

# Automating Your Risk Analytics from Account Underwriting to Reinsurance Portfolio Management

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# Agenda

Rapid growth of integration in the (re)insurance value chain

Integration opportunities with Touchstone® - In-house projects vs. SmartGate

How to optimize reinsurance workflows in Touchstone Re™

AIR's upcoming APIs for Touchstone Re

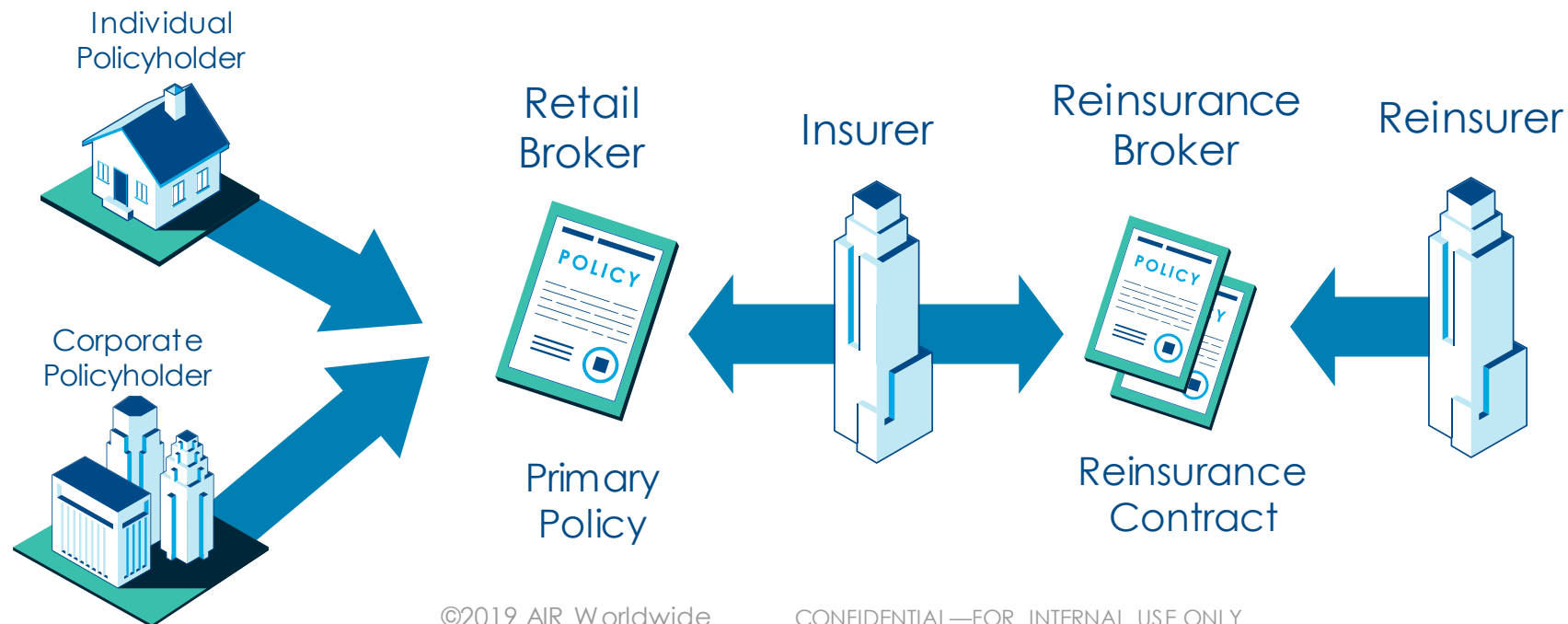
Partnering with AIR for integration and migration

# Rapid Growth of Integration

# The Marketplace Is Moving Toward Greater Integration

Companies of all sizes, across all LOBs, and across the (re)insurance value chain are investigating and implementing integration projects:

- 25 companies have started discussions with AIR or have licensed an AIR integration solution in the past 6 months

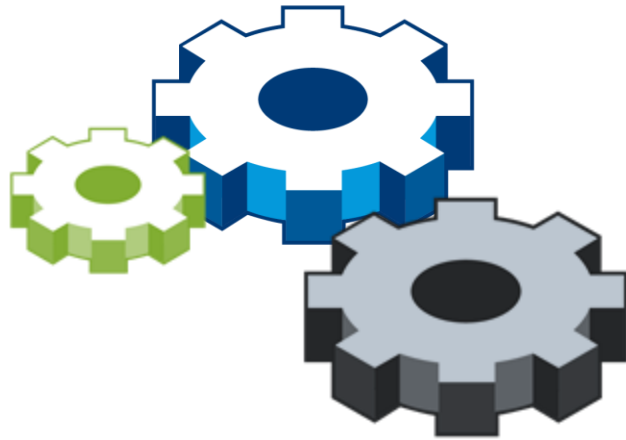


# What Are Typical (Re)insurer Challenges?

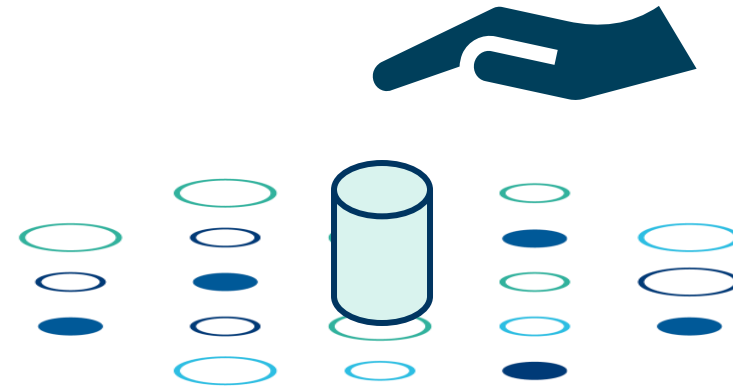
- Modeling is a manual task
  - Too time-intensive
  - Too many clicks required
- Modeling is complex
- The number of perils modeled in production is likely to grow (not shrink) in the future



## (Re)insurers' Immediate Goals Are Efficiency and Accuracy

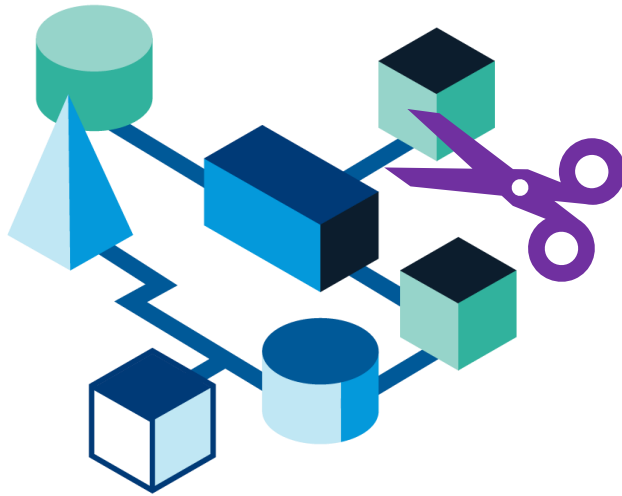


Automation



Integration

## (Re)insurers' Longer-Term Goals



Deliver content tailored  
to the end user

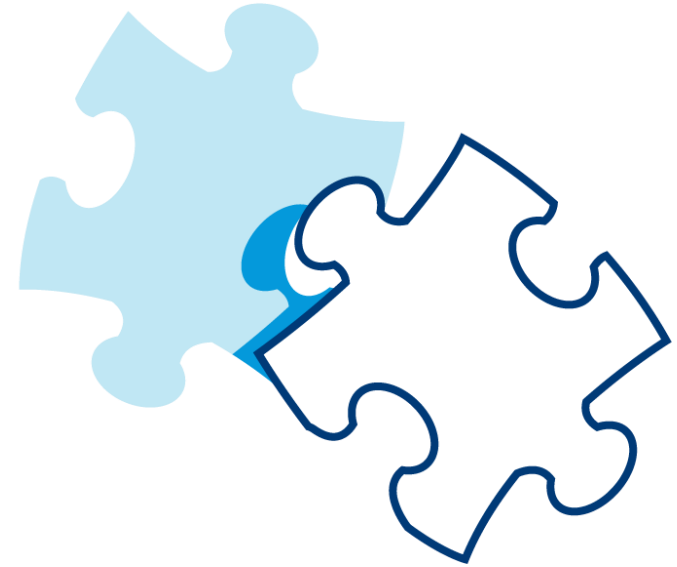


Leverage the full extent  
of data they possess

# Integration Changes the Way People Use Their Time

**Deloitte.**

*Employees should ultimately be spending more time on **ideation** and **decision making**—and far less on computation and distillation...”*

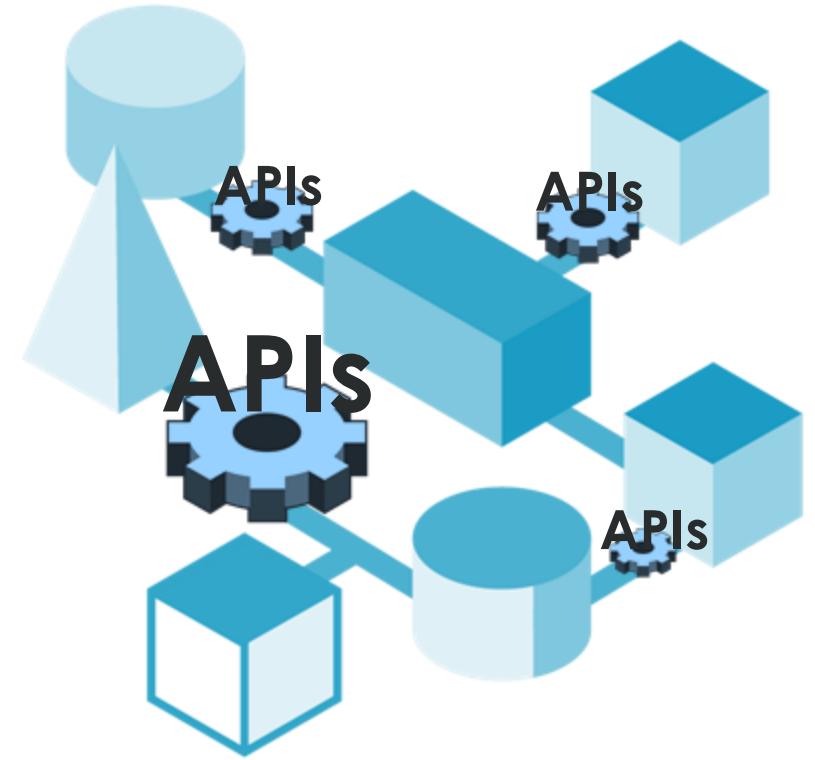




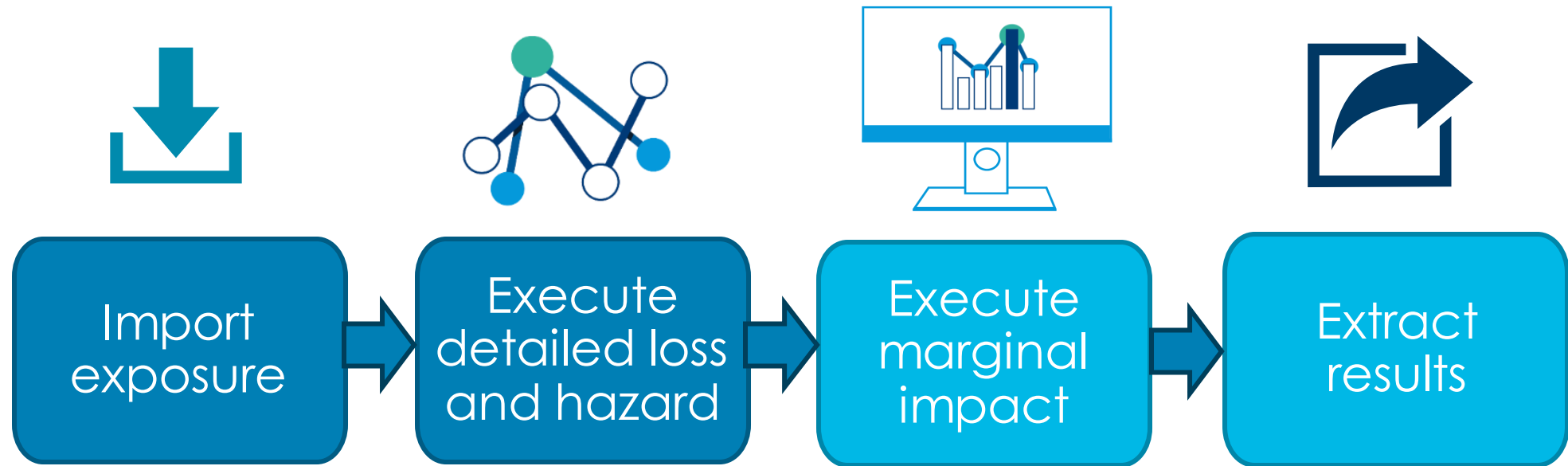
# Solutions Start with APIs

# APIs Link Your Internal Systems

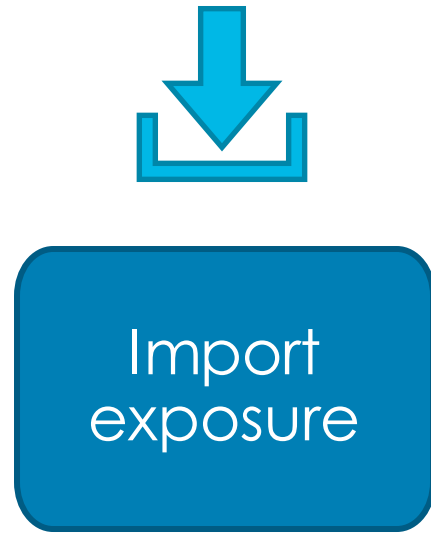
- Allow you to request Touchstone analyses from another program
- Allow data to be transferred back and forth at the click of a button
  - Or even **automatically!**
- No different than the apps on your mobile phone



## APIs Are Used to Build Your Workflow



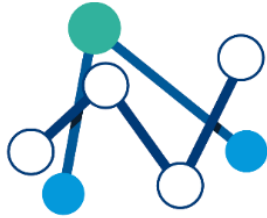
# Where Can You Save Some Clicks?



## ***Your automated workflow can:***

- Make certain selections for you:
  - Mapping set
  - Contract file
  - Location file
  - Reinsurance file
  - Destination database
  - Exposure set
- Create an exposure view
- Identify the project
- Select the currency
- Name the exposure view

## Where Can You Save Some Clicks?



Execute  
detailed loss  
and hazard

### ***Your Automated workflow selects for you:***

- Event set
- Perils
- Sub-perils
- Event filters
- Demand surge
- Average properties
- Output options, such as save by resolution, financial perspectives, etc.
- Number of cores
- Results database



# Finding the Best Solution for Your Business



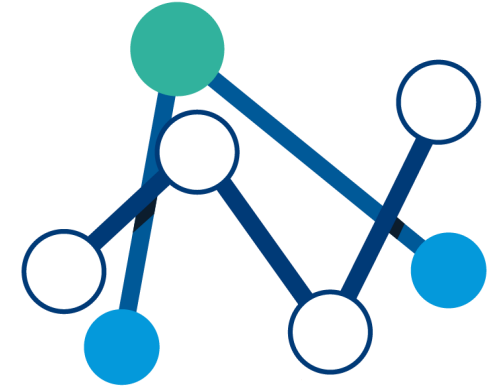
# Factors to Consider When Investigating an APIs Solution:



**Technical Skill Set**



**Control on  
Integration Project**



**Competing Projects**



**Time**

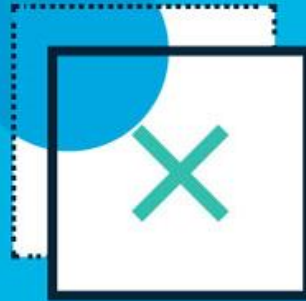
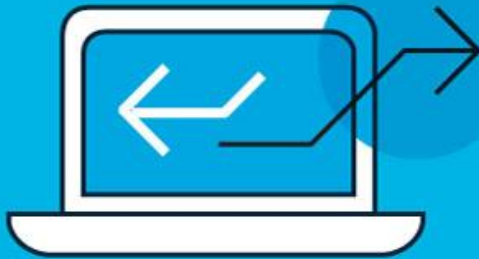


**Budget**



# TOUCHSTONE

What does  
integration look like  
in Touchstone?





# Use Touchstone APIs to Build Integration

**TOUCHSTONE®**

Data Source  
Management

Data Import  
and Export

Project  
Management

Analytics

**TOUCHSTONE®**

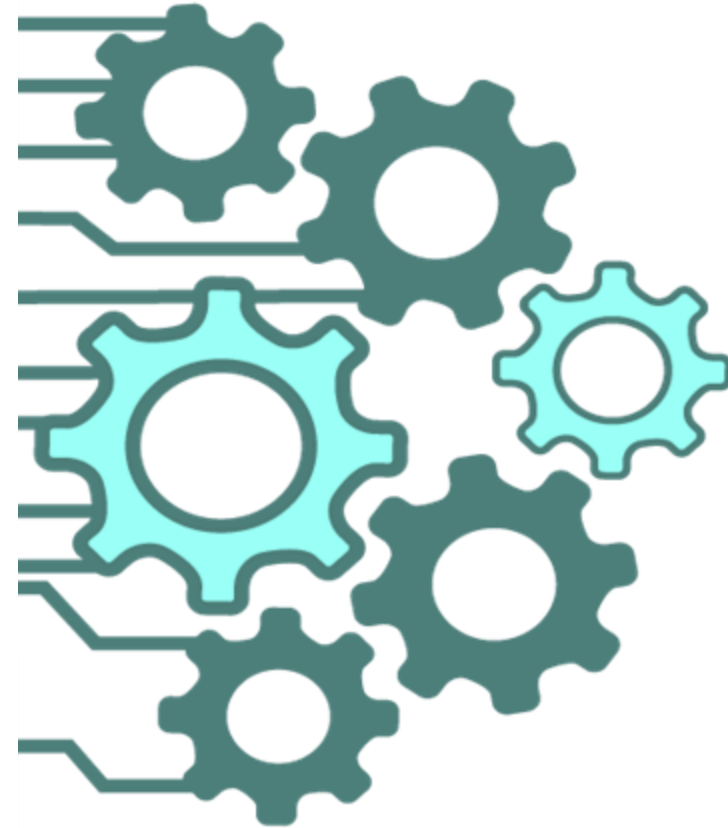
150+



40% of Clients Use  
Touchstone APIs

## Recently Released APIs

- Validation
- Independent Geocoding
- Loss Grouping
- Dynamic Ring – v7.1
- Dynamic Mapping Set – v7.2



## All New Features Will Have Public APIs Developed in Parallel

2020 release APIs include:

- Add/delete perils from existing exposure
- Model updates
  - AIR Hurricane Model for the U.S.
  - AIR Flood Model for the U.S.
- Vulnerability modifications
- Terrorism updates
- Gridded ring analysis
- Get contract filter
- Cancel activity



# Candidate Touchstone APIs for 2021



## Update to Results

- Get layer and layer/peril summary results
- Location AAL by peril
- Hazard results
- Filtering and grouping functionality



## Object management

- Create/update reinsurance programs
- Update currency exchange rate tables
- Create a loss modification template

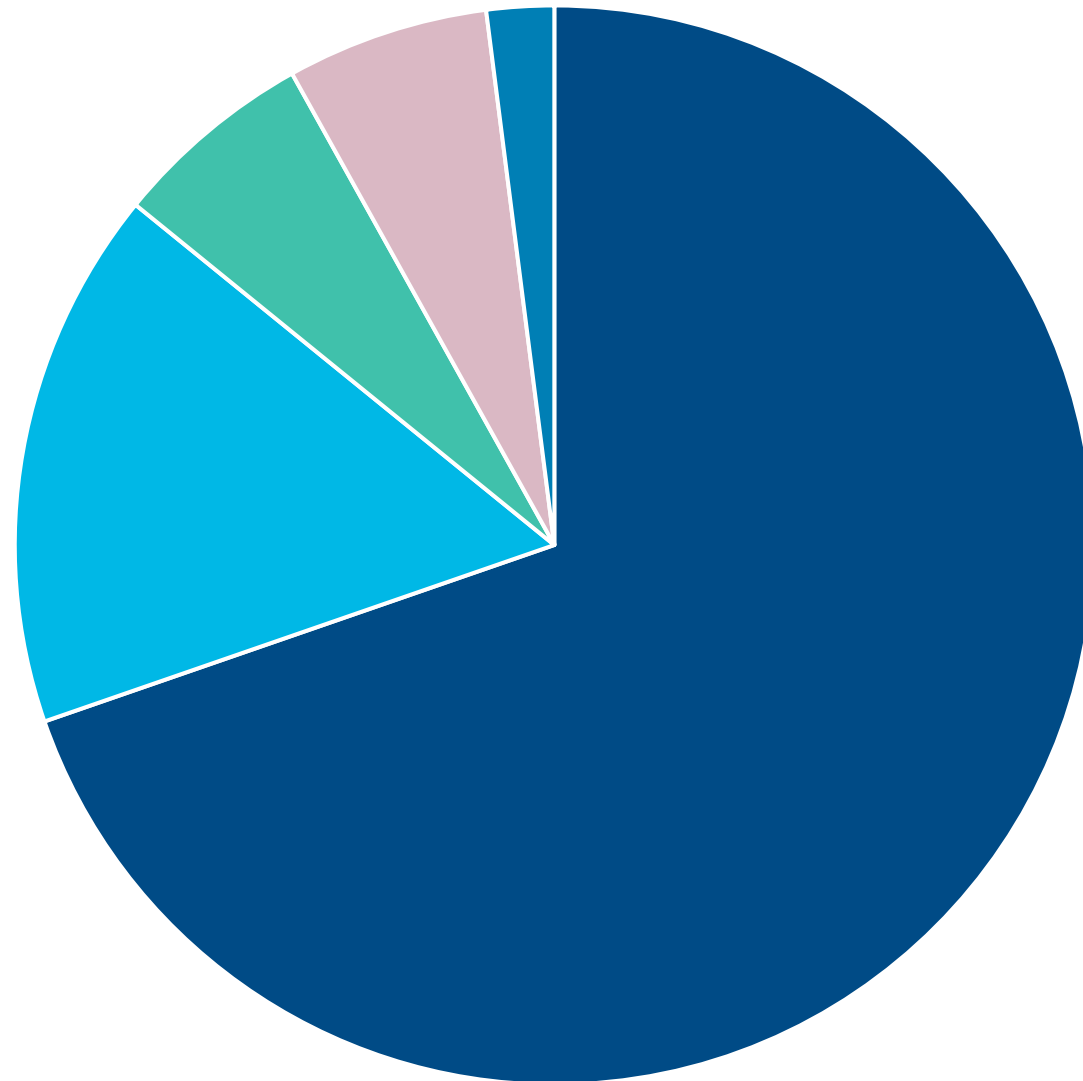
## Future Plans

- “Workflow Builder” for Automation and Integration Workflows
  - Underwriting
  - Portfolio
  - Reinsurance
- SOAP to REST
  - Easy integration with programming languages
  - Updates to authentication
  - Continue support for existing SOAP integrations



# What's Stopping You from Integrating Your Workflow?

- Resource Constraints, e.g., right people, budget
- Technical Challenge
- Disruption
- Too Many Other Projects
- Risk



# Jump-Start Your Integration with AIR SmartGate



SmartGate is a wrapper around the AIR API suite:

- Significantly reduces project development time
- Reduces your budget and schedule risk
- Allows you to focus on your analytical needs



SmartGate integration can be used to automate and integrate:

- Account underwriting
- Portfolio analytics
- Or both!

# CNA Case Study Illustrates How One Company Used SmartGate

## CNA Switches to AIR for an Automated, Integrated Workflow Solution

CASE STUDY

To stay competitive in a marketplace of rapidly advancing technology, CNA, one of the largest U.S. commercial property and casualty insurance companies, chose an innovative automation and integration solution from AIR to replace legacy modeling systems and streamline workflows. With AIR's solution, CNA transformed their modeling operations and exceeded performance goals while minimizing disruption for their underwriters.

### The SmartGate Solution by the Numbers\*

- 15-30 Seconds**  
Analyze up to 10 locations in a 50K catalog with Touchstone® Web Services and SmartGate
- <4 Minutes**  
Analyze up to 100 locations in a 50K catalog with Touchstone and SmartGate
- <10 Minutes**  
Analyze up to 1,000 locations in a 50K catalog with Touchstone and SmartGate

\*Runtimes depend on computing power.

### Highlights

**THE CHALLENGE:** As part of an enterprise-wide modeling transformation, CNA sought a cost-effective, minimally disruptive way to replace their legacy modeling systems and improve their model runtimes while maintaining their proprietary view of risk.

**THE SOLUTION:** CNA chose to work with AIR to develop SmartGate—an innovative, flexible automation solution that substantially improved CNA's modeling runtimes and streamlined account modeling workflows throughout the organization.

**INTEGRATION WITH MINIMAL DISRUPTION:** With AIR's comprehensive support, CNA was able to transition their modeling workflows and go live on their production system with the SmartGate solution in a matter of months.

**THE BENEFIT:** By switching to AIR, CNA has reduced the time required to make underwriting decisions; increased the number of modeling analyses that could be completed; maintained the ability to accommodate their own view of risk; and saved resources so they can focus on their core business.

**SUMMARY:** CNA improved process performance, so their underwriters can make more informed decisions faster with minimal disruption to their operations.



### The Challenge


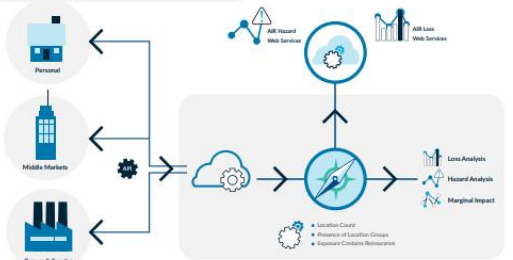
CNA is one of the largest U.S. commercial property and casualty insurance companies. CNA provides a broad range of standard and specialized property and casualty insurance products and services for businesses and professionals in the U.S., Canada, and Europe, backed by 120 years of experience and approximately \$45 billion of assets. As part of an enterprise-wide transformation of its catastrophe modeling systems and capabilities, CNA sought ways to streamline and enhance their underwriting processes in a way that would be both cost effective and cause minimal operational disruption. CNA realized that the solution they chose would have to replace their legacy systems with minimal disruption, improve their model runtimes, and accommodate their proprietary view of risk.

### The Solution

After thoroughly vetting and validating solutions from various catastrophe risk analytics providers, CNA felt optimistic about their decision to replace their legacy modeling systems with the innovation and flexibility offered by AIR's tools and services. Although switching modeling providers can pose challenges, CNA was able to address them head on with AIR's new automation solution, SmartGate, which offered automated workflows, substantially improved account modeling runtimes, and minimal operational disruption.

CNA's smaller accounts had to run in seconds and single-peril analyses for their larger accounts had to be completed in five minutes or less. To facilitate these two workflows, AIR created an interface in CNA's AIR Cloud environment to handle requests from CNA's system and initiate the appropriate process. To determine where the incoming exposure data could be processed fastest, AIR developed an algorithm—the SmartGate Decision Point—and incorporated it into the comprehensive SmartGate solution.

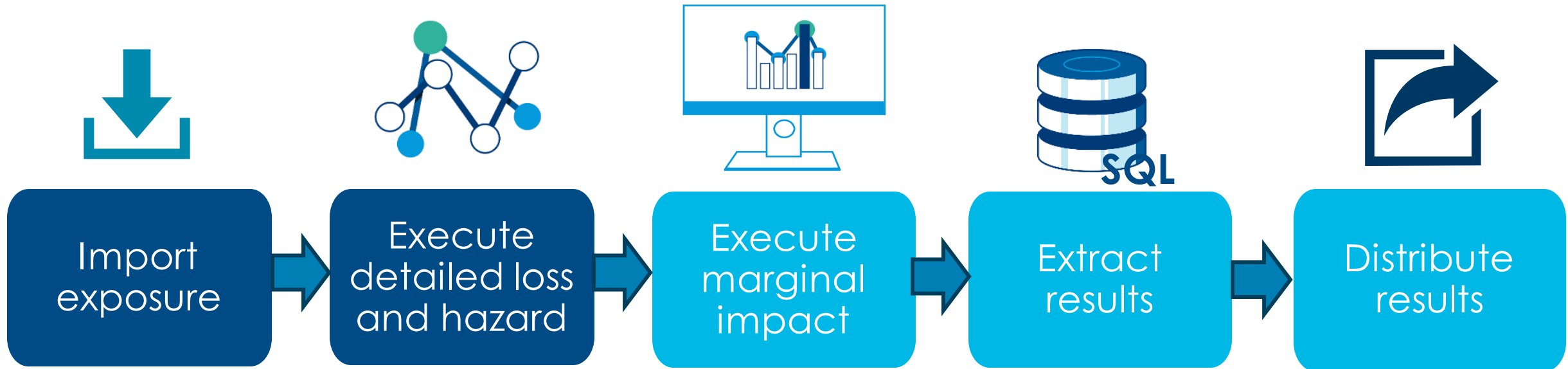
SmartGate is AIR's comprehensive solution comprising multiple tools and services to significantly shorten runtimes and automate workflows.



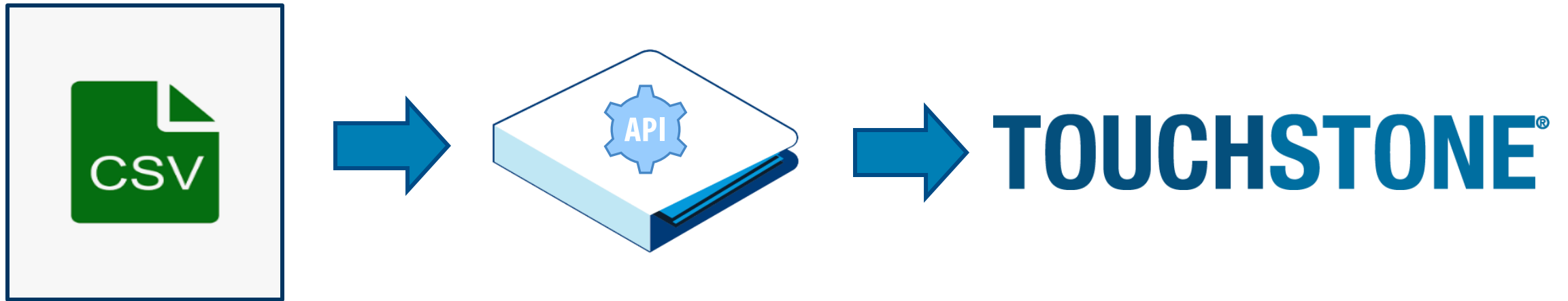
<https://www.air-worldwide.com/publications/brochures/documents/cna-switches-to-air-for-an-automated,-integrated-workflow-solution>



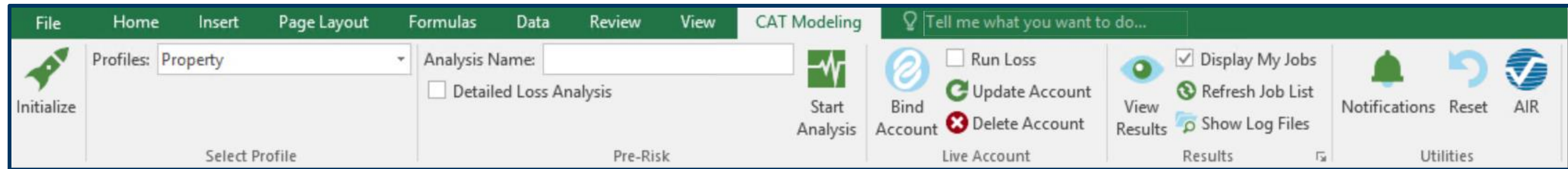
## Typical Workflows Include a Variety of Steps



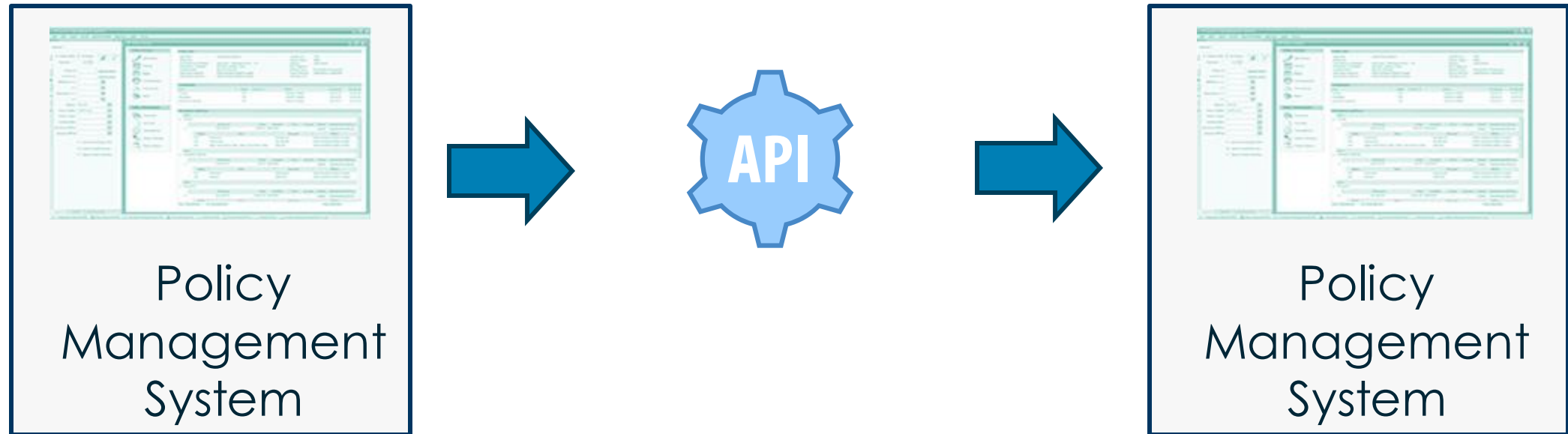
## Create an Automation Folder for CSV Files



# Integrate into Your MS Excel Data Scrubbing



# Integrate Directly into Your Policy Management System or Agency Portal



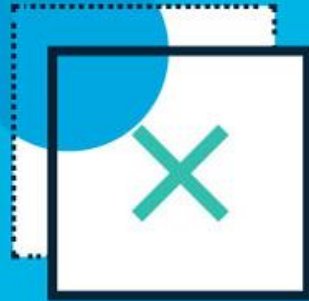
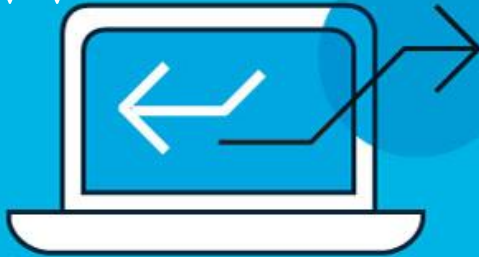
# The Right People to Discuss Integration

- Who needs to be there?
  - Cat team
  - Development team
  - Application owner
  - Underwriting

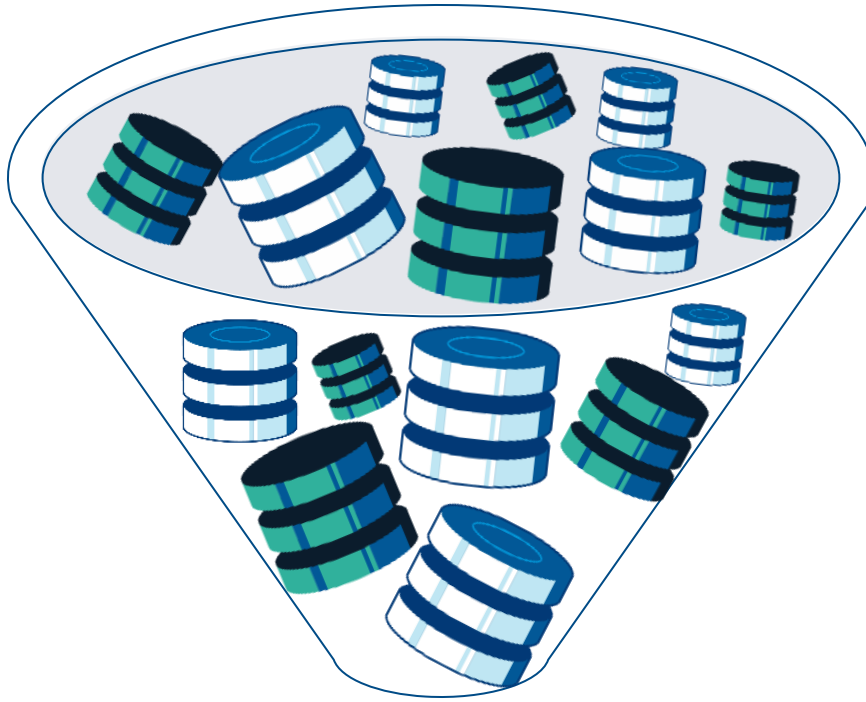


# TOUCHSTONE<sup>re</sup>

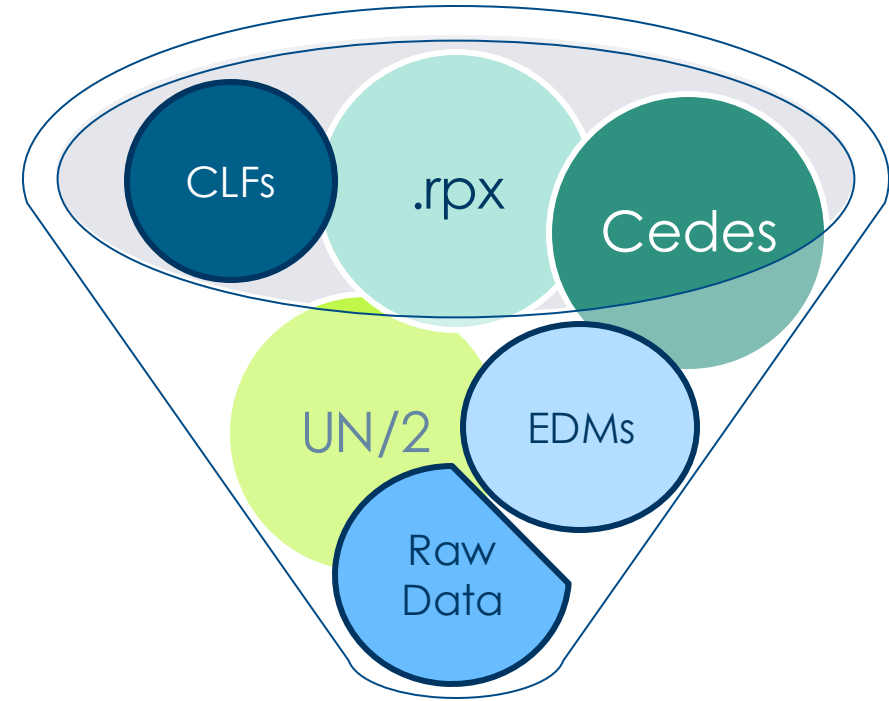
## Optimizing Reinsurance Workflow



## Reinsurer's Problem



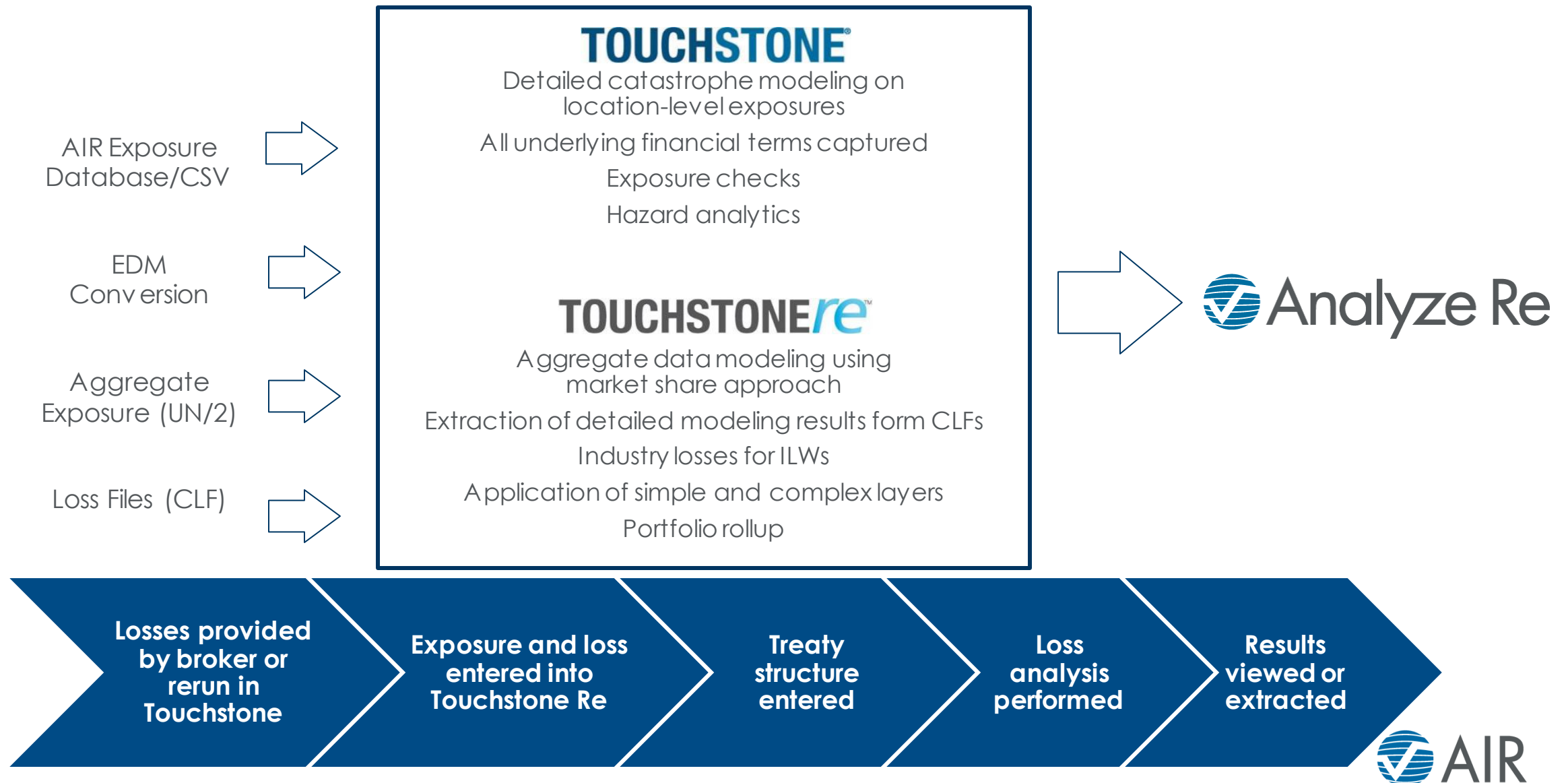
Reinsurance Pricing  
Data



Brokers' Modeling  
Files

How do you consume it all effectively?

# Modeling Treaty Business in AIR





# Maintaining Your View of Risk

## Your View of Risk

- Warm sea-surface temperature hurricane
- Time-dependent earthquake
- Severe thunderstorm cat only
- Demand surge
- Storm surge

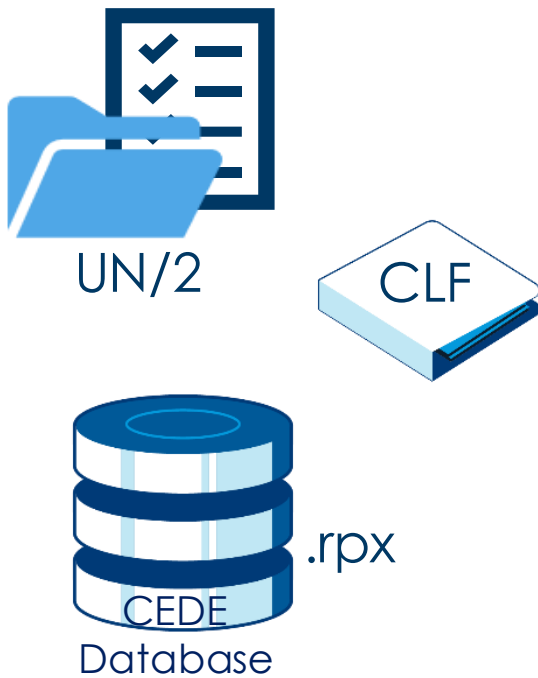


## Brokers' Modeling Assumptions

# Modeling Data Provided by Brokers

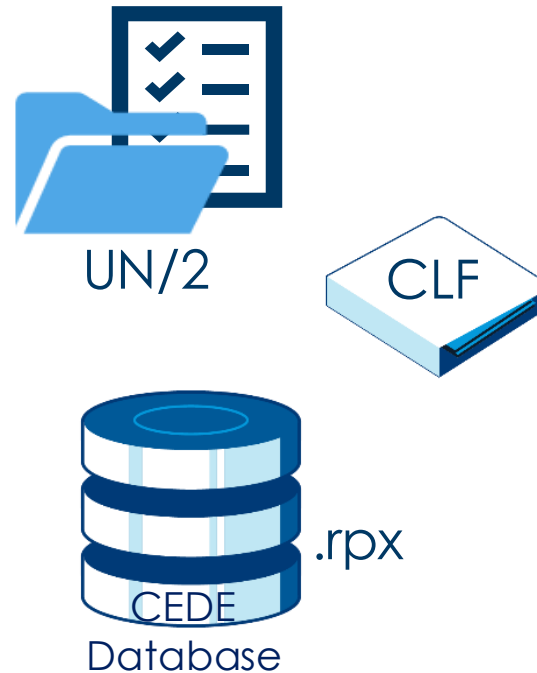
Cedant A

Data provided:



Cedant B

Data provided:



Cedant C

Data provided:



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

Cedant A

Data provided:



UN/2



.evi



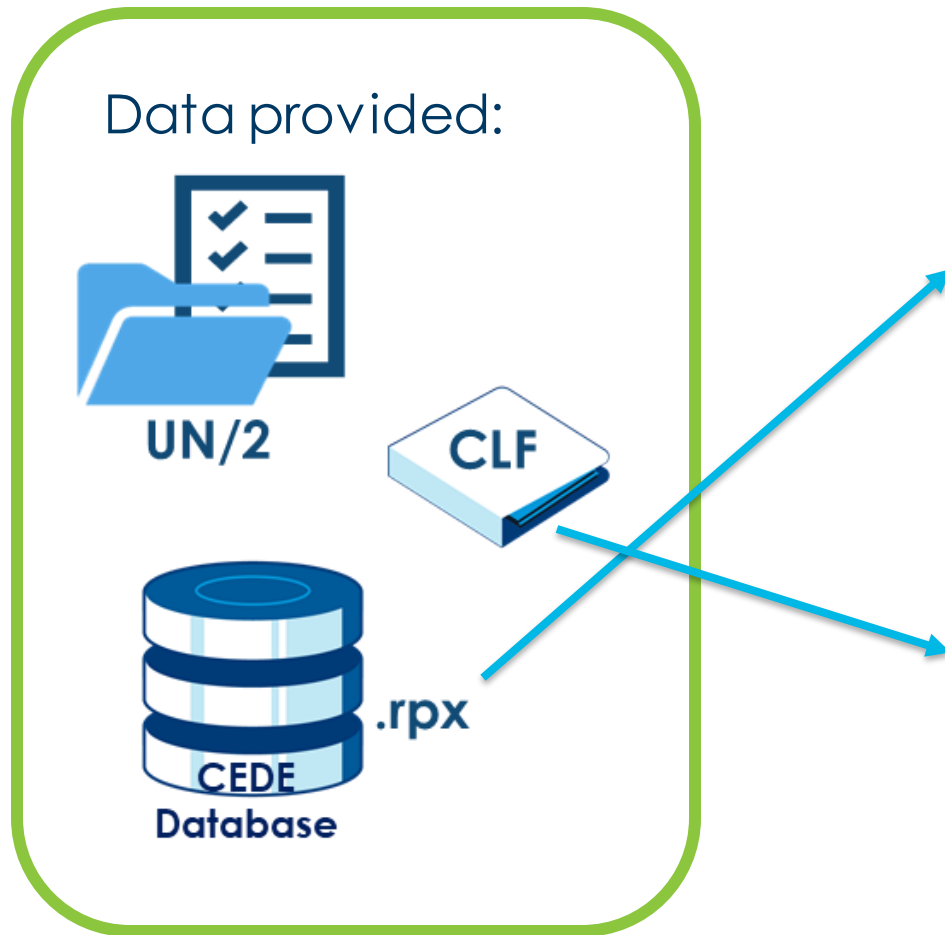
.rpx

```
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

# Adhering to Your View of Risk

Cedant A



## TOUCHSTONE®

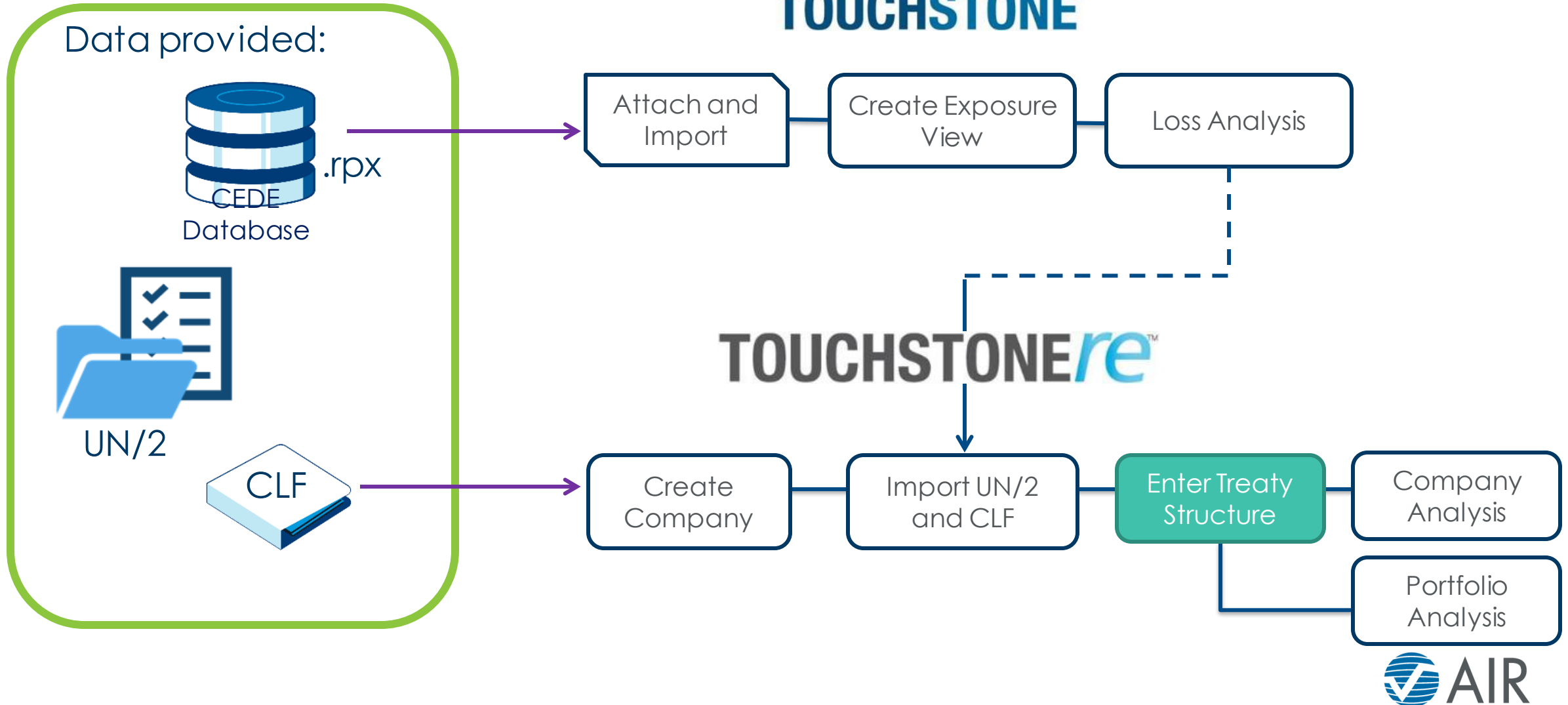
Run the detailed data to produce treaty ground-up losses in line with your company's view of risk

## TOUCHSTONE<sup>re</sup>™

Leverage modeling provided by the broker in the CLF file if it meets your company's view of risk

# Automating the Reinsurance Pricing Workflow

Cedant A



# Sample API Solution – Select Data

## Select Folders to Submit New Jobs

SUBMIT

☐ CedantA

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

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]

Scenario 1:

# CLF Is Checked and Meets Modeling Requirements

# 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  
\*\*\*\*\*



Scenario 2:

CLF Is Checked and Does Not Meet  
Modeling Requirements

# 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

# Sample API Solution – Complete Workflow

[7] - CedantB

Completed

Loss - 100%

Export CLF - 100%

Import CLF - 100%

```
*****
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
[3/19/2019 9:17 AM] - Submitted export CLF: CedantB_Default
*****

Touchstone Re
*****
[3/19/2019 9:19 AM] - Created new company: CedantB
[3/19/2019 9:19 AM] - Submitted import CLF: CedantB_Default_NT
*****

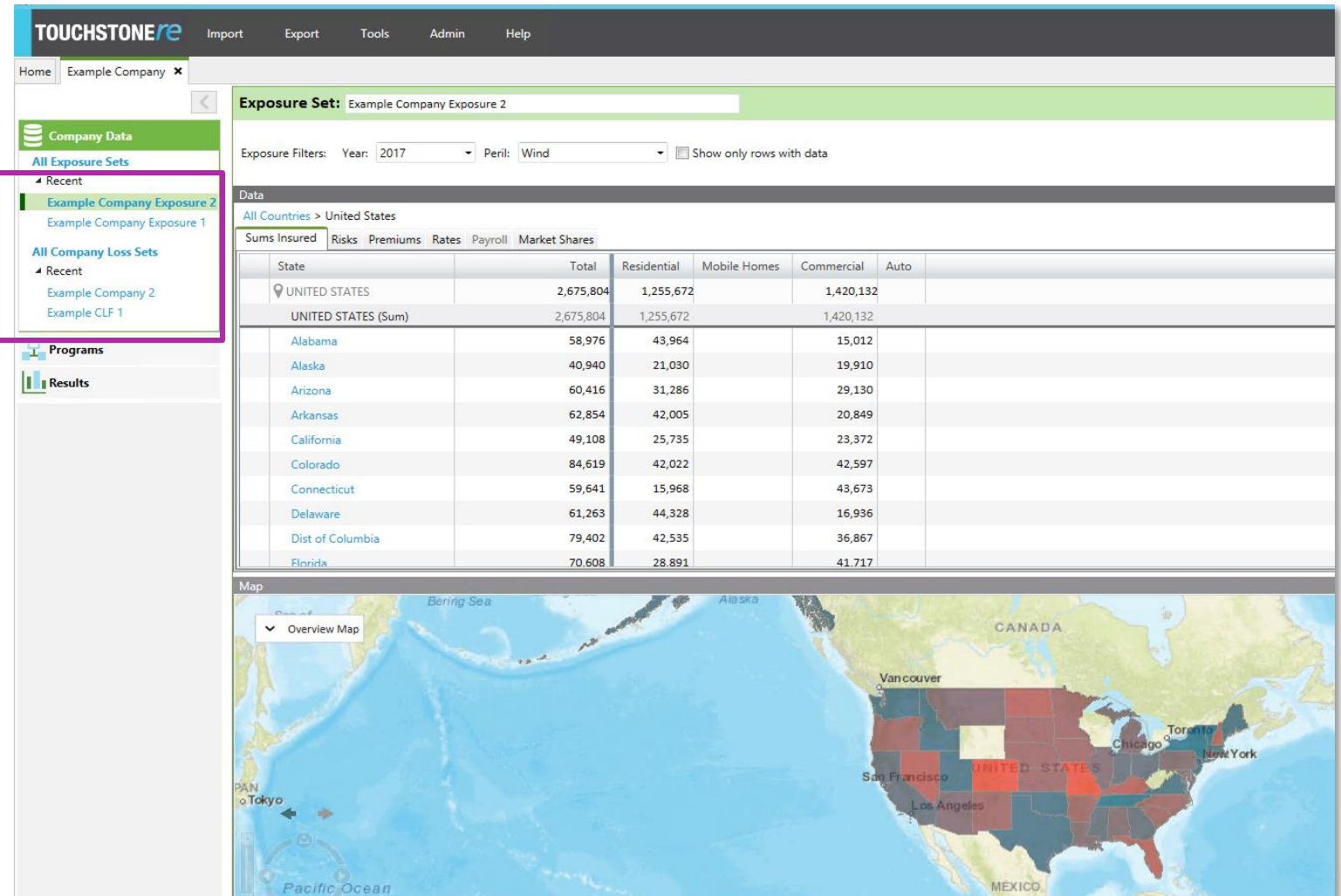
Workflow Complete
3/19/2019 9:19 AM
*****
```

Ready for **TOUCHSTONE***re*<sup>TM</sup> Modeling!

# Touchstone Re Company – Ready for Modeling

## Company contains:

- Aggregate exposure from UN/2 file
- CLF losses produced with your view of risk



# Add Complex Layer Structure

**TOUCHSTONE<sup>re</sup>** Import Export Tools Admin Help

Home Test 2 Example Company

**Company Data**

- Programs
  - All Programs
  - Recent
    - example
    - Retained Quota Share
    - Structure to be priced**
    - Inuring CAT Bond 4
    - Inuring CAT Bonds 1,23
    - FHCF Program
    - Peril Split to Remove FL Wind
    - Inuring Treaty 4
    - Inuring Treaties 1,2,3
    - View Fewer...
- Results

**Program: Structure to be priced**

**Program Details**

Program Type: Catastrophe Excess of Loss  
Inception Date: 01/01/2018  
Expiration Date: 12/31/2018  
Modified: 6/19/2018 by air-worldwide\l80895

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

Layers Program Options Relationships

**Available Program Templates**

Company	Assessment
▼ Name ▲	Date Range
example	1/1/2018-12/31/..
FHCF Program	1/1/2018-12/31/..
Inuring CAT Bon...	1/1/2018-12/31/..
Inuring CAT Bon...	1/1/2018-12/31/..
Inuring Treaties 1...	1/1/2018-12/31/..
Inuring Treaty 4	1/1/2018-12/31/..
Peril Split to Rem...	1/1/2018-12/31/..
Retained Quota S...	1/1/2018-12/31/..

**New Programs**

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

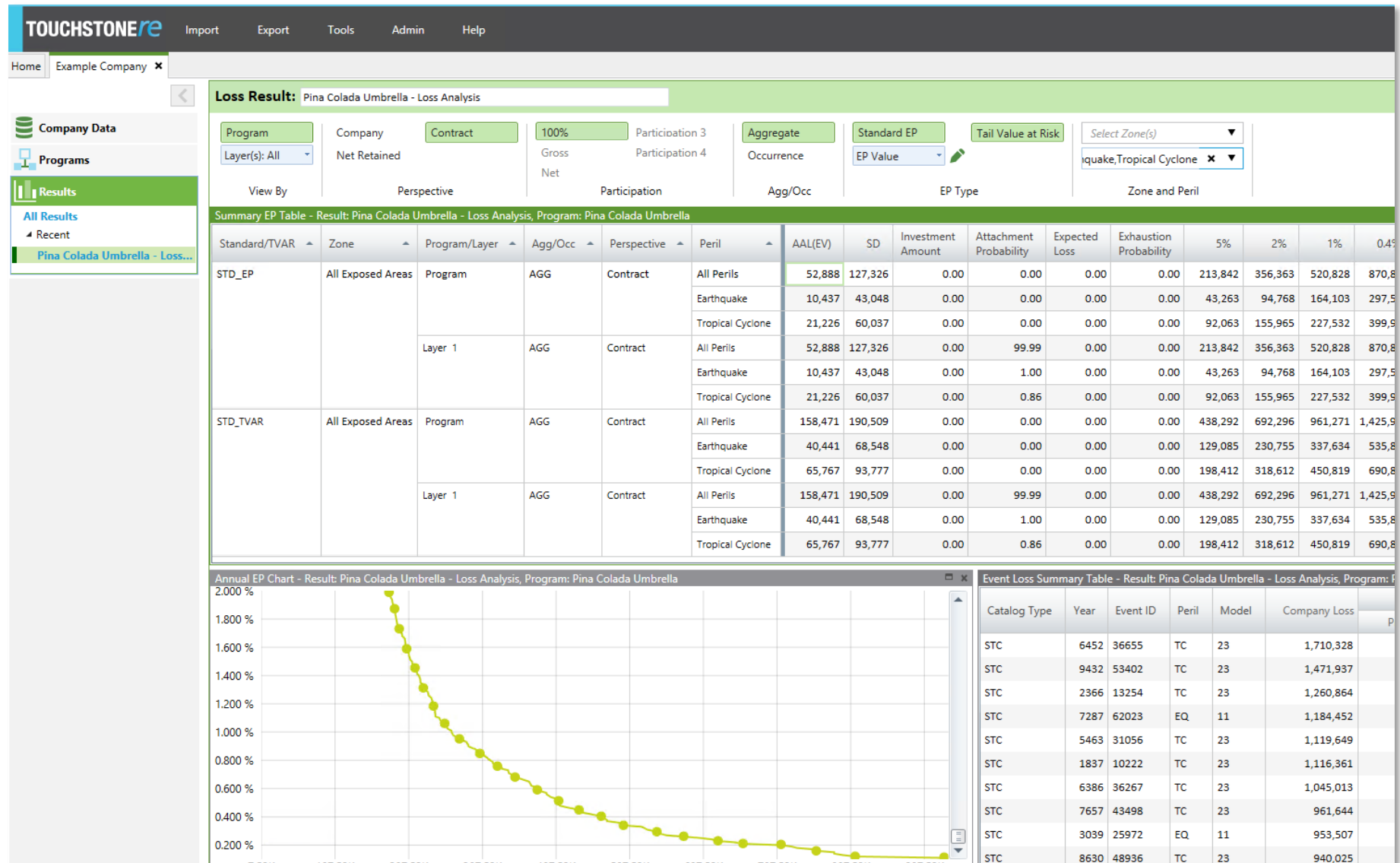
**Relationship Properties Manager**

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

**Diagram:**

```
graph TD; RetainedQuotaShare[Retained Quota Share] -.-> StructureToBePriced[Structure to be priced]; InuringTreaties123[Inuring Treaties 1,2,3] -.-> StructureToBePriced; InuringTreaty4[Inuring Treaty 4] -.-> StructureToBePriced; FHCFProgram[FHCF Program] -.-> StructureToBePriced; InuringCATBonds123[Inuring CAT Bonds 1,23] -.-> StructureToBePriced; InuringCATBond4[Inuring CAT Bond 4] -.-> StructureToBePriced; example[example] --> InuringTreaty4; PerilSplit[Peril Split to Remove FL Wind] --> InuringCATBonds123;
```

# Complete Pricing



# Portfolio Rollup

The screenshot displays the TOUCHSTONEre web application interface. The top navigation bar includes 'Import', 'Export', 'Tools', 'Admin', and 'Help'. The 'Home' tab is selected. Below the navigation bar, the 'Reinsurance' section is active, with 'Companies' and 'Portfolios' tabs. The 'Portfolios' tab is highlighted with a red box. The 'All Portfolios' and 'My Portfolios' links are visible. A table lists the portfolios:

Portfolio Name	Type	Date Created	Date Edited	Description
Static Portfolio	Static	10/28/2019 1:37:45 PM	10/28/2019 1:37:45 PM	
Test	Static	8/20/2019 10:16:46 AM	8/20/2019 10:16:46 AM	

Below the table, a 'Create Portfolio' dialog box is open, also highlighted with a red box. It contains the following fields and options:

- Portfolio Name: NewPortfolio\_Q4
- ☒ Static Portfolio
- ☐ Dynamic Portfolio
- Buttons: Create, Cancel

On the right side of the screenshot, a red box contains the text:

Available with  
V7.1 APIs



# AIR's Upcoming APIs for Touchstone Re

# New and Planned Touchstone Re APIs for 2020



New in v7.1



Create Status and  
Dynamic Portfolios

Planned for 2020



Copy Company,  
Program, and  
Exposure



Create Complex  
Program Relationships



Duplicate Portfolio



Add Event Filter



Run Multiple Programs in  
a Company

# Partnering with AIR in Migration and Integration

# Partnering with AIR in Migration and Integration

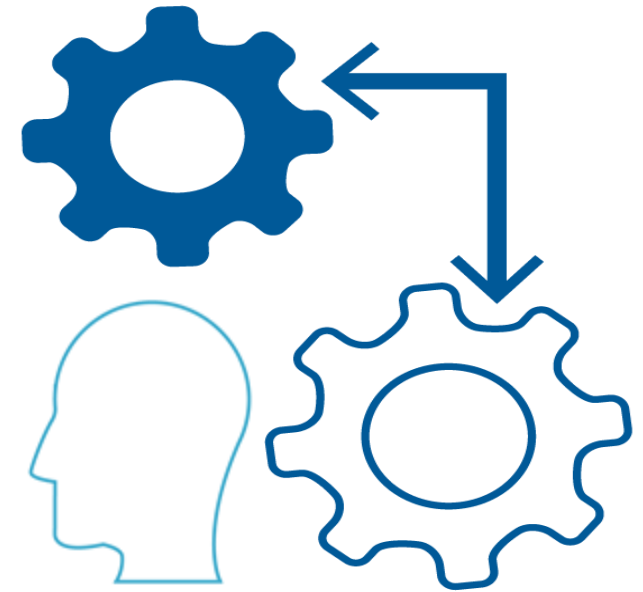
25+ Companies



Customized  
Transition



USD 50+ billion in  
premiums annually



## Contact Us



Bill Walker  
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