



Esri International Developer Summit
Palm Springs, CA

Implementing Data Reviewing, Reporting, and Validation into Web Applications

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A very short history of problems created by bad data

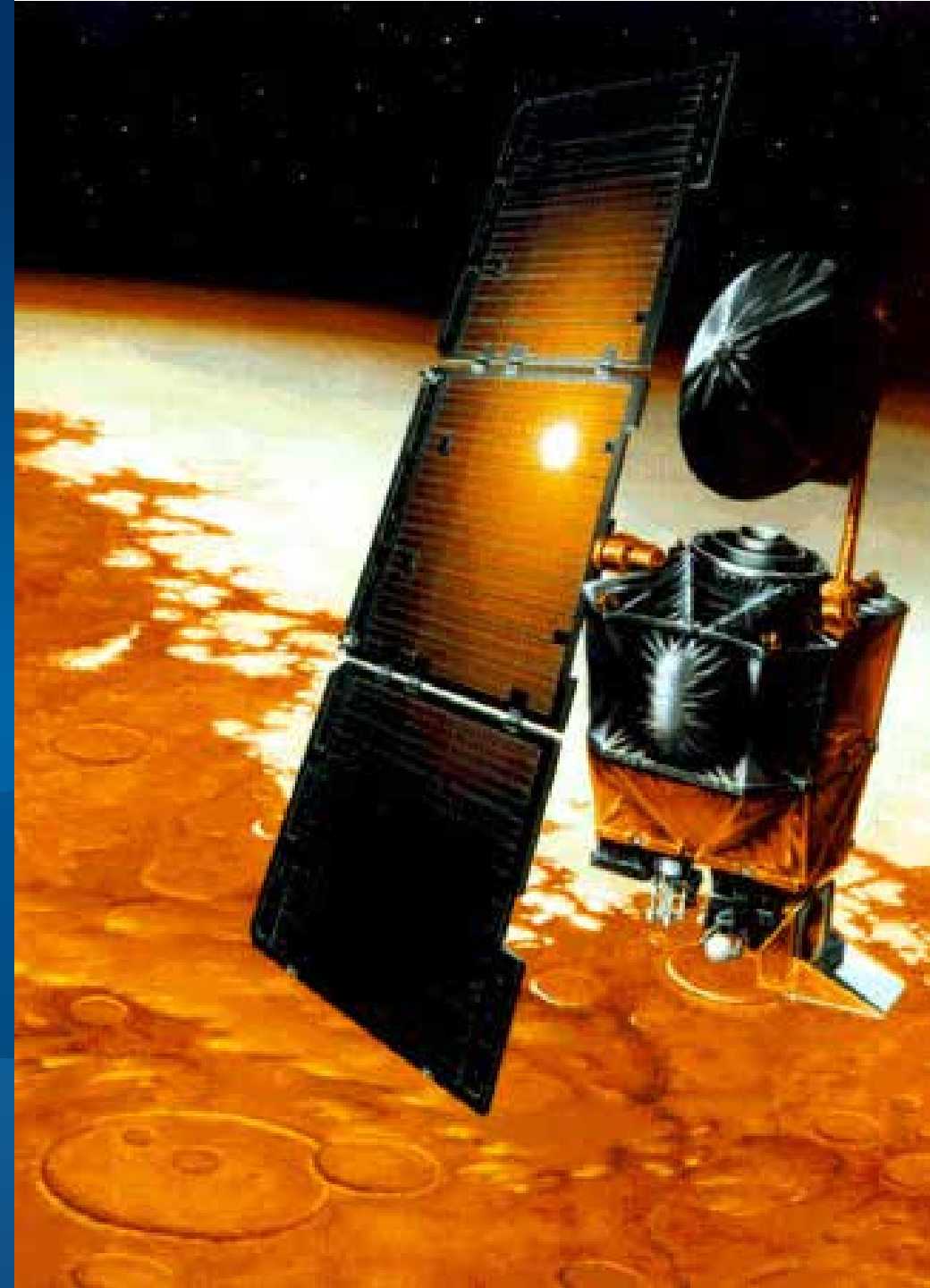


Image courtesy of NASA

Leaning tower of Pisa



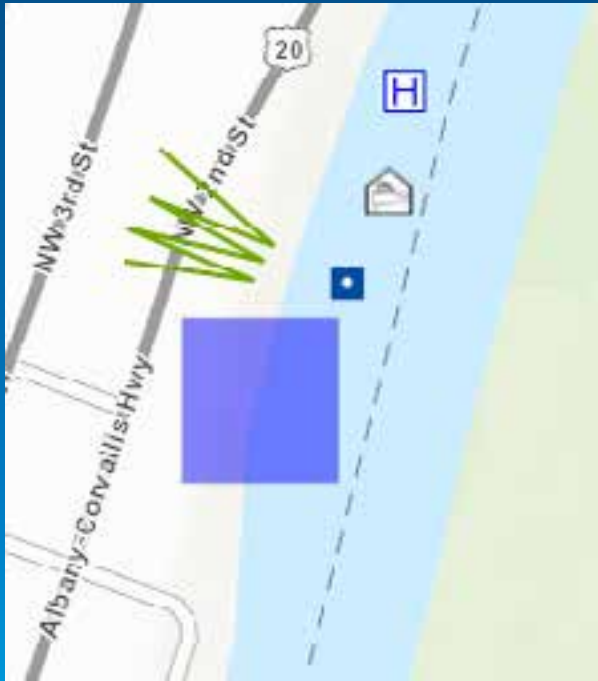
Image courtesy of [arcgis.com](https://www.arcgis.com)

Mars Climate Orbiter (1999)



GIGO

- Garbage in Garbage Out



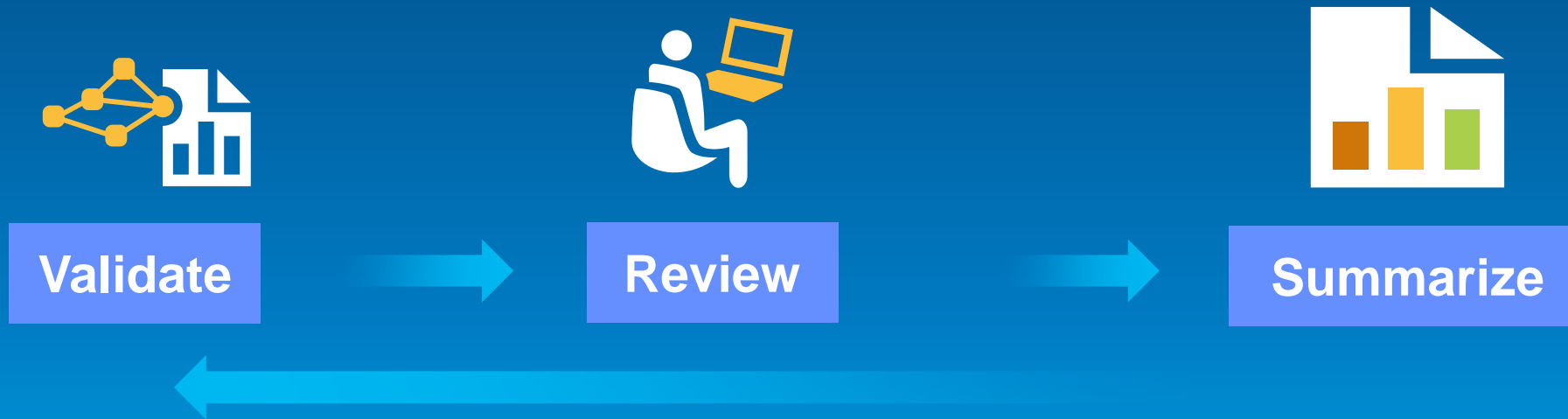
ArcGIS Data Reviewer

Agenda

- **Validating data and demo**
- **Reviewing results and demo**
- **Data quality summary and demo**

What is ArcGIS Data Reviewer?

- System to support data quality management for ArcGIS
- Monitors and measures data quality

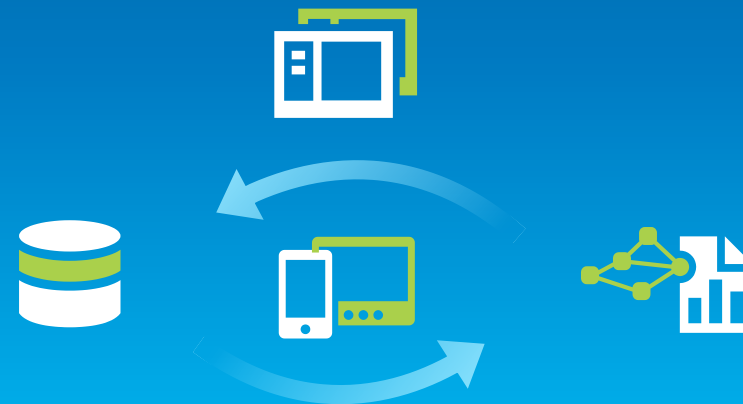


How can it help you?

- Reduce risk in deploying new apps
Validate data quality prior to app deployment



Validate data quality throughout app lifecycle



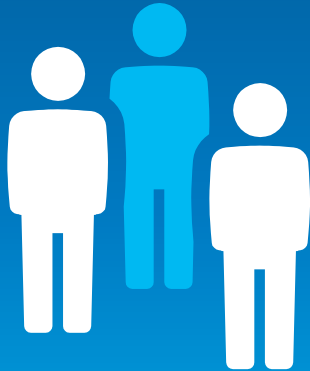
How can it help you?

- Measures data quality
- Control the costs associated with bad data by publishing reports which identify risks



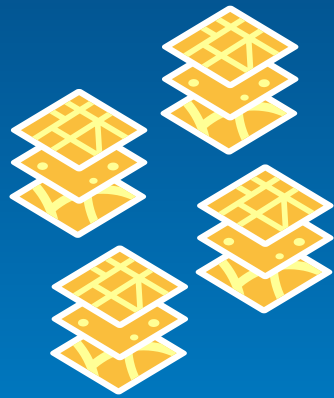
How can it help you?

- **Shield your users from data quality problems**
 - Alerting users to known data quality issues
 - Enabling crowd-sourcing for DQ feedback

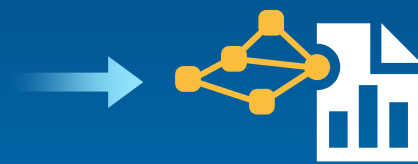


What are the consequences of bad data?

- Community Maps

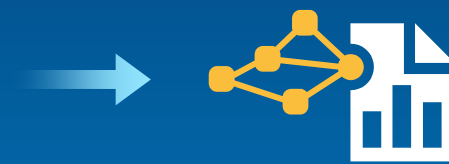


Contributor data



Check for missing
Elements and
geometry issues

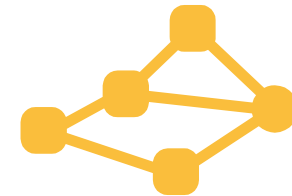
Prevents data corruption!



Identify cartographic
errors

**Prevents errors like
Buildings on water!**

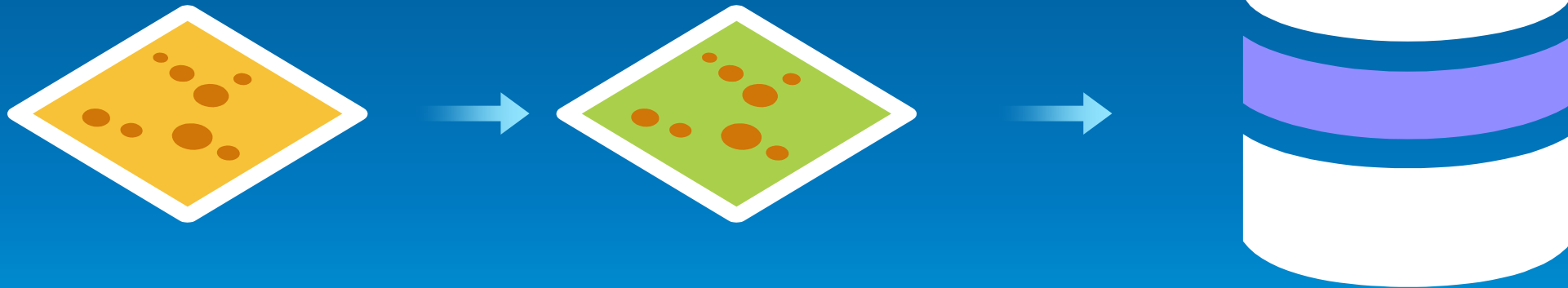
Monitoring your data with validation



Validate

Automated Validation

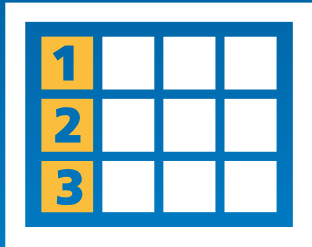
- *Checks* validate data based on conditions you define.
- Results are written to the Reviewer workspace.



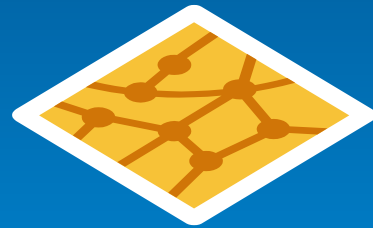
Automated Validation

- 40+ Checks

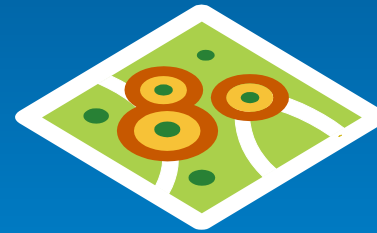
Attribute/Table



Feature integrity



Spatial Relationships



Item Metadata

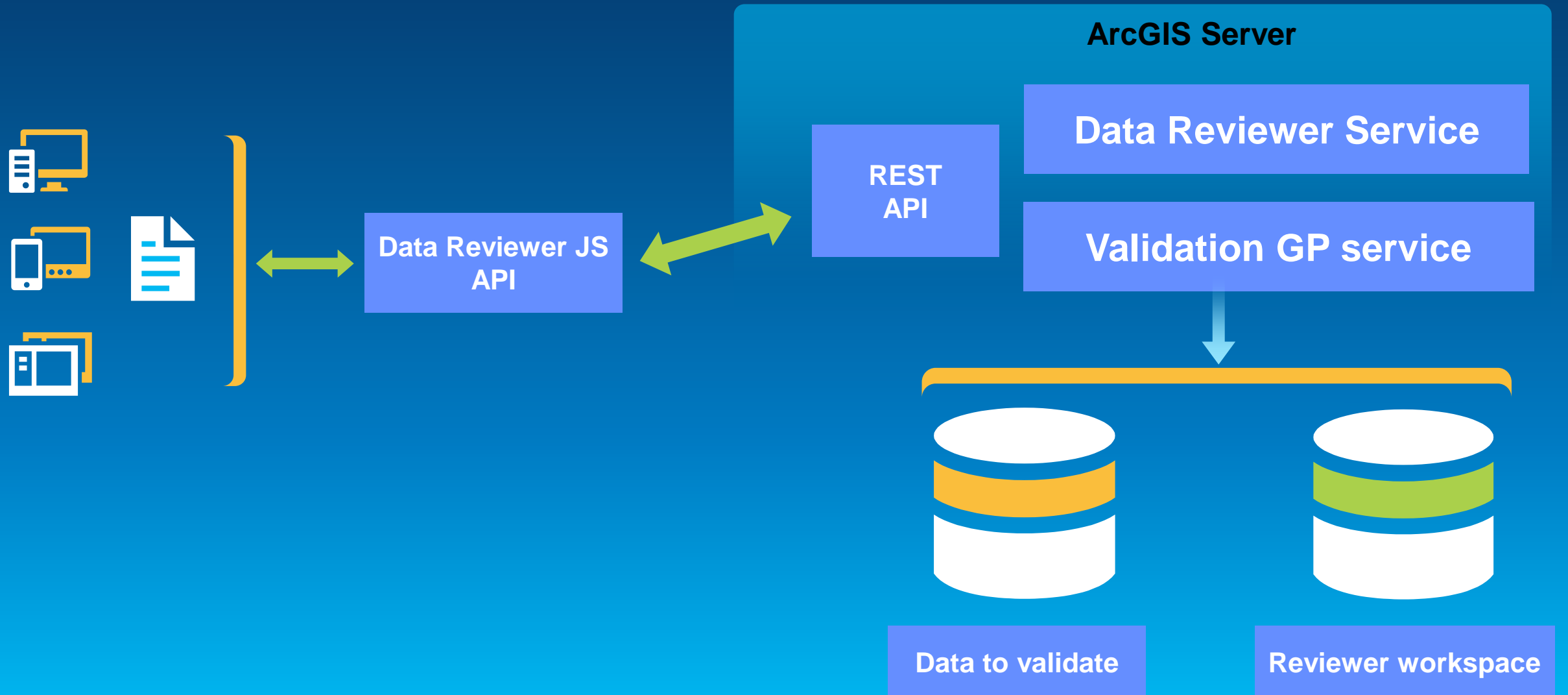


Automated validation

- Group checks into batch jobs



Automated Validation



Demo workflow

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Contractor



Viewing Results



Review

Results

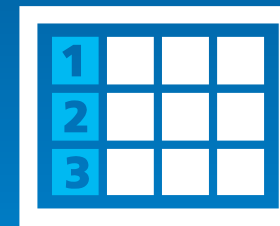
- Results are features or rows created by validation



Validation uses checks in a batch file to search data based on conditions you configure



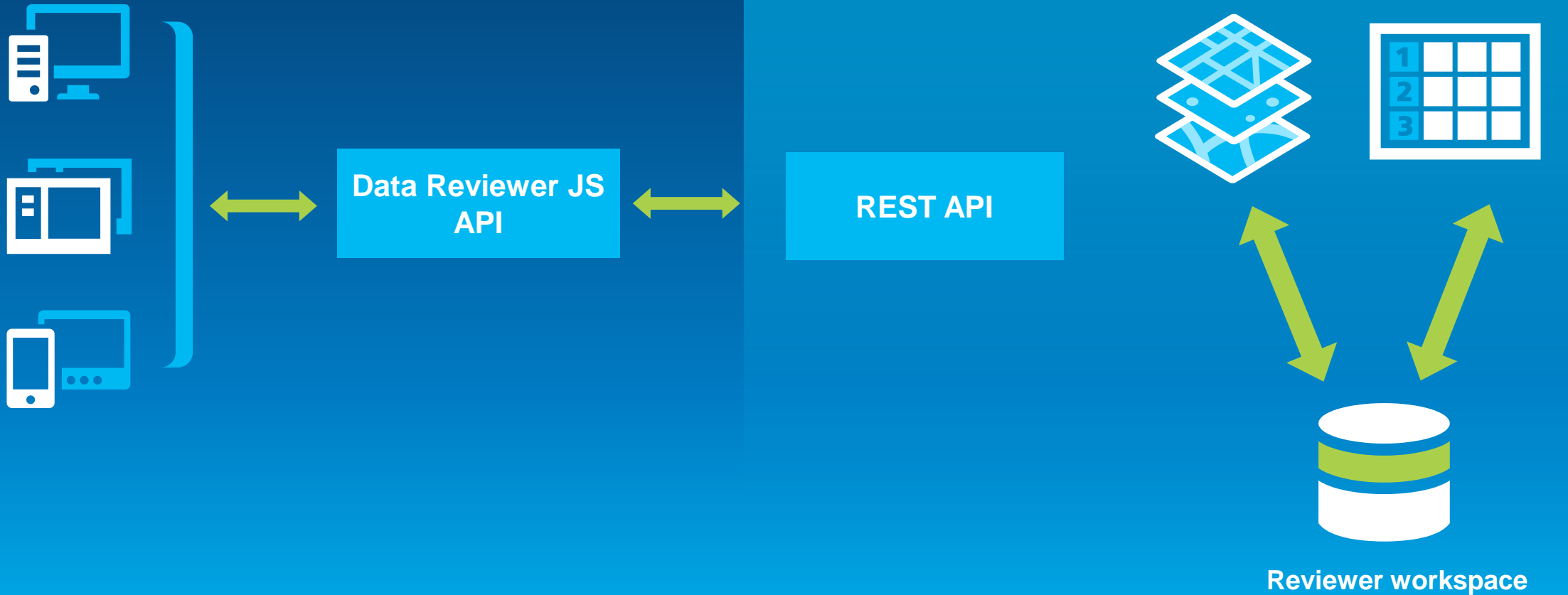
Features and rows returned by that search are written to the Reviewer workspace



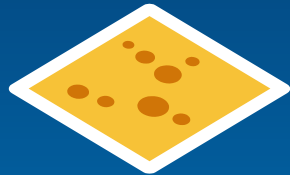
Data in Reviewer Workspace is viewed in a Map service or table

Results

- Query and write results



Results



Object Id	Session Id	Checktitle	Resource Name	Check Name	Severity	Review Technician
13009	1	Gravity Main	ssGravityMain	Domain Check	2	testuser
13223	1	Gravity Main	ssGravityMain	Domain Check	2	testuser
13232	1	Gravity Main	ssGravityMain	Domain Check	2	testuser
14575	1	Gravity Main	ssGravityMain	Domain Check	2	testuser
15833	1	Gravity Main	ssGravityMain	Domain Check	2	testuser
17882	1	Gravity Main	ssGravityMain	Domain Check	2	testuser

- Spatial and non-spatial
- Attributes describe check, problem, and validation information
- Object ID provides link back to feature that failed the check

Results demo

Contractor



Measuring Data Quality



Summarize

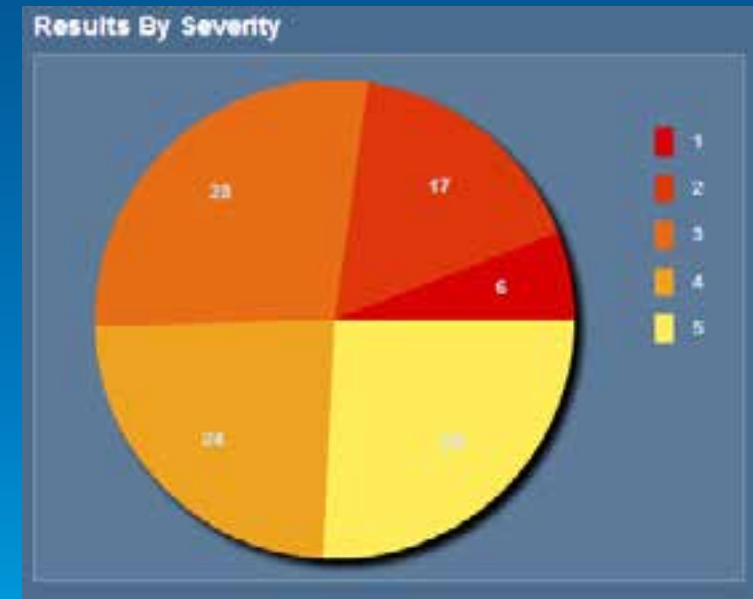
Summarize data quality

- **Dashboard**
 - Data quality summaries
 - Summaries are derived from results
 - Helps stakeholders understand data quality status



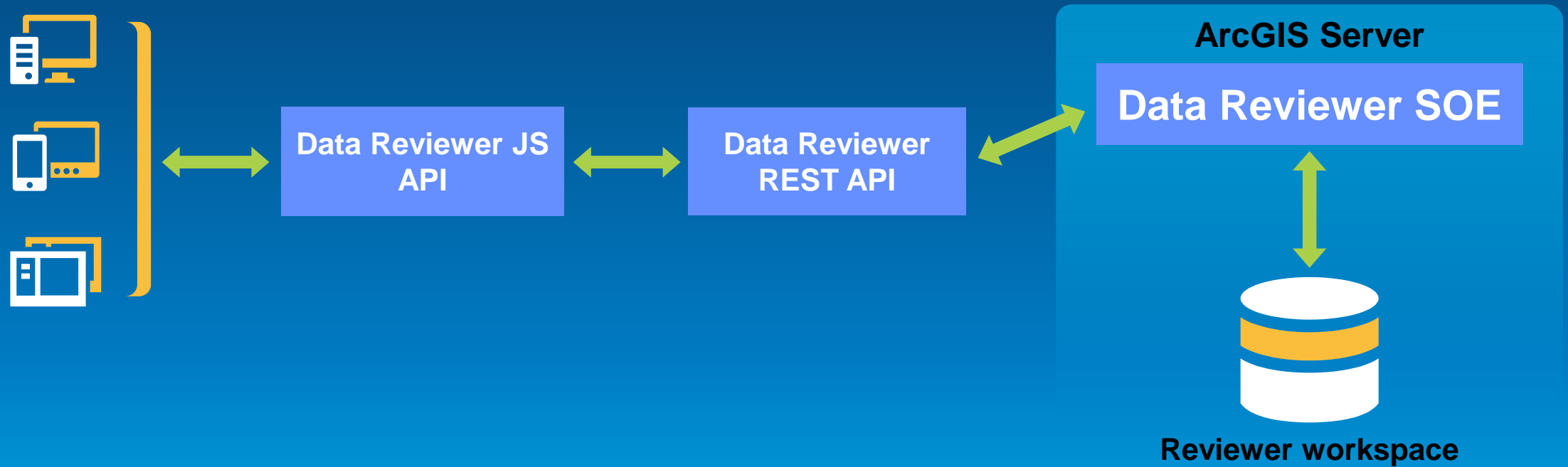
Dashboard

- How many issues do I have in my data by feature class?



- How severe are the issues with my data?

Dashboard



Dashboard demo

Contractor

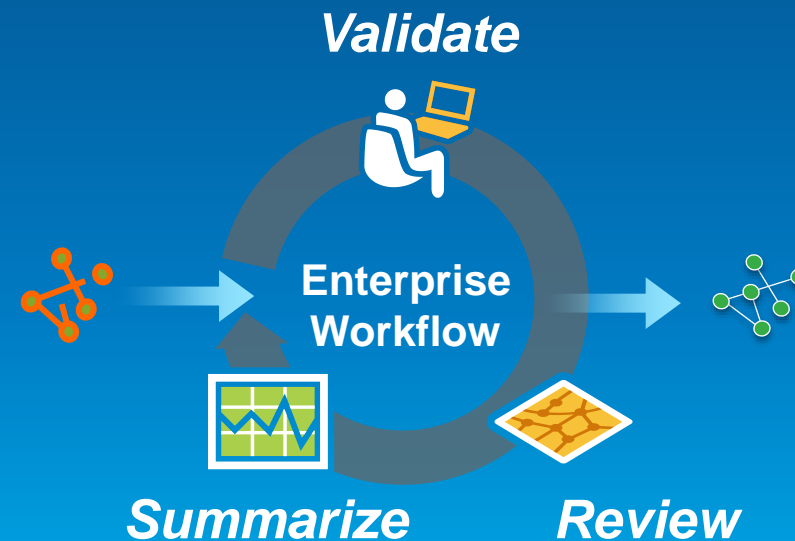


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What is ArcGIS Data Reviewer?

- Data quality management for ArcGIS
 - Provides
 - Rule based workflows
 - Interactive tools
 - Track data issues
 - For individuals and enterprise
 - Saves time/money
 - Less rework
 - Standard extension to ArcGIS
 - Desktop extension since 8.0
 - Server extension at 10.1



Resources

- **Product page**
 - www.esri.com/datareviewer
- **Resource center**
 - <http://resources.arcgis.com/en/communities/data-reviewer/>
 - Includes live samples
- **Training**
 - www.esri.com/training
- **Questions and comments**
 - datareviewer@esri.com
- **Session Survey:**
 - <http://www.esri.com/events/devsummit/session-rater>
 - See link on <http://www.esri.com/devsummit>





Understanding our world.