- ☐ Coastal Flood
- ☐ Liquefaction

Event Set Filter: Filters not applied

Demand Surge: ☐ With ☒ Without

Financial Settings:

Correlation: Off

Disaggregation: On

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: None

☐ Move Marine Craft Geocodes to Coast



Analysis Settings

Model: AIR Default

☒ Catastrophe Peril Analysis

Region: Europe

Event Set: 10K European AP (2019) - Standard

Perils:

- ☒ Severe Storm
- ☒ Severe Thunderstorm
- ☒ Other Perils:
- ☒ Inland Flood
- ☐ Wildfire/Bushfire
- ☐ Winter Storm
- ☐ Terrorism
- ☐ Coastal Flood

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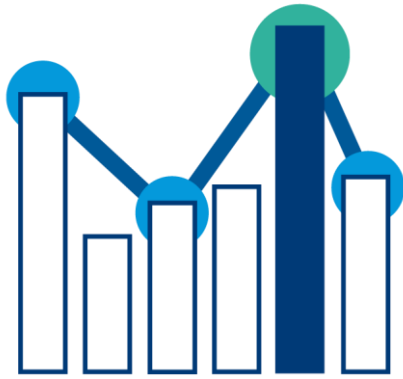
Flexibility:

Loss Modification Factor: None

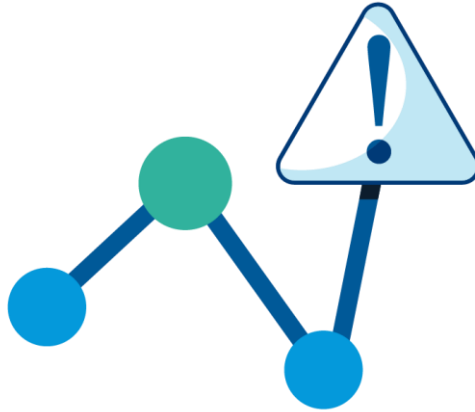
Baseline Analysis: None

☐ Move Marine Craft Geocodes to Coast

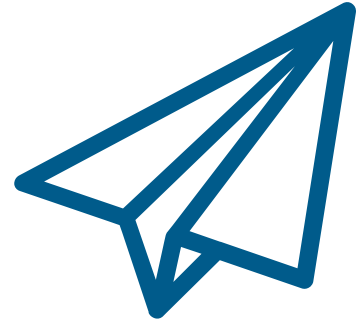
Software Performance Enhancements Yield Faster Runtimes Across Various Workflows



Detailed Loss Analysis



Hazard Analysis



CLF Exports

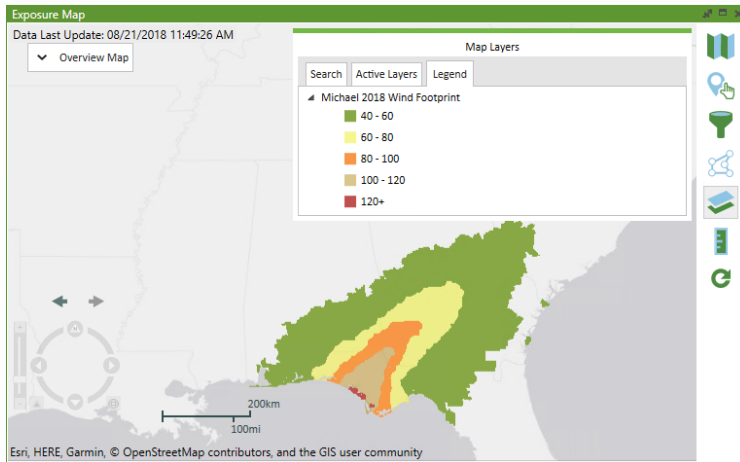
SQL 2016 Means Reduced Results Database Sizes



For the technologically inclined, AIR is leveraging Columnstore, which allows for high data compression

Location-Level Event Intensities (LLEIs) Are Now Available for ALERT™ Events Sets

Hazard Results Intensity									
Location ID	Latitude	Longitude	Tropical Cyclone						
			Maximum Wind Speed	Maximum Wind Speed Units	Duration	Duration Units	Surge Depth	Surge Depth Units	
397424	29.615601	-82.339302	71.73	MPH	13.00	HRS	0.00	FT	
398017	29.621201	-82.339302	71.29	MPH	13.00	HRS	0.00	FT	
398018	29.621201	-82.335602	71.41	MPH	13.00	HRS	0.00	FT	
398019	29.621201	-82.331902	71.58	MPH	13.00	HRS	0.00	FT	
398020	29.621201	-82.328102	71.74	MPH	13.00	HRS	0.00	FT	
398606	29.626801	-82.335602	70.97	MPH	13.00	HRS	0.00	FT	
398607	29.626801	-82.331902	71.21	MPH	13.00	HRS	0.00	FT	
398608	29.626801	-82.328102	71.39	MPH	13.00	HRS	0.00	FT	
398609	29.626801	-82.324402	71.62	MPH	13.00	HRS	0.00	FT	



Provides Transparency

Facilitates Understanding

Supports Validation

Project Import and Export Streamlines Data Transfer

- Entire projects can be exported and imported, including:
 - Exposure views with filters
 - Reinsurance information (.rpx)
 - Currency rates
 - Detailed loss templates
 - UN/2 and CLF files
- Allows users to retain the structures of their exposure data (views/sets)
- User can select which specific artifacts to export
- Provides single package of files
- Import allows user to seamlessly re-create exposure structures (project, exposure views, exposure sets)
- Touchstone 2018 projects can be imported and upgraded in Touchstone 2019

Manage Projects

Choose Project

Export will include: ☒ Exposure Data ☐ Results (CLF) ☐ Unice/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 ▼

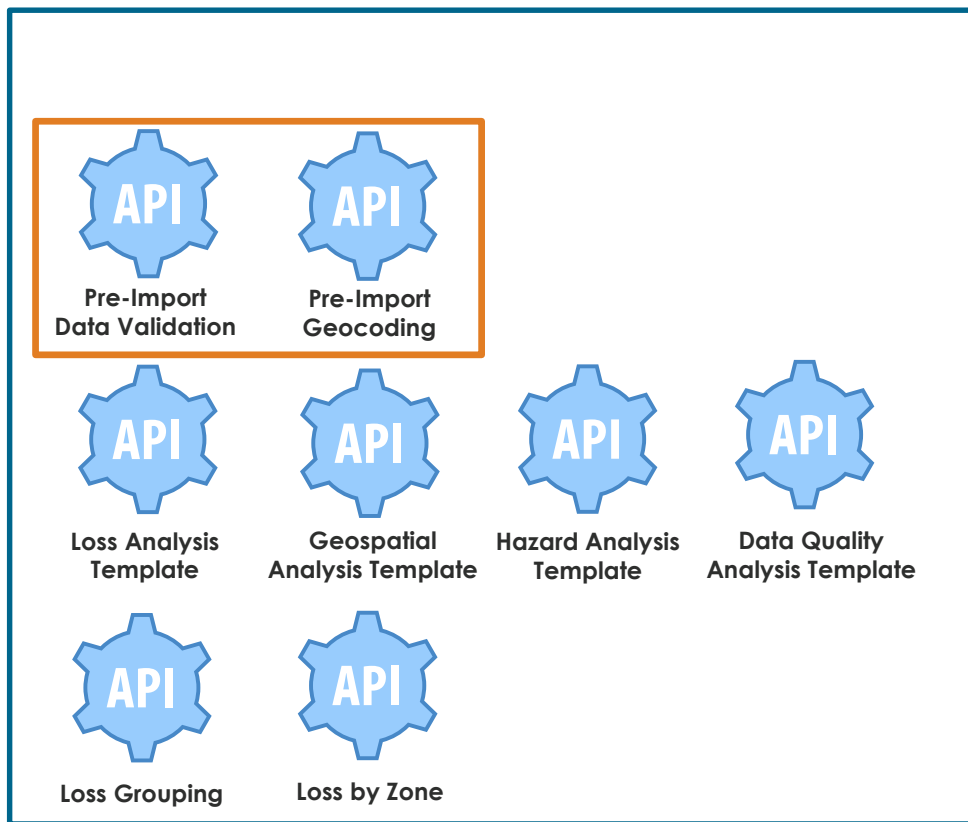
UNICEDE/2 & LOB Mapping ▼

⚠ Export Options ▼

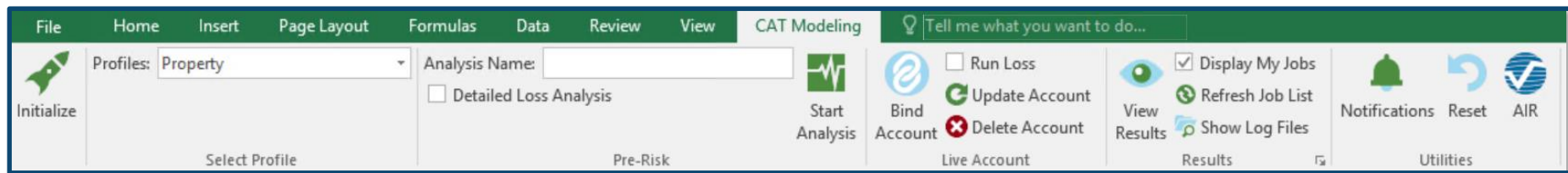
☒ Close on Export

Cancel Export

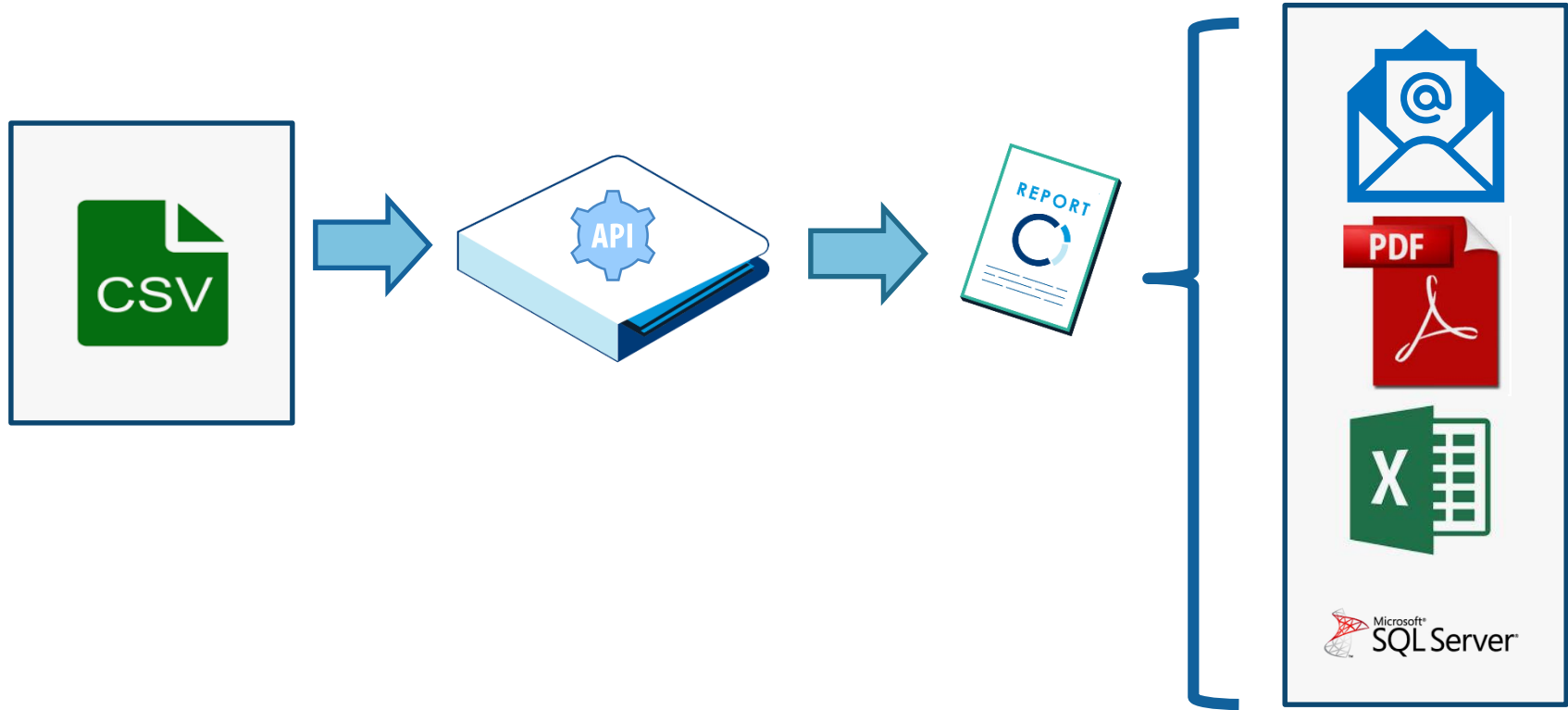
Brand New Touchstone APIs



Integrate into Your Microsoft Excel Data Scrubbing

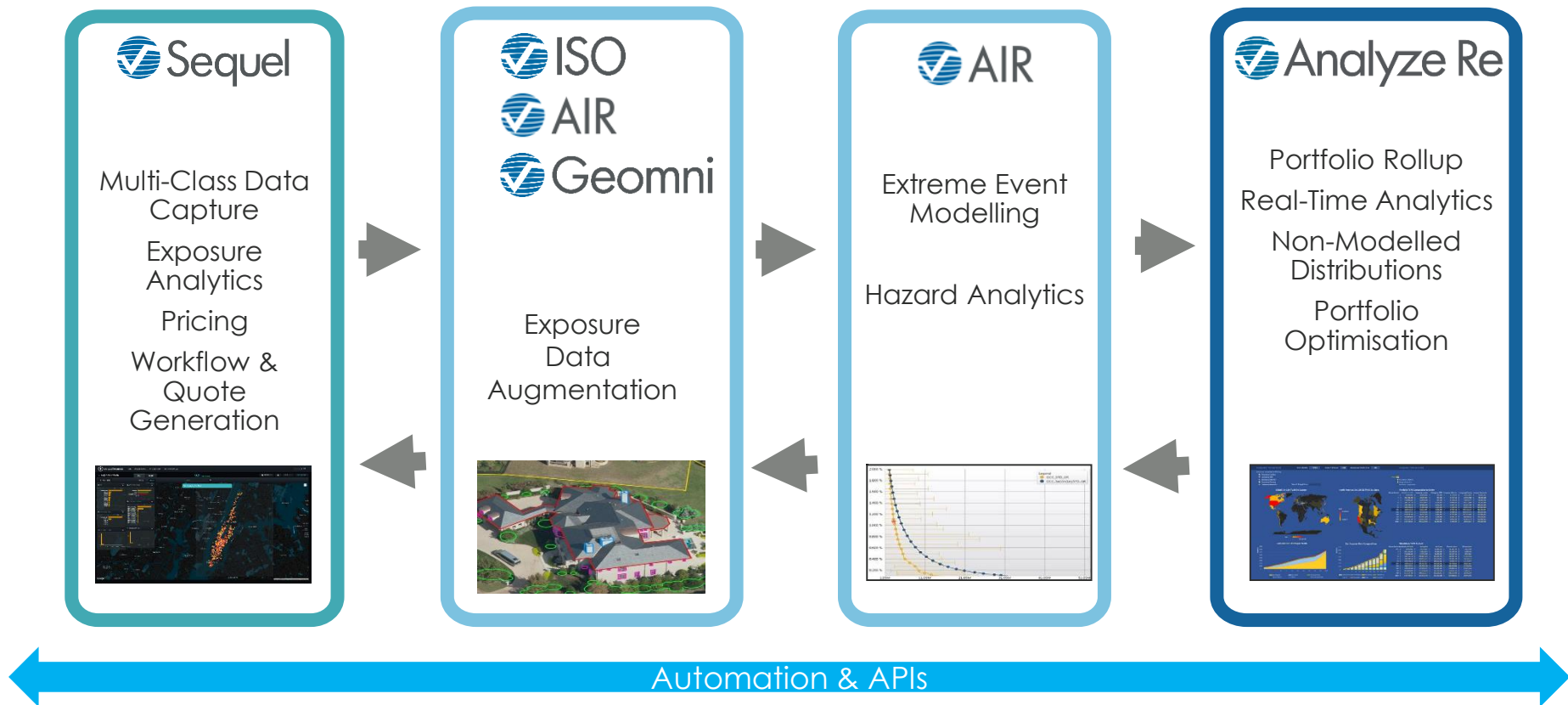


Create an Automation Folder for CSV Files

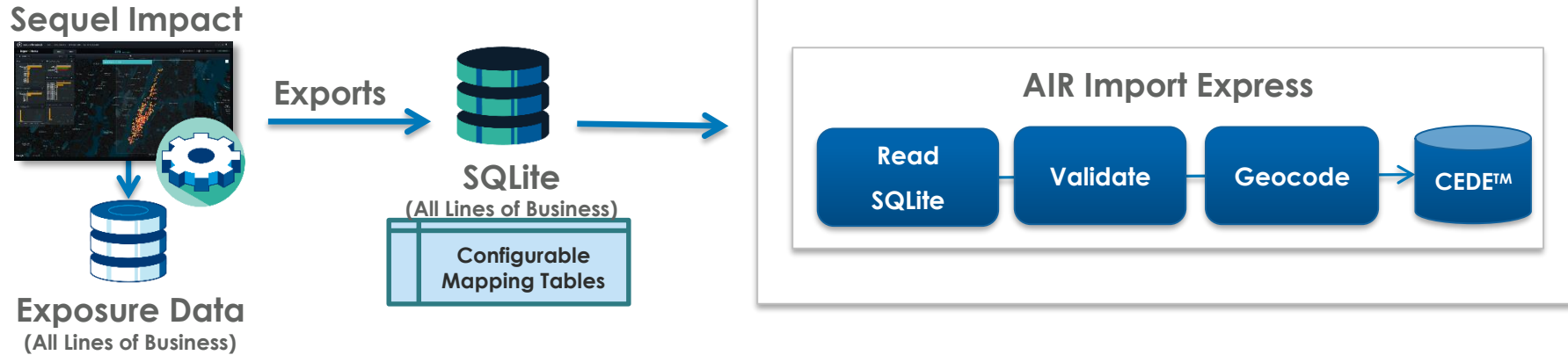


Sequel Impact Integration

Delivering Analytics Throughout the (Re)Insurance Value Chain

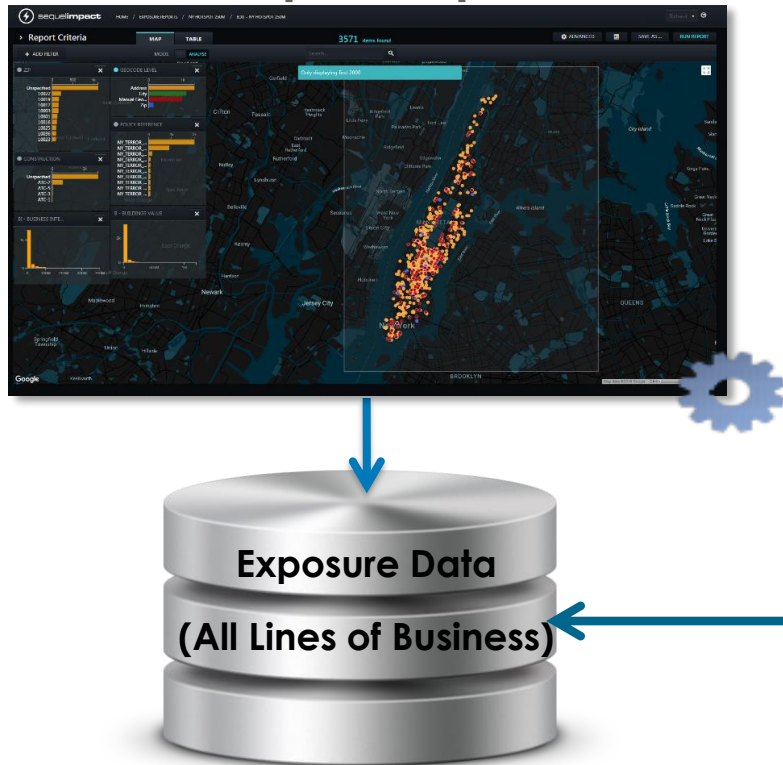


Touchstone Can Now Ingest Exposure Data from Sequel Impact at the Click of a Button



Future Vision: Additional Data Transfer Capabilities Between Sequel Impact and AIR Products

Sequel Impact



Touchstone and
Touchstone Re

Touchstone
Focus™

ARC Cyber
Application

Arium
Application

CA
Custom
Applications

Touchstone Re

Touchstone Re Goes Live!

The screenshot displays the Touchstone Re software interface. The main header includes navigation links: Home, Example Company, Import, Export, Tools, Admin, and Help. Below the header, there's a 'Reinsurance' section with tabs for 'Companies' and 'Portfolios'. The 'My Companies' section shows a table with columns: Company Name, Company ID, Exposure Sets, Latest Exposure Year, Regions, Company Loss Sets, Latest Result, Latest Activity, and Program. The table lists 'Example Company' with 2 exposure sets, latest exposure year 2017, and a latest result of 'Pina Colada Umbrella - Loss Analysis' dated 4/3/2018.

On the right, the 'Latest News' section features articles about 'Tropical Cyclone Marcus' and 'Tropical Cyclone Kelvin'. The sidebar on the left contains a 'Company Data' section with links to 'All Exposure Sets', 'All Company Loss Sets', 'Programs', and 'Results'. The main content area shows a detailed view of 'Example Company Exposure 2', including a table of 'Exposure Filters' and a map of the United States.

State	Total	Residential	Mobile Homes	Commercial	Auto
UNITED STATES	2,675,854	1,255,672	1,420,182		
UNITED STATES (Sum)	2,675,854	1,255,672	1,420,182		
Alabama	58,976	43,964	15,012		
Alaska	40,840	21,050	19,790		
Arizona	60,416	51,286	29,150		
Arkansas	62,854	47,005	20,849		
California	49,108	25,735	23,372		
Colorado	84,619	42,022	42,597		
Connecticut	58,841	15,968	43,873		
Delaware	62,263	44,328	16,935		
District of Columbia	76,402	42,316	34,087		
Florida	70,008	38,891	41,117		

Updated and New Models Coming to Touchstone Re

CATRADER® Parity Models

- US and Canada MPCl and Crop Hail
- China MPCl
- Terrorism
- Pandemic

Updated Models

- US Hurricane (including Offshore)
- European ETC (including GB Storm Surge)
- Central Europe Inland Flood (including Poland)
- New Zealand Earthquake

New Models

- India MPCl*

* Only available in Touchstone Re

CATRADER to Touchstone Re Migration Tool

The screenshot shows the 'CATRADER To TouchstoneRe' application window. It features several input fields for configuration: TouchstoneRe SQL Server (SDGTS\AIO\B4\SQL2016), CATRADER Database (AIRCT2Exp), TouchstoneRe Database (AIRExposureRe), SQL Server Login (airadmin), SQL Server Password (masked), CATRADER CLF Source Directory (\\SDGEmerald\EGDB\AirConfigData), and TouchstoneRe CLF Directory (\\SDGEmerald\EGDB\DataShare). Below these are radio buttons for 'All Companies' (selected) and 'Company Filter'. The 'Company Filter' section includes a date picker set to '1/ 1/2010' and a 'Treaty Status' dropdown with 'Bound' selected. A list of companies is displayed, with 'AMER PROFESSIONALS' highlighted. At the bottom, a status bar indicates '4292 of 4295 companies selected.' and a 'View Log' button is present.

CATRADER To TouchstoneRe

TouchstoneRe SQL Server: SDGTS\AIO\B4\SQL2016

CATRADER Database: AIRCT2Exp

TouchstoneRe Database: AIRExposureRe

SQL Server Login: airadmin

SQL Server Password: *****

CATRADER CLF Source Directory: \\SDGEmerald\EGDB\AirConfigData

TouchstoneRe CLF Directory: \\SDGEmerald\EGDB\DataShare

☒ All Companies

☐ Company Filter

With Programs Expiring On or After: 1/ 1/2010

Treaty Status: ☒ Bound, ☐ Authorized, ☐ Submitted

Get Company List

Calculate Space

Migrate To Touchstone Re

AMER PHYS ASSUR CORP

AMER PREMIER INS CO

AMER PROFESSIONALS

AMER PROTECTION INS

AMER RE CORP GROUP

AMER RE-INS CO

AMER RELIABLE INS CO

AMER RESOURCES INS

AMER ROAD INS CO

AMER SAFETY CAS INS

AMER SAFETY INDEM CO

AMER SAFETY INS CO

AMER SAFETY INS GRP

AMER SECURITY INS CO

AMER SELECT INS CO

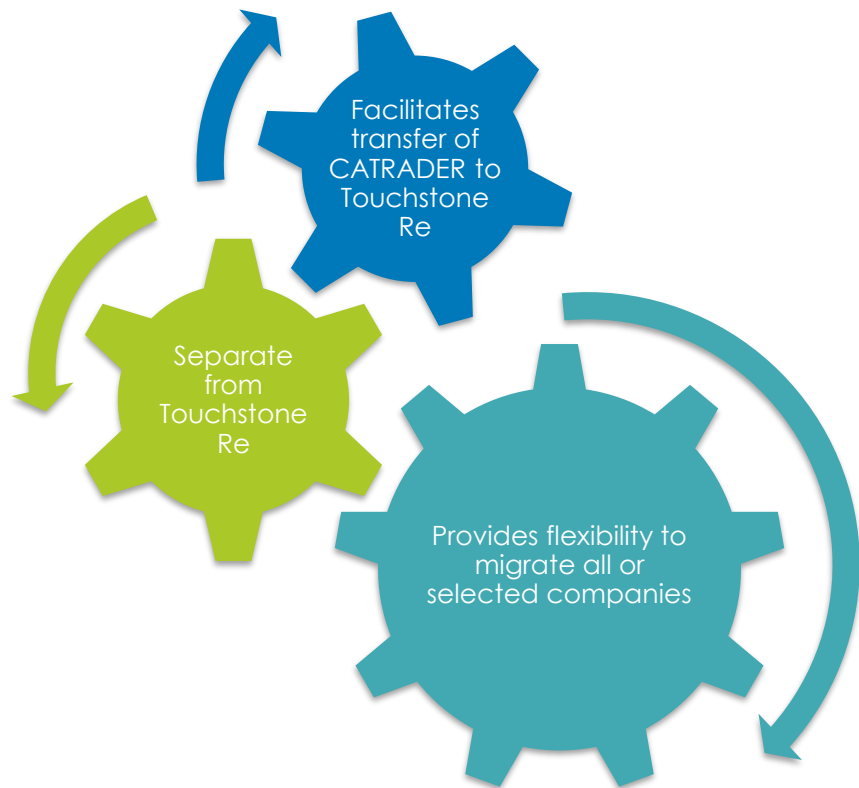
AMER SERVICE INS CO

AMFR SKYI INF INS CO

Select All

View Log

4292 of 4295 companies selected.



Migrating Data from CATRADER to Touchstone Re

Companies

Programs (including inuring/assessment/source relationships)

CLFs/DLFs

User-Defined Categories or UDCs (Company and Cat Programmes)Portfolios

Portfolios

Program Event Filters for Crop Models

Advanced Loss Modifications and Custom Aggregate Models and LOBs

CLF Loss Market Shares

Touchstone Re Import Functionality

Prior Version Import Functionality

UNICEDE/2 Exposure

CLFs/DLFs

CATRADER Companies

Touchstone to Touchstone Re Data Transfer

Summer 2019 Enhanced Functionality

CEDE to UNICEDE/2 Import

Touchstone Re Companies

Loss Market Shares for CLFs

Calculate CLF-Based Loss Market Shares

Analyze CLFs against custom ALERT Event Sets

AIR ImportExpress

Import Type: Company Loss File (CLF)
Import a set of Company Loss Files.

Import Data Details

Input File: * \\csdt7\Import\Envision_2019\CLFs\ToCombine\CA_v7_EQ_FF_G
CLF Set Name: * CA_v7_EQ_FF_10K
Company Name: * On The Fly * A new company will be created.
Type: 10K with Historic and World Scenarios
Expand/Generate: ☒ Generate Loss Market Shares
Currency Rate: AIR Default
☐ Expand Multi-Year Analysis

Model Name	#	Version	Peril	Demand Surge	Modified	Currency	Year Count	Event Count	Loss File Name
AIR Earthquake Model for the U.S. and Canada	11	10.4.0	EQ	Yes	No	LCL	3,447	4,192	CA_v7_EQ_FF_R

☒ Close after Import

Import Close



Typhoon Jebi 11/8/2018 6:00:00 PM				
Type of posting	Posting date:time EST	Summary	Scenarios	Downloads
Post Landfall 2	11/8/2018 6:00:00 PM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Post Landfall 1	9/9/2018 6:00:00 PM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Landfall	9/4/2018 7:00:00 PM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

Summary	Downloads
Posting Date: 11/8/2018 6:00:00 PM	
Simulated Event Set	
Note: The "All simulated scenarios" set consists of all the events simulated by AIR using the event's actual parameters. The "Select simulated scenarios" set consists of a subset of the full distribution that is most representative of the range of potential industry losses.	

Product	Version	Description	Download
CATRADER	Version 19 and 20 and TS Re	Selected set of simulated scenarios	
TOUCHSTONE	Version 5.1 and 6	Selected set of simulated scenarios	

Program Relationships Tab Simplifies Structuring Complex Structures

TOUCHSTONEre Import Export Tools Admin Help

Home Example Company

Program: Corporate Cat Program to be priced

Program Details

Program Type: Inception Date: 01/01/2019 Expiration Date: 12/31/2019 Modified: 3/26/2019 by AIR-WORLDWIDE\61778

Catastrophe Excess of Loss: AIR Default Save Terms in: US Dollar Display Terms in: US Dollar Units: Ones

Currency Rate Table: AIR Default

Layers Program Option **Relationships** EP Adjustments

Available Program Templates

Company	Assessment
Europe Cat Cov...	1/1/2019-12/3...

New Programs

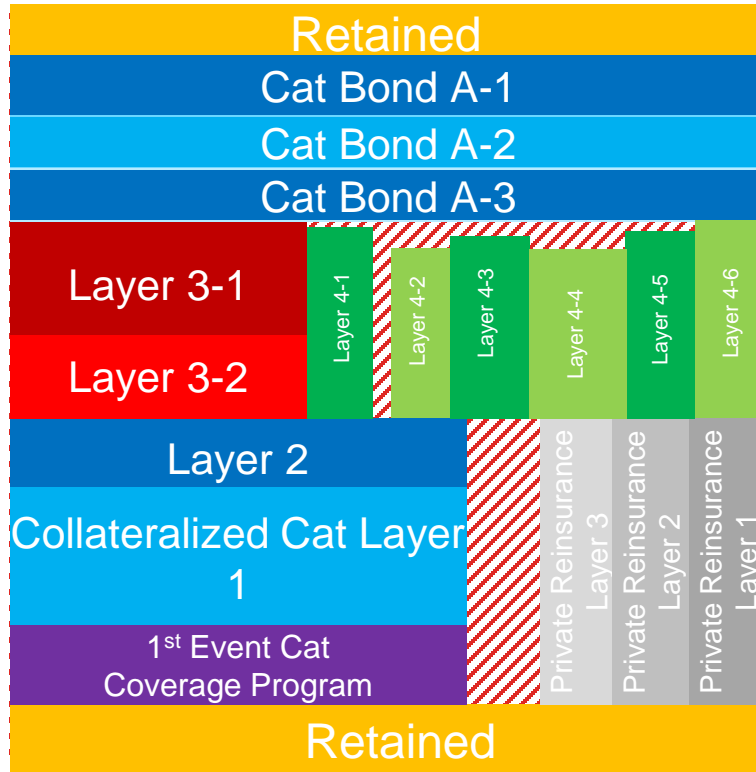
- Cat XOL
- Quota Share
- Agg XOL
- Cat Bond
- ILW
- Ground Up

Relationship Properties Manager

Select any program on the stage to view or modify its relationship properties

Key: — SOURCING AND ASSESSMENT - - - INURING

Touchstone Re Supports More Complex Reinsurance Structures



- More flexible inuring and source programmes relationships
- Support for multiple exposure sets
- Ability to specify layer specific perils

Enhanced CLF Management Functionality

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

Analyses to Export:

ID	Name	Project Name	Database Name	Result Type	Created
<input checked="" type="radio"/>	7156 TEST - Loss Analysis wEventID LMF04	MR_test	MR_TEST_RES	CLF	3/26/2019 5:43:29 PM
<input type="radio"/>	7153 TEST - Loss Analysis wEventID LMF05_LH	MR_test	MR_TEST_RES	CLF	3/26/2019 5:42:51 PM
<input type="radio"/>	7152 TEST - Loss Analysis wEventID LMF05	MR_test	MR_TEST_RES	CLF	3/26/2019 5:42:47 PM

Comments:

Number of CLF Cores: Min: Max:

☒ Save to CLF

Destination Path:

Base File Name:

☒ Associate Loss to Company

Loss Set Name:

Business Unit:

SQL Instance:

Company:

☒ Close on Export

Push results
straight to
Touchstone Re

Company Loss Set Manager

Sort: Date Installed - newest on top

- Katie_CombinedCLF
- Exercise4_Combined
- TX_FL_NoDS_10K_GR
- TX_FL_TC_10K
- UK_US_Tsv6_EQ_TC_10K_GR

Name: UK_US_Tsv6_EQ_TC_10K_GR

Description: Generated by Touchstone ver. 6.0.0.4446 (Friday, July 13, 2018 10:37:02 AM)

AOP Result Set Name UK & US - Loss Analysis for CLF

Description
Analysis Target Info
Exposure View: UK & US

Imported: 7/25/2018
Generated: 7/13/2018 by AIR Worldwide

Type: 10K with Historic and World Scenarios Loss Market Shares: Not Generated Generate

Modified: No Expanded for Multi-Year Analysis: Not Expanded Expand

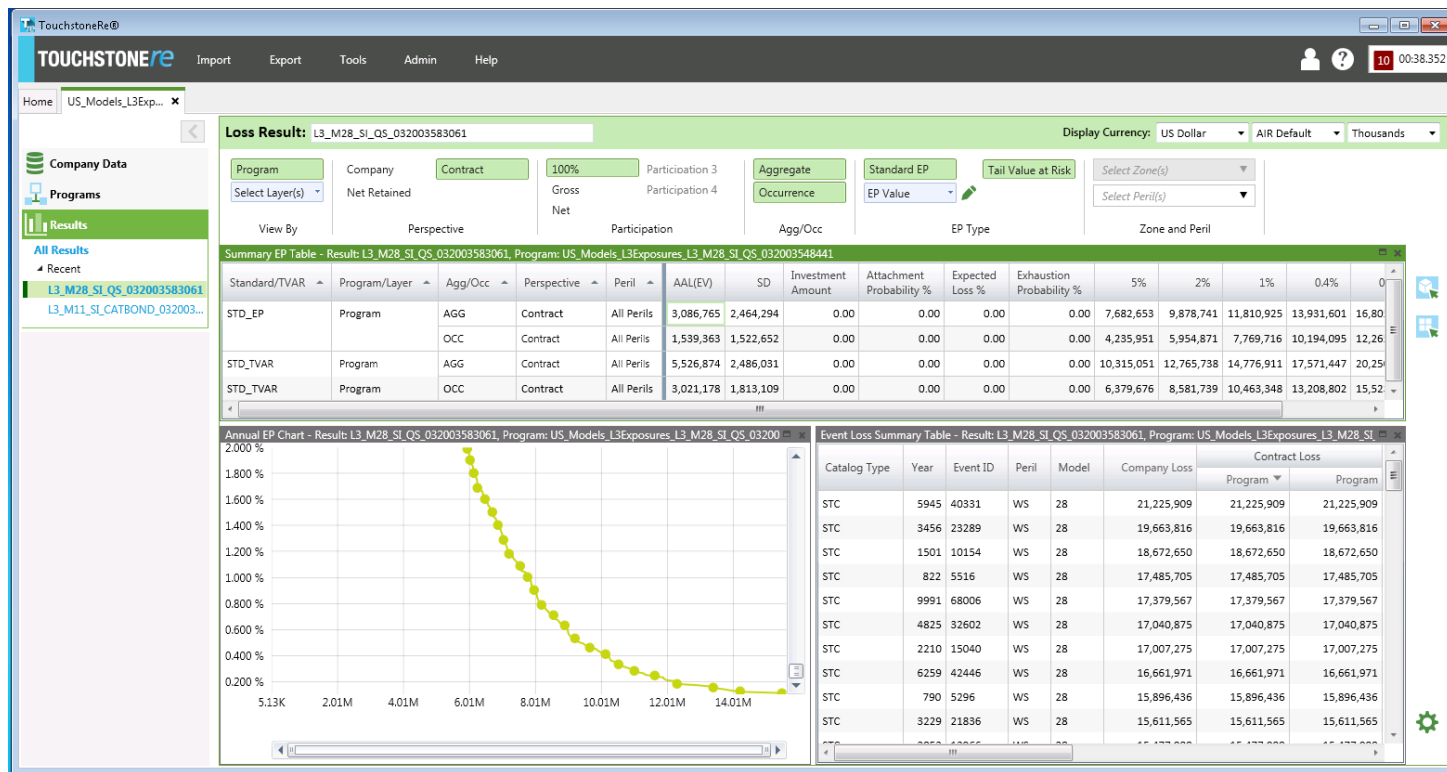
Model Info
Loss Info

Display Currency: US Dollar AIR Default Ones Generate Summary

Assign currency and exchange rate settings, then click Generate Summary.

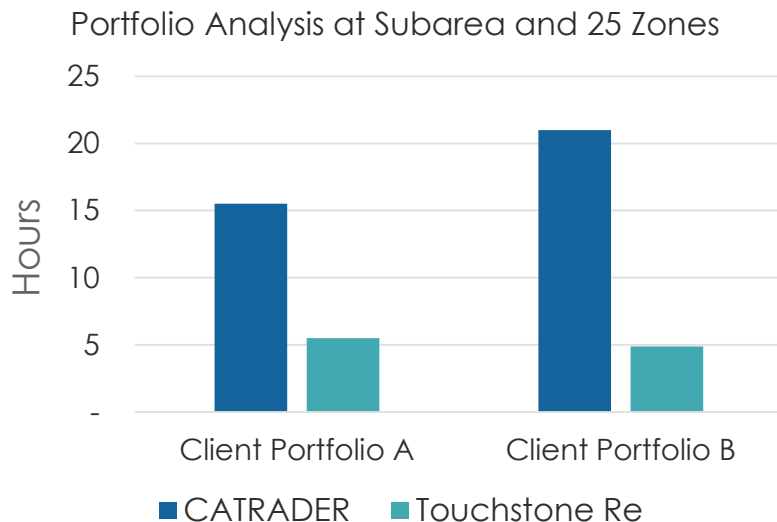
Model Name	#	AAL/EV	SD	20 yr	50 yr	100 yr	250 yr	500 yr	1000 yr
All Models		5,281,439	9,703,126	21,851,536	35,591,669	47,873,086	64,105,541	81,920,518	99,168,282
AIR Extra Tropical Cyclone Model for Europe	41	167,854	481,433	735,765	1,421,151	2,218,079	3,353,829	4,743,681	6,093,886
AIR Earthquake Model for Alaska	14	5,214	69,431	0	54,454	144,127	269,471	419,832	714,710
AIR Earthquake Model for Hawaii	13	17,558	213,354	0	62,304	371,029	1,254,552	2,314,266	3,547,538
AIR Earthquake Model for the U.S. and Canada	11	1,735,605	5,657,079	8,996,163	18,406,156	28,168,768	41,667,957	52,695,220	62,400,572
AIR Hurricane Model for Hawaii	23	91,717	1,424,325	0	44,550	522,434	7,028,591	16,520,017	27,209,583
AIR North Atlantic Basinwide Hurricane Model	27	3,262,538	7,820,776	14,591,532	26,307,310	36,977,398	58,219,546	71,087,560	95,674,388
AIR Earthquake Model for the Pan-European Region	31	952	33,505	0	0	0	0	45,766	209,583

Expanded Loss Dashboard Shows More Views of Risk

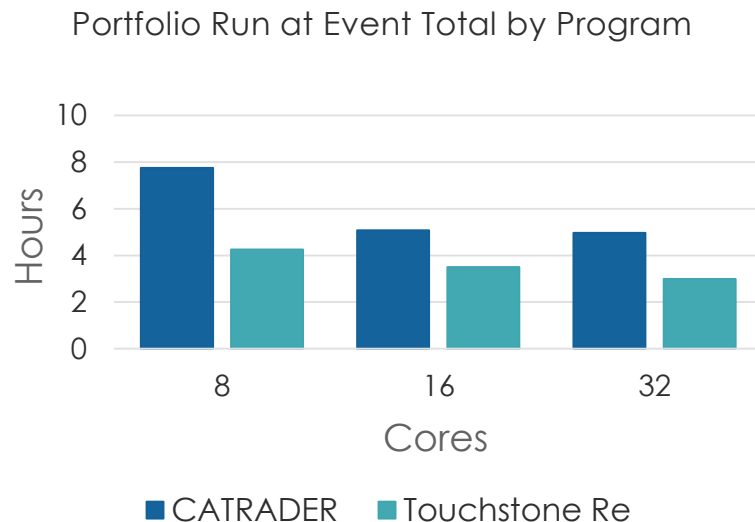


Touchstone Re Significantly Improves the Performance of Client Portfolio Run Times

Up to 4x as Fast as CATRADER when Run at Subarea by Programme with Zones



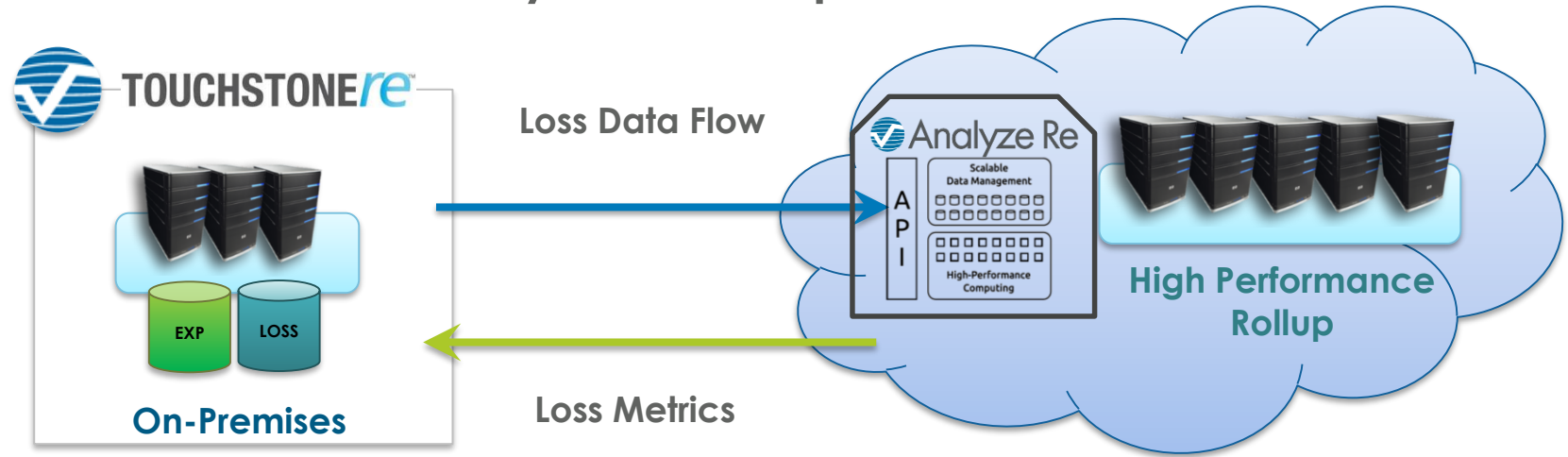
More than 1.5x as Fast as CATRADER when Run at Event Total by Programme



Note: Single program run times have generally improved but show variability based on exposures, analysis options


Portfolio Rollup Powered by Analyze Re Will Significantly Improve the Speed of Analyses

Analyze Re Rollup




Implementing Analyze Re Rollup Will Be as Simple as Clicking a Checkbox


New Portfolio Loss Analysis


Portfolio: MultiProgramType_032902327578  ☒ Analyze Re Rollup


Analysis Settings

Loss Diagnostics
Portfolio Filter
Analysis Settings
Output Options
Analysis Management

Event Set: World All Perils (10K Time Dep Hybrid) 


Demand Surge: ☐ With ☐ Without ☒ Program specific 

 **Perils**

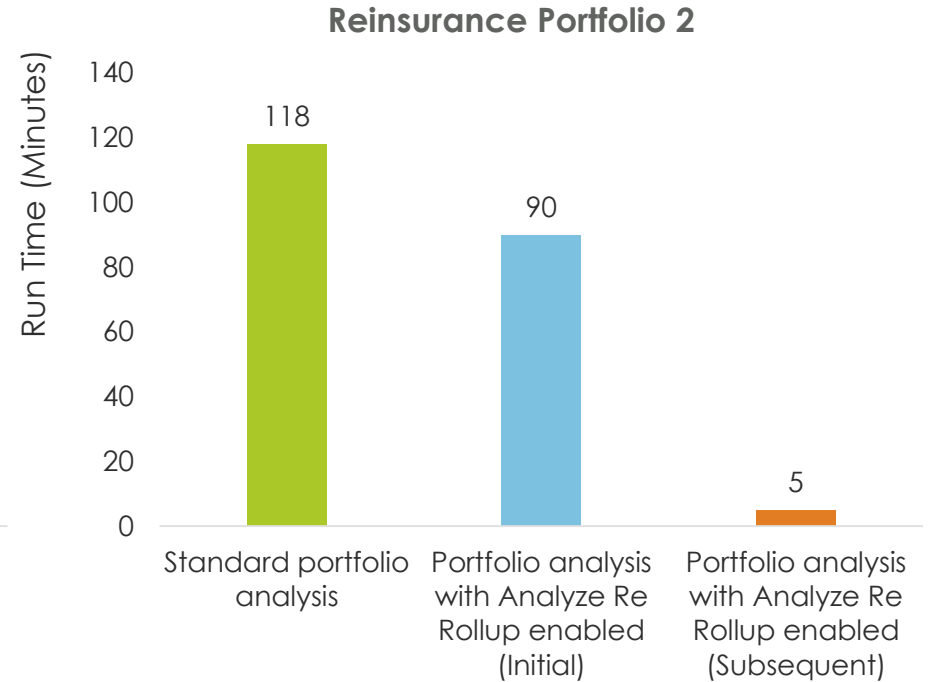
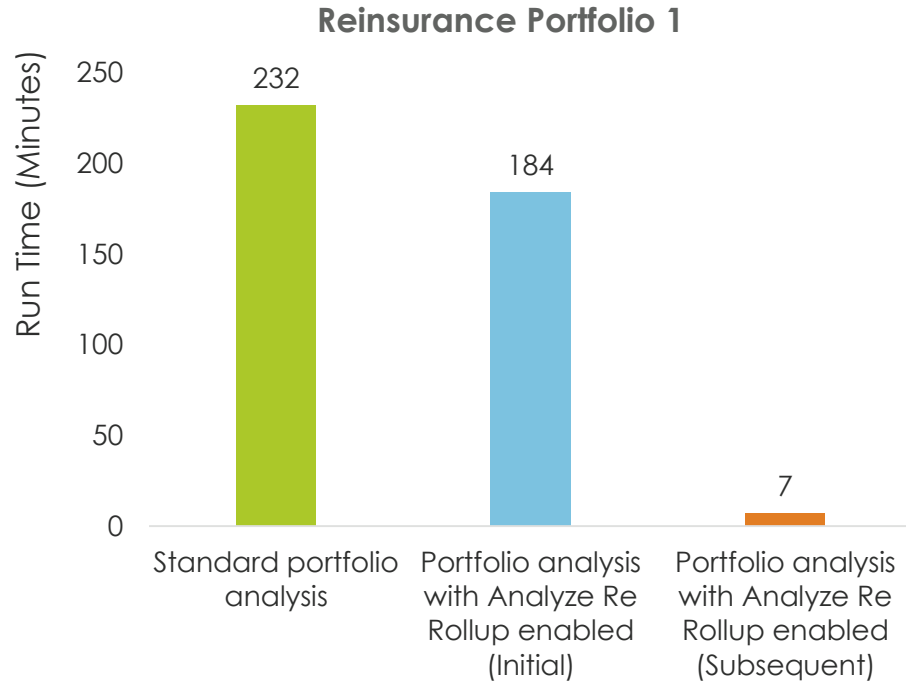
☒ Earthquake 
☒ Earthquake Shake
☒ Fire Following

☒ Tropical Cyclone
☒ Wind

☒ Severe Storm
☒ Severe Thunderstorm
☒ Winter Storm

☒ Other Perils:
☒ Inland Flood
☒ Wildfire/Bushfire
☐ Terrorism 
☒ Coastal Flood
☒ Multi-peril Crop
☒ Crop Hail
☐ Pandemic

Sample Portfolio Performance Improvements with Analyze Re Rollup



Automating Workflows with APIs

Touchstone Re APIs Automate Workflows



Create and delete companies



Monitor the status of your activities



Import and delete CLFs



Create and delete exposure sets



Submit program and portfolio loss analyses



Create, retrieve, edit, and delete programs



Export DLFs



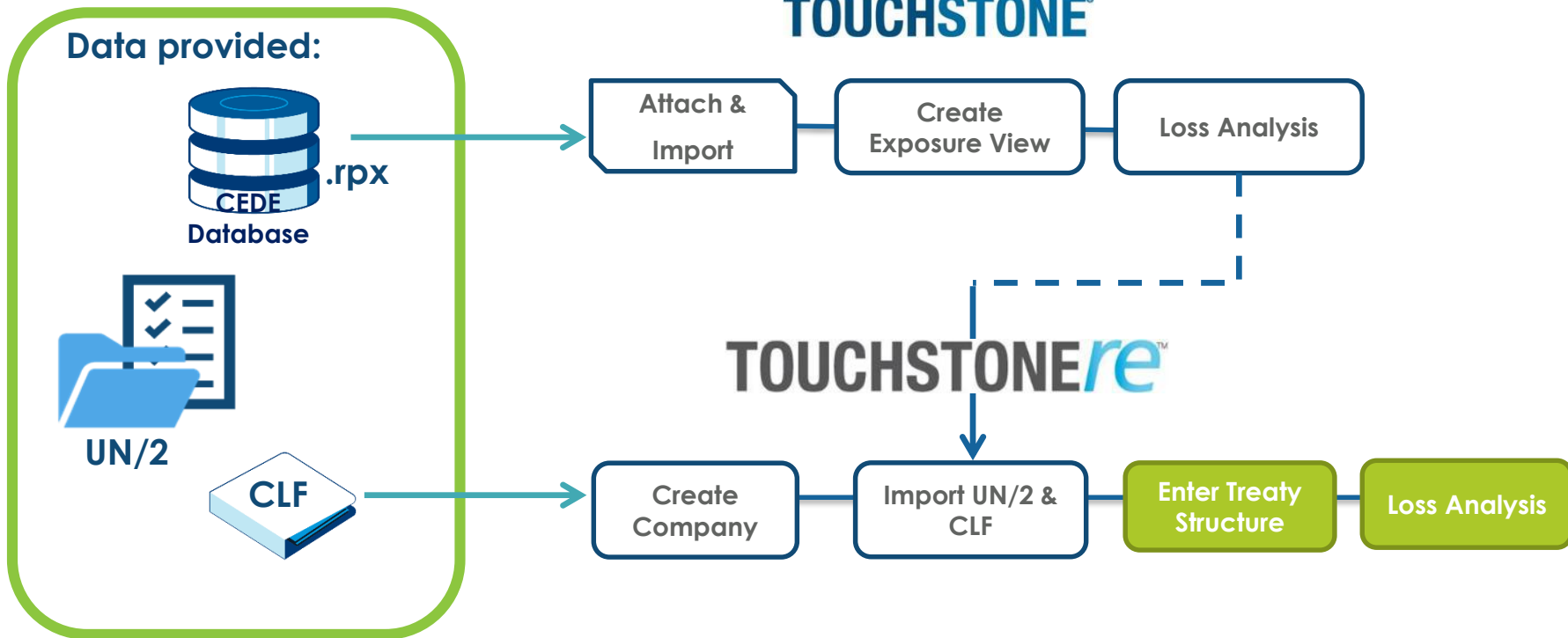
Retrieve zone sets



Calculate CLF loss market shares

Automating the Reinsurance Pricing Workflow - Adhering to Your View of Risk

Cedant A



Automating the Reinsurance Pricing Workflow— Does the CLF Adhere to Your View of Risk?

Cedant A

Data provided:



UN/2



.evi



.rpx

```
Comment5 = Description
Comment6 = Analysis Target Info
Comment7 = Exposure View:
Comment8 = Exposure View Filter:
Comment9 = * ApplyAsOfDate:
Comment10 = Exposure Set(s):
Comment11 =
Comment12 = Exposure Statistics
Comment13 = Total RV:
Comment14 = o Hazard Models Options
Comment15 = Event Set Name:
Comment16 = Event Set Type:
Comment17 = Event Filter:
Comment18 = Perils:
Comment19 = [ ] Multi-peril Crop
Comment20 = [ ] Coastal Flood
Comment21 = [ ] Crop Hail
Comment22 = [x] Earthquake Shake
Comment23 = [x] Fire Following
Comment24 = [x] Inland Flood
Comment25 = [x] Landslide
Comment26 = [x] Precipitation Flood
Comment27 = [ ] Pandemic
Comment28 = [x] Sprinkler Leakage
Comment29 = [x] Severe Thunderstorm
Comment30 = [x] Storm Surge
Comment31 = [x] Wind
Comment32 = [ ] Terrorism
Comment33 = [x] Tsunami
Comment34 = [ ] Wildfire/Bushfire
Comment35 = [x] Winter Storm
```

Cedant A
Not defined
-
1
AIRExposure_DemoDefault, CedantA

1496947260001.97

10K US AP (2017) - Standard
Stochastic
Not defined

Sample API Solution – Select Data

Select Folders to Submit New Jobs

☐ CedantA

Tre

CedantA_Default_R0HKH_23_NT.clf [1 Kb]

CedantA_Default_R0HKH_27_NT.clf [34 Kb]

CedantA_Default_R0RKE_23_NT.clf [1 Kb]

CedantA_Default_R0RKH_27_NT.clf [13 Kb]

CedantA_Default_R10KH_23_NT.clf [48 Kb]

CedantA_Default_R10KN_27_NT.clf [4,427 Kb]

CedantA_Default_NT.evi [68 Kb]

CedantA_Default_R0HKH_23_NT.evt [1 Kb]

CedantA_Default_R0HKH_27_NT.evt [1 Kb]

CedantA_Default_R0RKE_23_NT.evt [1 Kb]

CedantA_Default_R0RKH_27_NT.evt [1 Kb]

CedantA_Default_R10KH_23_NT.evt [17 Kb]

CedantA_Default_R10KN_27_NT.evt [1,218 Kb]

CedantA_2018_log.ldf [2,098 Kb]

CedantA_2018.mdf [10,486 Kb]

☐ CedantB

T

CedantB_Default_R0HKH_27_NT.clf [2 Kb]

CedantB_Default_R0RKH_27_NT.clf [1 Kb]

CedantB_Default_R10KN_27_NT.clf [259 Kb]

CedantB_Default_NT.evi [67 Kb]

CedantB_Default_R0HKH_27_NT.evt [1 Kb]

CedantB_Default_R0RKH_27_NT.evt [1 Kb]

CedantB_Default_R10KN_27_NT.evt [1,218 Kb]

CedantB_2018_log.ldf [1,049 Kb]

CedantB_2018.mdf [1,078,985 Kb]

SUBMIT

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 AIR

Sample API Solution – Touchstone Re Company Created and CLF Imported

[6] - CedantA Completed

Import CLF - 100%

```
*****
Cedant Name: CedantA
3/19/2019 9:14 AM
*****

*****
Analysis Info
*****
[3/19/2019 9:14 AM] - 10K US AP (2018) - Warm SST Conditioned Hurricane: True
[3/19/2019 9:14 AM] - Storm Surge: True
[3/19/2019 9:14 AM] - Wind: True

*****
Touchstone Re
*****
[3/19/2019 9:14 AM] - Created new company: CedantA
[3/19/2019 9:14 AM] - Submitted import CLF: CedantA_Default_NT

*****
Workflow Complete
3/19/2019 9:14 AM
*****
```

Sample API Solution – Run Through Touchstone

[7] - CedantB

Running

Loss - 61%

Cedant Name: CedantB

3/19/2019 9:14 AM

Analysis Info

[3/19/2019 9:14 AM] - 10K US AP (2018) - Warm SST Conditioned Hurricane: False

[3/19/2019 9:14 AM] - Storm Surge: True

[3/19/2019 9:14 AM] - Wind: True

Touchstone

[3/19/2019 9:14 AM] - Attached CEDE database: CedantB_2018

[3/19/2019 9:14 AM] - Created new project: CedantB

[3/19/2019 9:14 AM] - Submitted loss analysis: CedantB_2018_Default

Use Touchstone APIs to Build Integration

TOUCHSTONE®

Data Source
Management

Data Import
and Export

Project
Management

Analytics

TOUCHSTONE^{re}

Data Source
Management

Data Import
and Export

Company
Management

Analytics

TOUCHSTONE®
150+  **API**

**40% of Clients Use
Touchstone APIs**

Advanced Loss Modifications

Build Your Custom View of Risk Using Touchstone Re's Advanced Loss Modifications

Event-Based Adjustment Factors

- Adjust losses based on events in the AIR catalogue by area and line of business

Program EP-Based Adjustment Factors

- Adjust ground-up losses for programs based on the EP curve for specific models

Event-Based Adjustment Factors Allow You to Customise Your View of AIR Models

Account for model variations discovered as part of your validation process

Incorporate new scientific findings that might alter model output prior to the release of an updated model

Account for secondary or sub-perils or special losses not included in the original

Investigate the sensitivity of model results

Apply safety loads for large events to develop a conservative approach to risk management

Admin Console Provides an Interface for Managing Event-Based Adjustment Factors

The screenshot displays the Administration Console interface for managing Event Based Adjustment Factors. The sidebar on the left contains navigation options: Object Management, Aggregate Program Analysis Template, Aggregate Portfolio Analysis Template, Zone Set Manager, and Event Based Adjustment Factors (highlighted with a red box). The main header shows the title 'Event Based Adjustment Factors' and the breadcrumb 'Object Management > Event Based Adjustment Factors'. Below the header, there are fields for Name (Event Based Adjustment Factor Set 1) and Description. The 'Created' and 'Modified' dates are 03/28/2019 by AIR-WORLDWIDEJ61778. A 'Filter Models by Event Set' dropdown is set to 'World All Perils (10K Time Dep Hybrid)'. A 'Download Sample' button (highlighted with a red box) is located next to the 'Export' and 'Clear' buttons. The table below lists various adjustment factors, with the row for 'AIR Earthquake Model for Australia' (Model ID 51) highlighted with a red box.

Model ID	Model	Model Version	Base Name	Factor By Area & LOB	Factor By Event
23	AIR Hurricane Model for Hawaii	4.3.0	18_X_H23		
27	AIR North Atlantic Basinwide Hurricane Model	21.0.0	19_X_H27		
28	AIR Winter Storm Model for the U.S.	1.9.0	18_X_H28		
30	AIR Tropical Cyclone Model for Canada	1.0.0	15_X_H30		
31	AIR Earthquake Model for the Pan-European Re...	3.1.0	18_X_H31		
33	AIR Earthquake Model for Southeast Europe	1.0.0	13_X_H33		
41	AIR Extra Tropical Cyclone Model for Europe	6.1.0	19_X_H41		
42	AIR Winter Storm Model for Canada	1.0.0	15_X_H42		
43	AIR Severe Thunderstorm Model for Europe	1.0.0	18_X_H43		
44	AIR Severe Thunderstorm Model for Australia	1.0.0	17_X_H44		
51	AIR Earthquake Model for Australia	4.1.0	17_X_H51		
52	AIR Earthquake Model for Japan	6.3.0	17XH5214		
53	AIR Earthquake Model for New Zealand	4.0.0	19_X_T53TOT		
54	AIR Earthquake Model for Southeast Asia	3.1.0	17_X_H54		
55	AIR Earthquake Model for China	1.2.0	07_X_H55		
58	AIR Earthquake Model for India	1.0.0	16_X_H58		
60	AIR Northwest Pacific Basinwide Typhoon Model	3.0.0	19_X_H60		

Review Results With or Without Event-Based Adjustment Factors

New Loss Analysis 2019 Cat Program Template: AIR Default Aggregate An

Program: 2019 Cat Program

Analysis Settings

Loss Diagnostics

- Analysis Settings
- Output Options
- Analysis Management

Demand Surge: ☐ With ☐ Without ☒ Program specific

Perils

<input checked="" type="checkbox"/> Earthquake	<input checked="" type="checkbox"/> Tropical Cyclone	<input checked="" type="checkbox"/> Severe Storm	<input checked="" type="checkbox"/> Other Perils:
<input checked="" type="checkbox"/> Earthquake Shake	<input checked="" type="checkbox"/> Wind	<input checked="" type="checkbox"/> Severe Thunderstorm	<input checked="" type="checkbox"/> Inland Flood
<input checked="" type="checkbox"/> Fire Following	<input checked="" type="checkbox"/> Winter Storm	<input checked="" type="checkbox"/> Wildfire/Bushfire	<input type="checkbox"/> Terrorism
		<input checked="" type="checkbox"/> Coastal Flood	<input checked="" type="checkbox"/> Multi-peril Crop
		<input checked="" type="checkbox"/> Crop Hail	<input type="checkbox"/> Pandemic

Event Date Filter

Start Date: ☒ Program Specific ☐ User Specified: 01/01/2019

End Date: ☒ Program Specific ☐ User Specified: 12/31/2019

☐ Consider events from program inception date

IED Settings: ☒ Use latest IED

EP Adjustments: ☐ With ☐ Without ☒ Program Specific

Custom LOBs: ☐ With ☐ Without ☒ Program specific

Event Based Adjustment Factor:

Analysis Name: 2019 Cat Program - Loss Analysis Run

Programme EP-Based Loss Adjustments Enable You to Modify Losses Based on Your Knowledge of Loss Experience



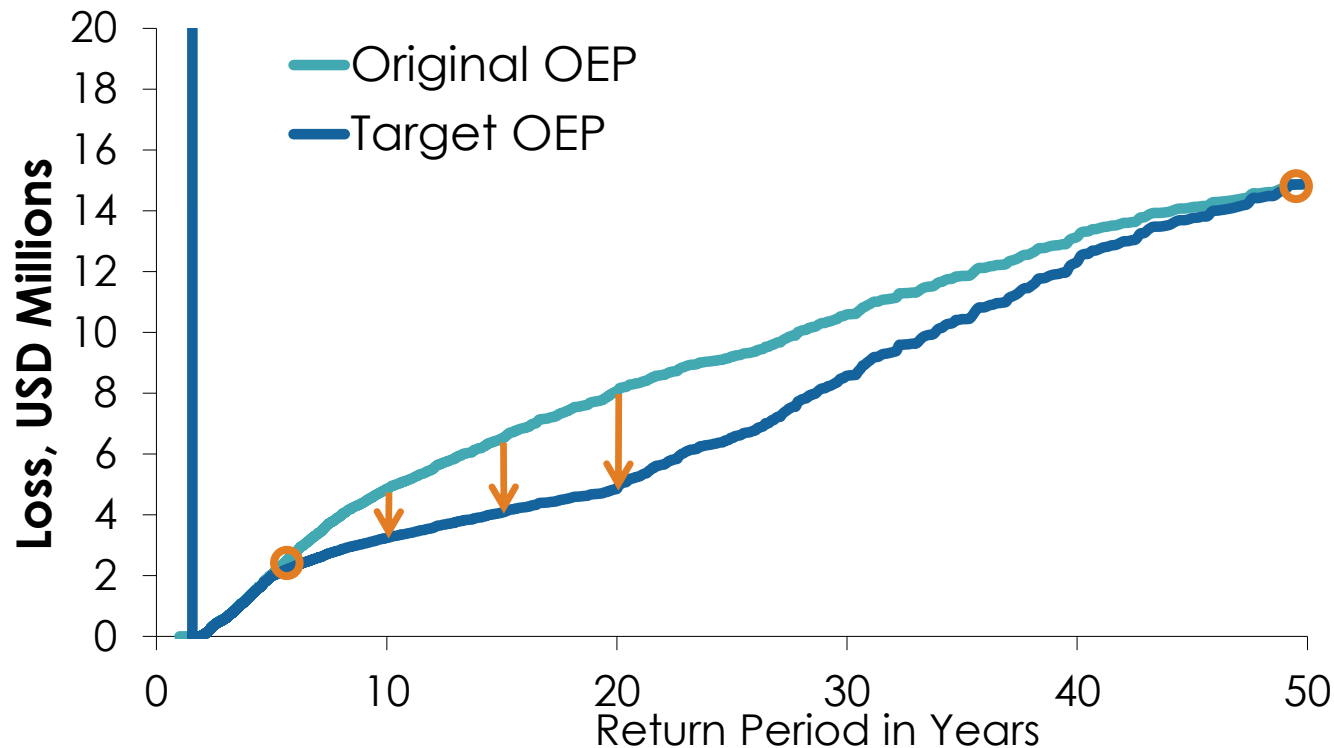
Fine-tune model results to fit observed loss history

Adjust losses to match model results from an alternative model

Account for exposures that are dissimilar from AIR Industry Exposures

Apply special conditions that cannot be explicitly modelled

Example: Matching Modelled Losses with Your Ground-Up Loss Experience at Low Return Periods



EP Adjustments Screen Enables You to Define Target Points on an EP Curve

Program: 2019 Cat Program

Program Details

Program Type: Catastrophe Excess of Loss
Inception Date: 01/01/2019
Expiration Date: 12/31/2019
Modified: 3/28/2019 by AIR-WORLDWIDE\I61778

Currency Rate Table: AIR Default
Save Terms in: US Dollar
Display Terms in: US Dollar
Units: Ones

Layers Program Options Relationships **EP Adjustments**

☐ Enable EP Adjustments

[Copy from Program](#) [Reset All](#) [?](#)

Model ID	Description	Modified
15	AIR Earthquake Model for the Caribbean	
18	AIR Japan Inland Flood Model	
20	AIR Severe Thunderstorm Model for the U.S. and Canada	Yes
23	AIR Hurricane Model for Hawaii	
27	AIR Basinwide Hurricane Model for North America	
28	AIR Winter Storm Model for the U.S.	
30	AIR Tropical Cyclone Model for Canada	
31	AIR Earthquake Model for the Pan-European Region	
33	AIR Earthquake Model for South East Europe	
41	AIR Extra Tropical Cyclone Model for Europe	
42	AIR Winter Storm Model for Canada	

AIR Severe Thunderstorm Model for the U.S. and Canada

Point	Return Period (yr)	DisplayValue
Point 1	10	3,022
Point 2	15	4,005
Point 3	20	4,888
Point 4		

Adjustment Method:
☒ Amount ☐ Percent

Target Curve:
☐ Agg EP ☒ Occ EP

Scaling Method:
Scale

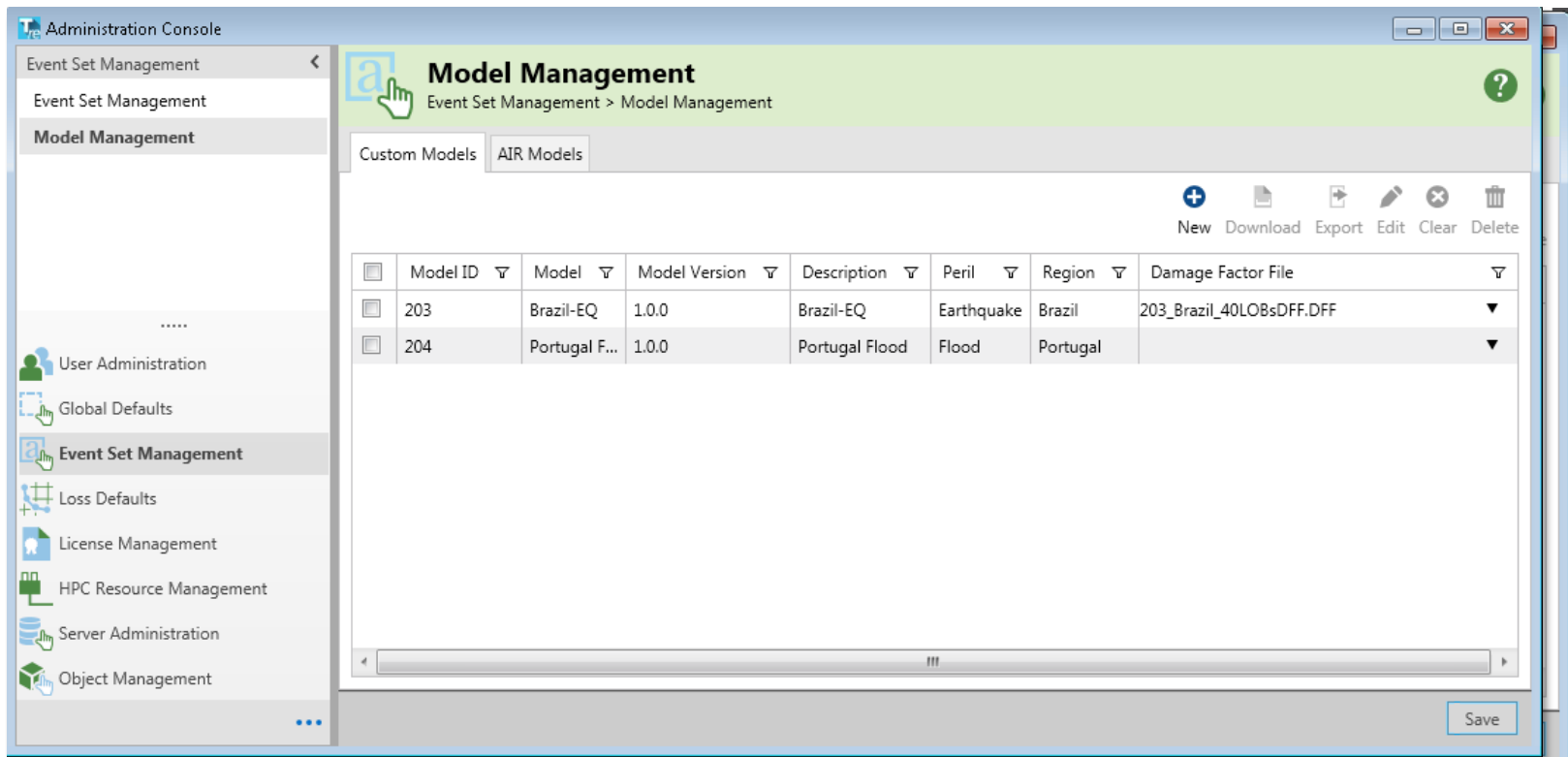
RP Interval Min: 5 RP Interval Max: 50

Aggregate Model Builder

Use Aggregate Model Builder to Develop Loss Estimates from Any Type of Risk



Custom Models Can Be Applied to Capture Risk Not Covered by Traditional Models



The screenshot displays the 'Administration Console' window, specifically the 'Model Management' section. The left sidebar contains a navigation menu with options: Event Set Management, Model Management (selected), User Administration, Global Defaults, Event Set Management (highlighted), Loss Defaults, License Management, HPC Resource Management, Server Administration, and Object Management. The main content area is titled 'Model Management' and shows a breadcrumb 'Event Set Management > Model Management'. Below this, there are tabs for 'Custom Models' and 'AIR Models'. A toolbar at the top right of the main area includes icons for New, Download, Export, Edit, Clear, and Delete. A table lists the custom models:

<input type="checkbox"/>	Model ID ▾	Model ▾	Model Version ▾	Description ▾	Peril ▾	Region ▾	Damage Factor File ▾
<input type="checkbox"/>	203	Brazil-EQ	1.0.0	Brazil-EQ	Earthquake	Brazil	203_Brazil_40LOBsDFF.DFF ▾
<input type="checkbox"/>	204	Portugal F...	1.0.0	Portugal Flood	Flood	Portugal	▾

A 'Save' button is located at the bottom right of the console window.

Custom Models Can Be Applied to Capture Risk Not Covered by Traditional Models

Administration Console

Event Set Management

Model Management

New Portfolio Loss Analysis

Template: AIR Default Aggregate A

Portfolio: MultiProgramType_032801156991 ☐ Analyze Re Rollup

Analysis Settings

Event Set: World All Perils & Custom Models 10K

Demand Surge: ☐ With ☐ Without ☒ Program specific

Perils

☒ Earthquake ☐ Tropical Cyclone ☐ Severe Storm ☒ Other Perils:

☒ Earthquake Shake ☐ Wind ☐ Severe Thunderstorm ☐ Inland Flood

☐ Fire Following ☐ Winter Storm ☒ Wildfire/Bushfire

☐ Terrorism ☐ Coastal Flood

☐ Multi-peril Crop

☐ Crop Hail

☐ Pandemic

Summary of New Features

Touchstone

- Sequel Impact integration
- Run prior model version
- Performance enhancements
- ALERT hazard information
- Project import/export
- APIs

Touchstone Re

- New import functionality
- Enhanced migration tool
- Complex reinsurance structures
- Analyze Re Portfolio Rollup
- Advanced loss modification
- Aggregate Model Builder
- APIs

Touchstone and Touchstone Re Release Timeline



Note: V8 CLFs/DLFs from 2020's release will not be compatible in Version 21 of CATRADER

Questions?



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19

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