

Cambridge Centre for Risk Studies
Advisory Board Research Showcase – 23 January 2018

An Integrated Platform for Risk Research

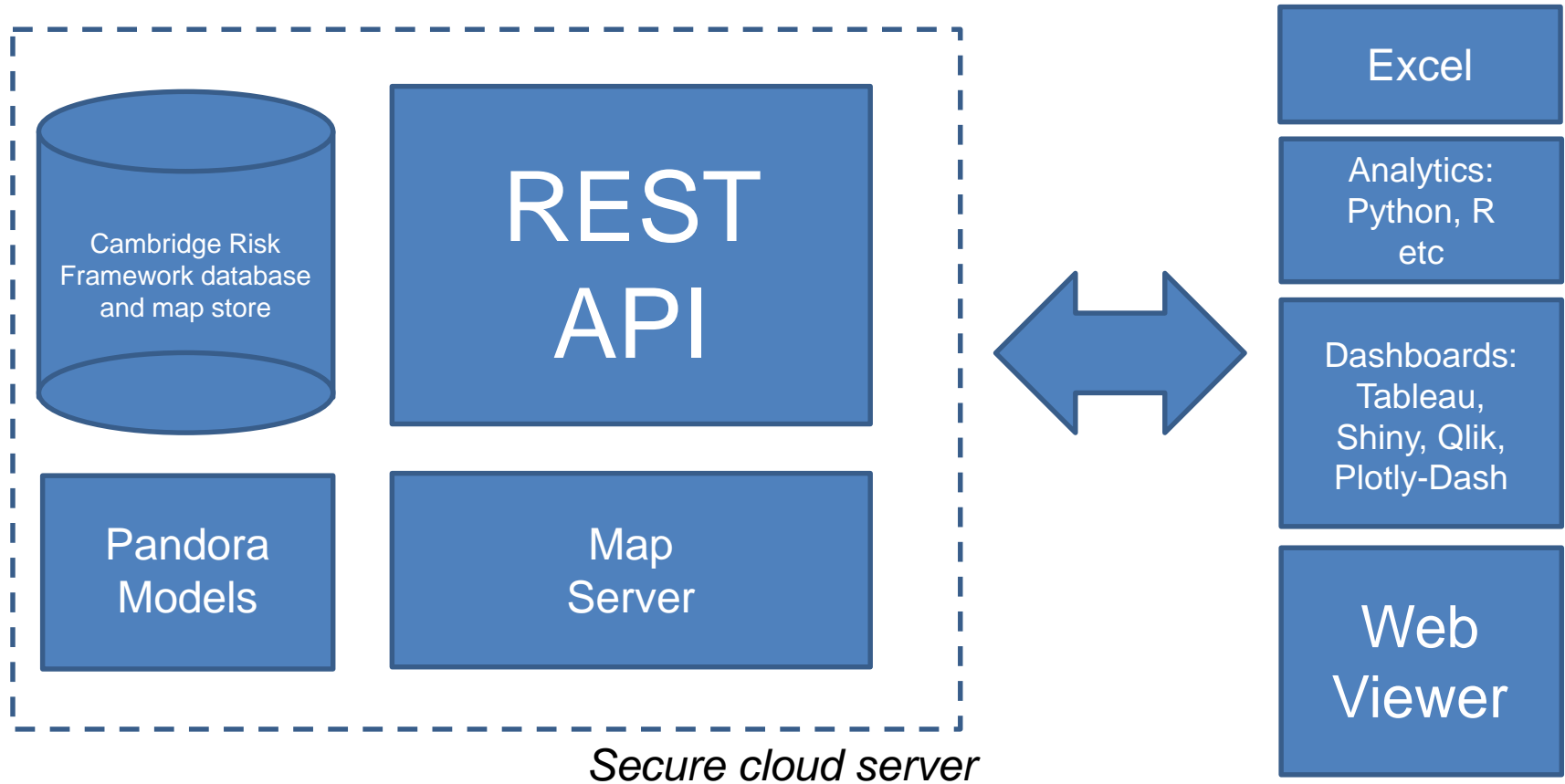
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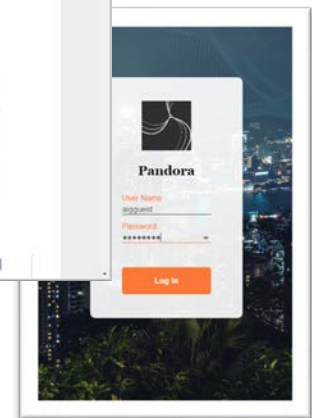
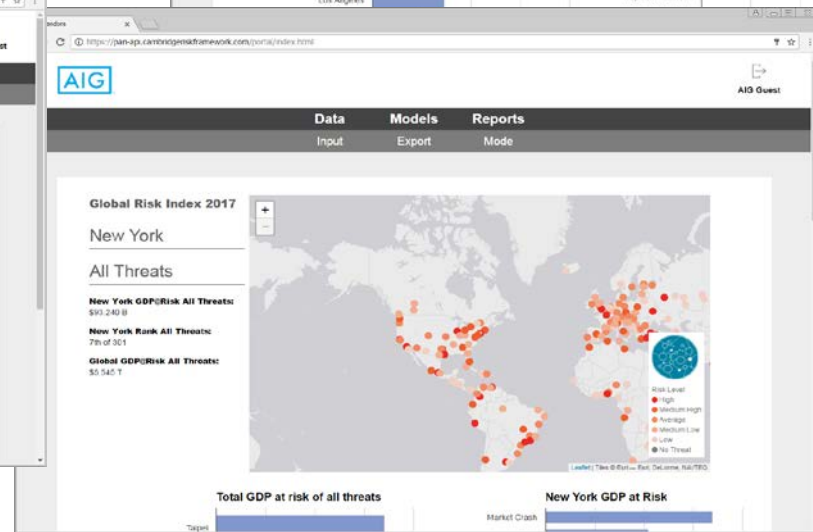
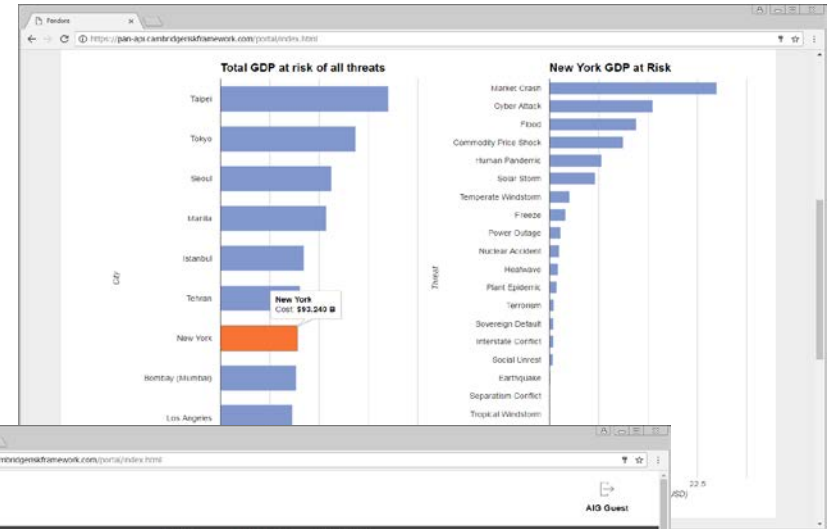
Simon Ruffle
Research Assistant
Cambridge Centre for Risk Studies

Cambridge Risk Framework



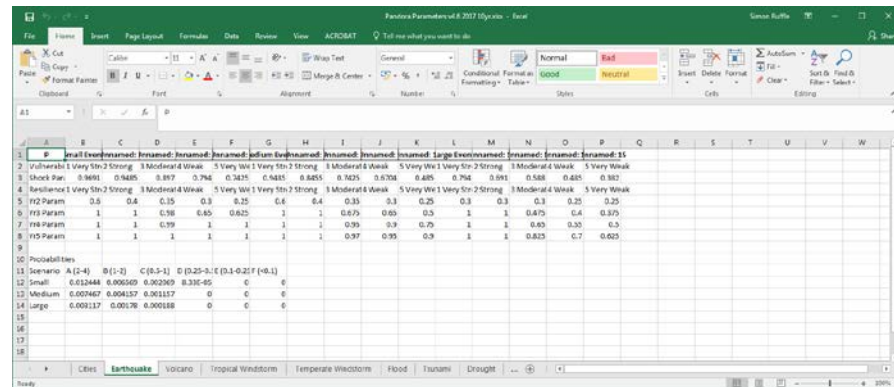
Web Viewer

- Upload a schedule of locations with revenues
- Run a model
- View results in a dashboard
- Download results to Excel
- Share dashboard with colleagues



Methodological Advances 2017

- New simplified Parameter Spreadsheet
 - No more secondary threats
- New V5 Model
 - City boundary definitions and GDP estimates from Oxford Economics
 - Derivation of resilience metrics using the InfoRM Index for Risk Management.
- Team uses various development environments:
 - Spyder
 - Plotly-Dash
 - Web viewer
 - Excel



The screenshot shows an Excel spreadsheet with a parameter matrix and probability distributions. The matrix has columns labeled 'Small Event', 'Medium Event', 'Large Event', and 'Very Large Event' and rows labeled 'R1 Param', 'R2 Param', 'R3 Param', and 'R4 Param'. The probabilities are listed in the bottom rows.

	Small Event	Medium Event	Large Event	Very Large Event
R1 Param	0.9891	0.9405	0.897	0.794
R2 Param	0.5	0.4	0.15	0.3
R3 Param	1	1	0.96	0.65
R4 Param	1	1	0.99	1

Probabilities:

Scenario	A (2-4)	B (1-2)	C (5-1)	D (2.25-2.1)	E (2.1-0.2)	F (0.1)
Small	0.612448	0.000569	0.302969	0.330	0	0
Medium	0.001747	0.004137	0.01157	0	0	0
Large	0.001137	0.00170	0.00188	0	0	0

API Progress 2017

- Uploads new Parameter Spreadsheet
- Model version management
- Pandora partners can manage their own users
- Hybrid of SQL and No-SQL database architecture
- Improved and faster range of results endpoints
- Lloyd's 2018 City Risk Index receiving data from REST API
- Improved documentation



Cambridge Risk Framework 2018

- Global Risk Index
 - Support for City Risk Index 2018 Launch in April
 - Preparation for 2019
- Support for Data Provenance
- Pandora Methodological Advances
 - Cyber Sub threats for loss processes
 - Data Exfiltration
 - DDOS
 - Contagious Malware
 - Cloud Outage
 - Resilience case studies
- Use Case Development themes
 - Insurance Purchasing Framework
 - Corporate Risk Profiling
 - Cyber Threat Index
- New Web User Interfaces
 - Web viewers 2.x

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