Data Dashboards: Who, What, When, Where, Why, and How

PNWS Conference
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City of Hillsboro | Water Department/Joint Water Commission

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Outline

WHAT ARE DASHBOARDS?

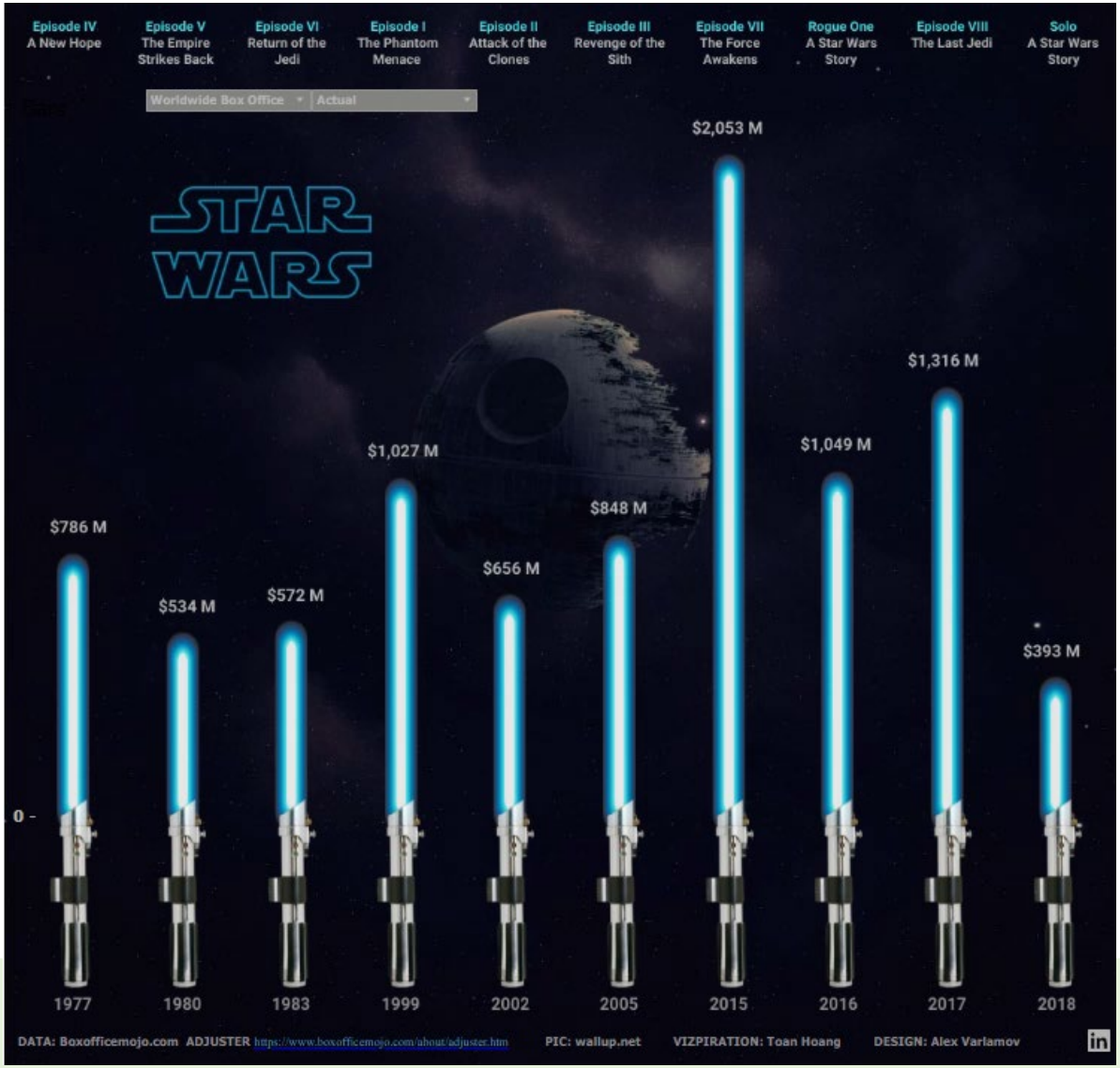
DASHBOARD CONSIDERATIONS

EXAMPLES

WHAT ARE DASHBOARDS?

- A data dashboard is a tool used to analyze and display data
- Dashboards often
  - are interactive or reference data in real-time
  - track or monitor progress or trends using key performance indicators (KPIs)
  - highlight a small portion of larger dataset to tell a specific story
  - replace static reports for a more engaging experience
  - easily accessible online or via shared server
  - save time generating reports
  - can be used to search/ download data, particularly federal government
- Data ≠ numbers

WHAT ARE DASHBOARDS?



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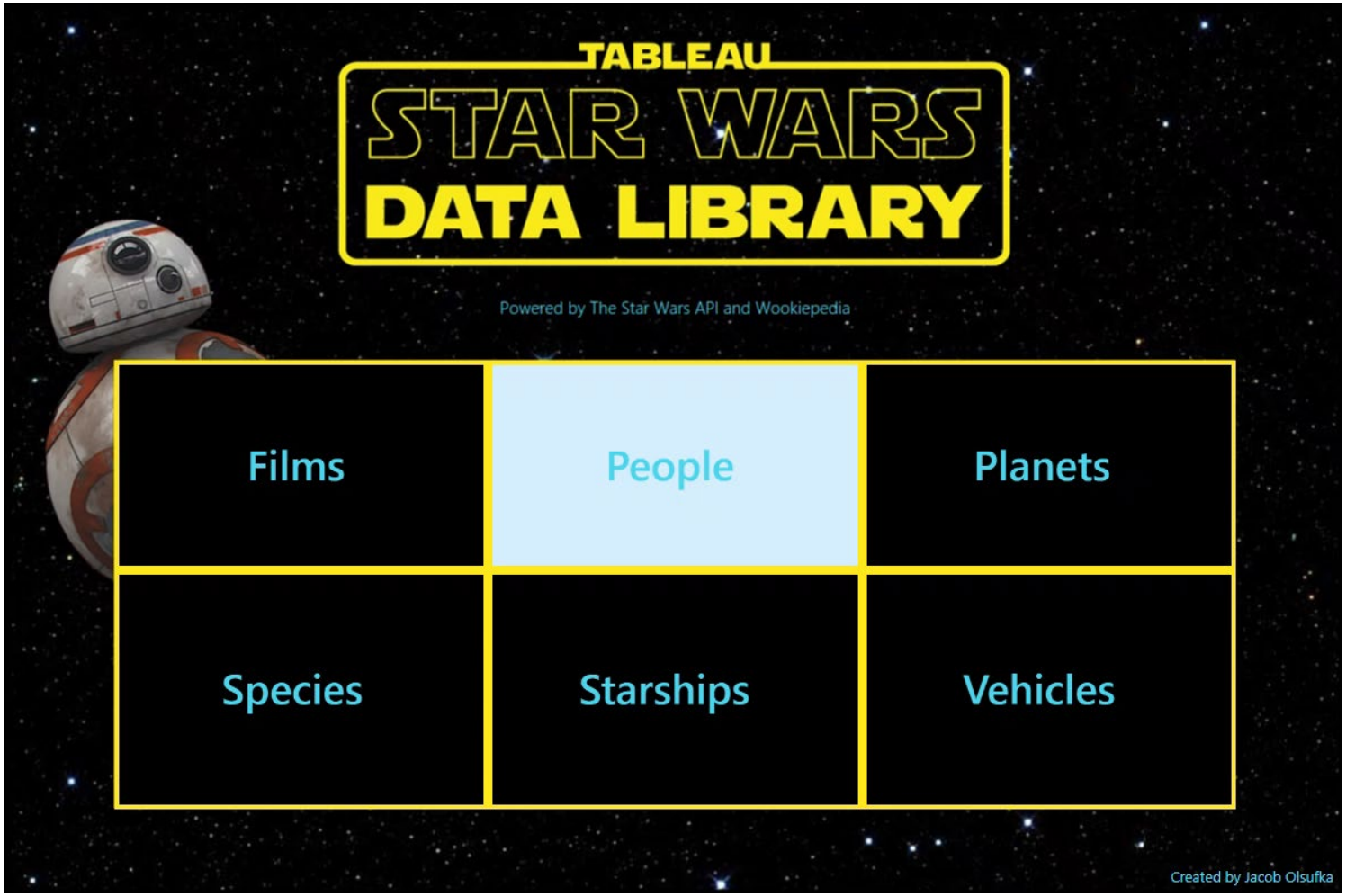

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DASHBOARD CONSIDERATIONS

Who	Who is the intended user? Is there interest? Who will maintain it?
What	What is the data source? What type of data is it? What program will work best?
When	When will the dashboard need to be ready? Does the effort match the reward?
Where	Where will the dashboard be published?
Why	Will this replace a report? Is the dashboard for decision making?

DASHBOARD CONSIDERATIONS

How

Narrow the focus. Keep it simple. Make it performant and scalable. Address the W's.

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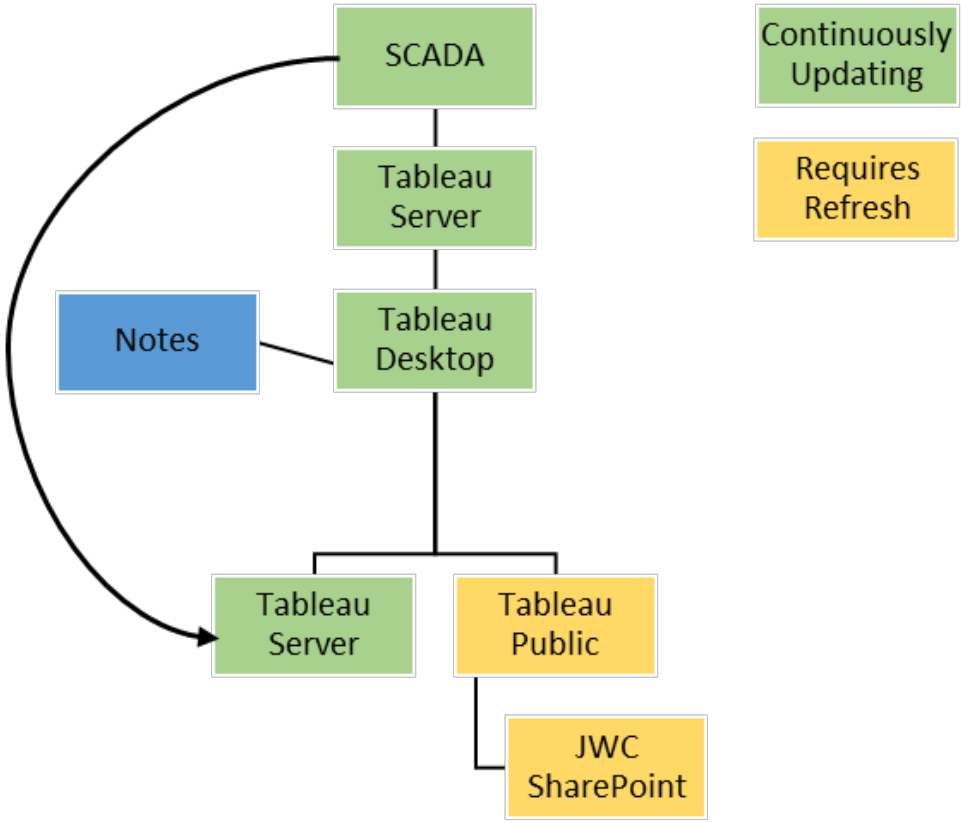
EXAMPLES: JWC DASHBOARD

Who	JWC partners. Maintained by Hillsboro Water staff.
What	Tableau-based dashboard connected to SCADA export. Time-series water quality and flow data.
When	No time restrictions. Effort = Reward.
Where	JWC SharePoint, internal only.
Why	Replaces a report generated in Seeq.

SCADA: Supervisory Control and Data Acquisition

EXAMPLES: JWC DASHBOARD

How ~~Narrow the focus. Keep it simple. Make it performant and scalable.~~



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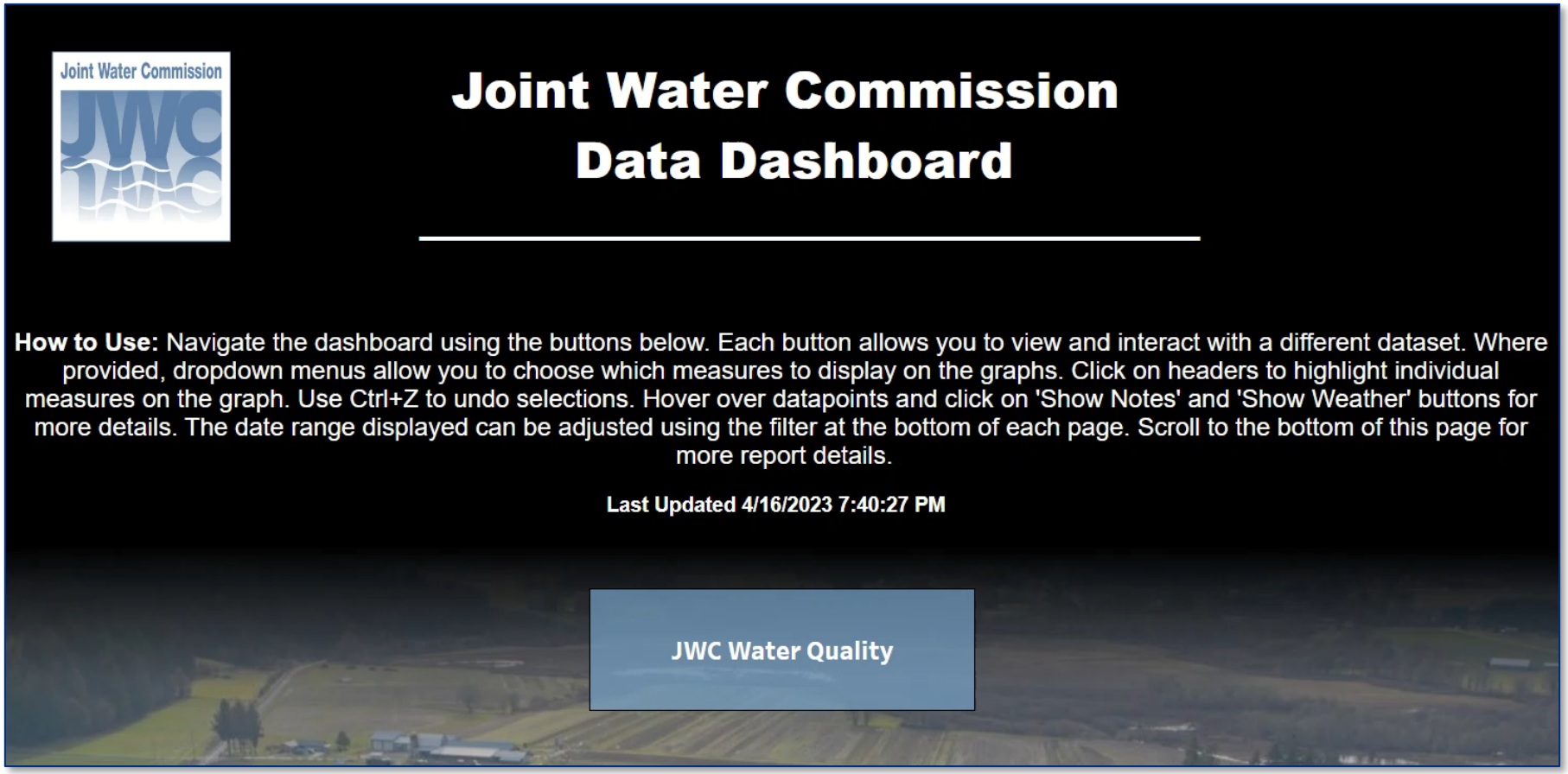
EXAMPLES: JWC DASHBOARD



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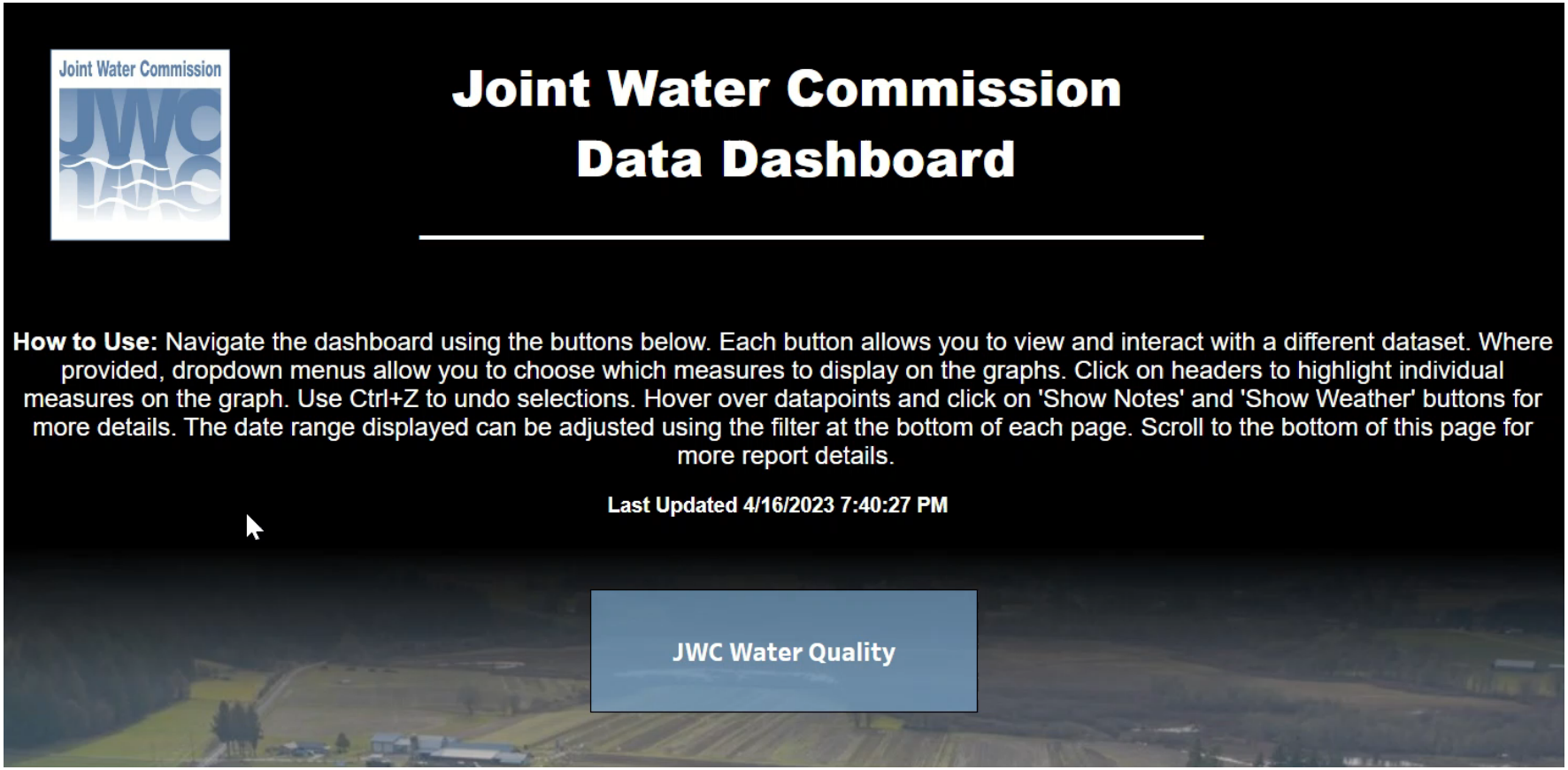
EXAMPLES: JWC DASHBOARD



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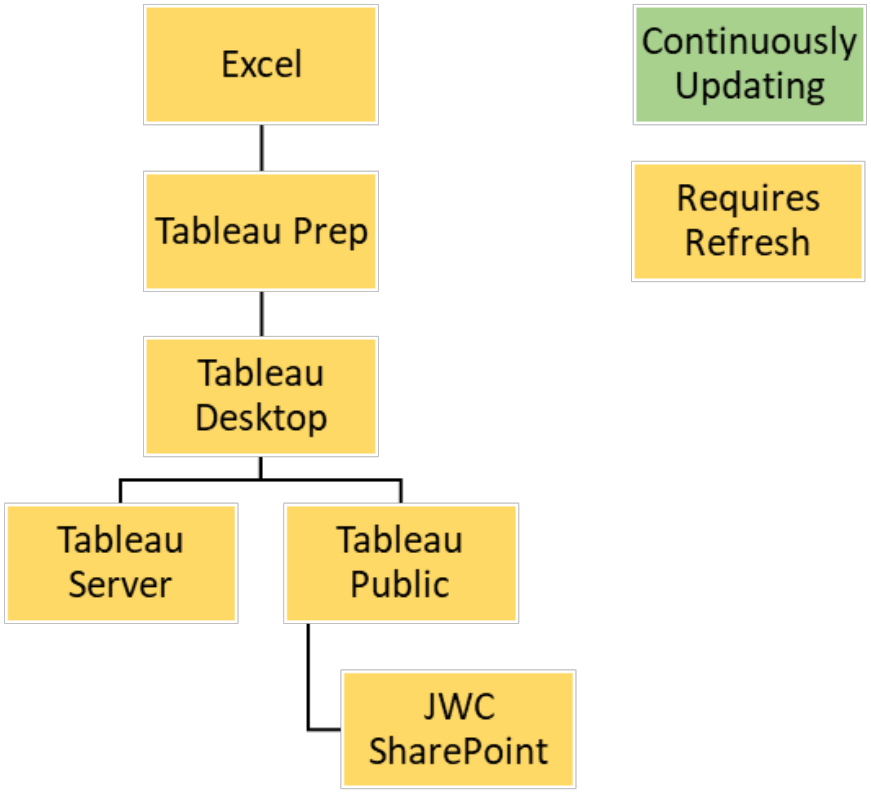
EXAMPLES: STORAGE ALLOCATIONS

Who	JWC partners, staff, and basin stakeholders.
What	Excel spreadsheets. Daily totals.
When	Prior to release season starting. Effort = Reward.
Where	JWC SharePoint and PDF email distribution.
Why	Replaces a report generated in Excel.

EXAMPLES: STORAGE ALLOCATIONS

How Narrow the focus. Keep it simple. Make it performant and scalable. Address the W's.



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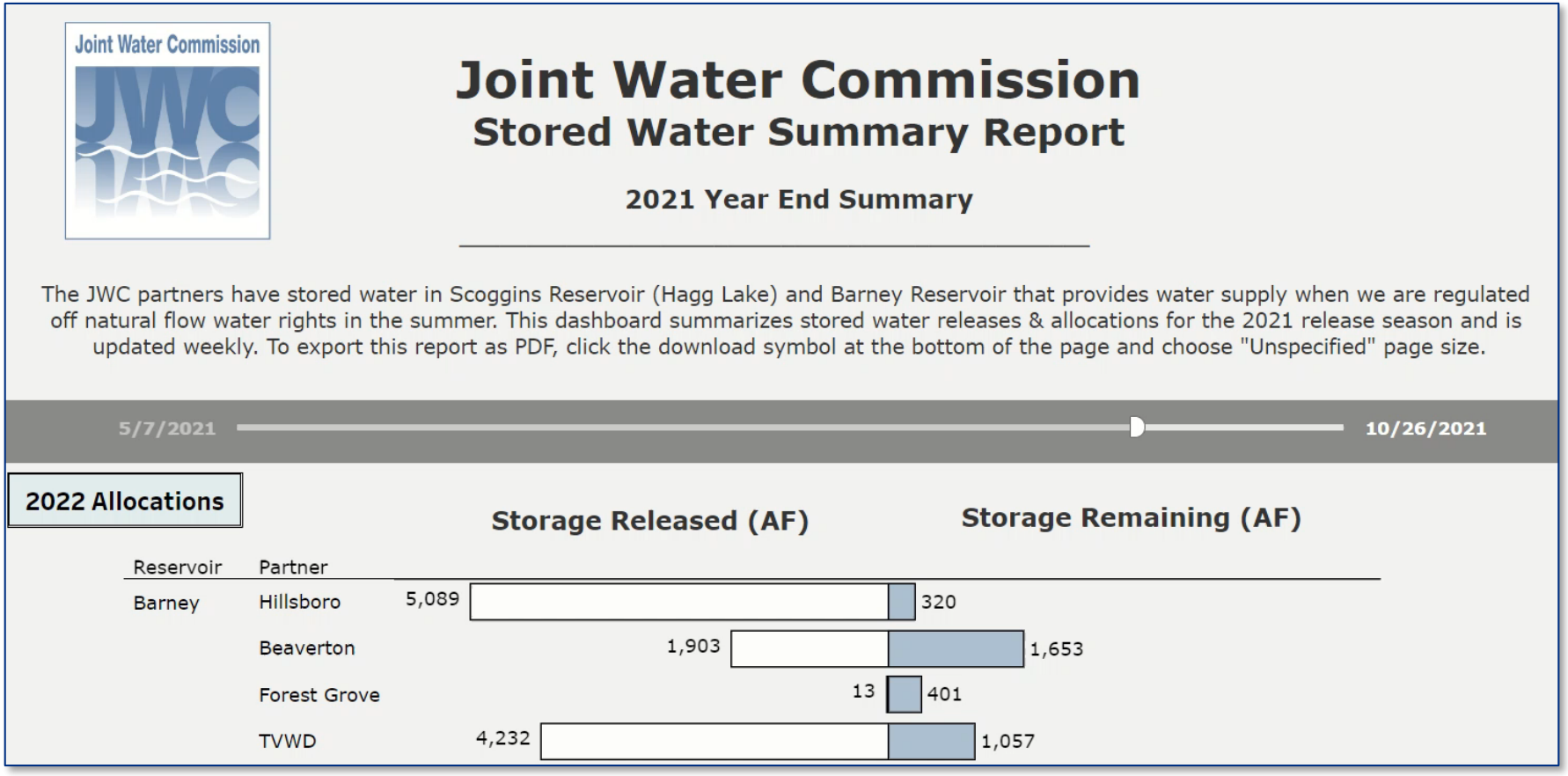


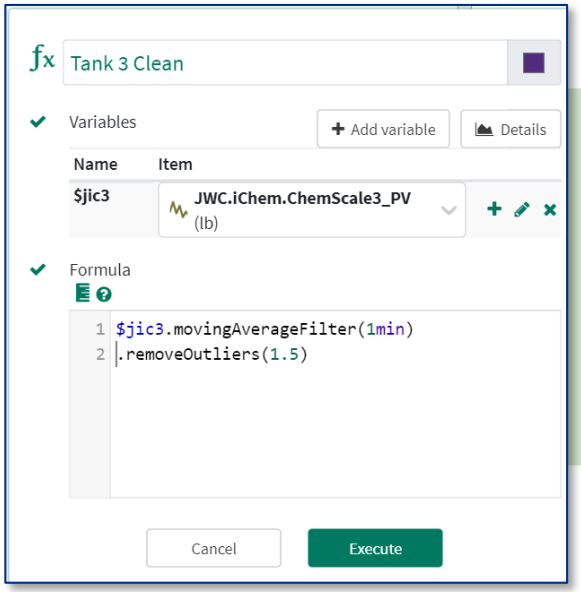
EXAMPLES: CHEMICAL PROJECTIONS

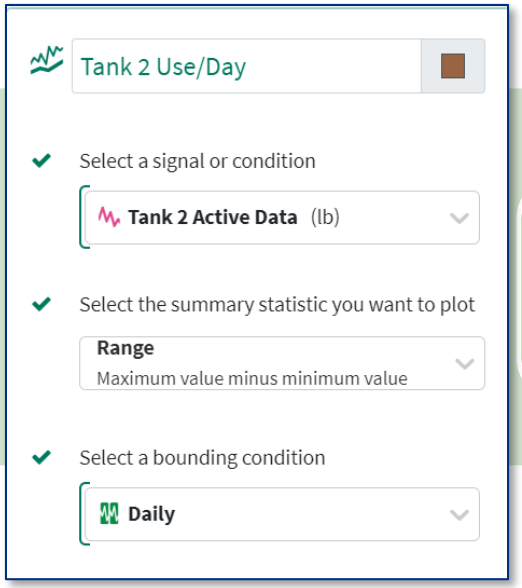
Who	JWC WTP Operators
What	Continuous, time-series SCADA data connected to Seeq
When	No timeline. Effort = Reward.
Where	Seeq
Why	Decision making. Replaces an obsolete analytical spreadsheet.

EXAMPLES: CHEMICAL PROJECTIONS

How

Measure the rate of use for various WTP chemicals using Seeq analytics.





Aug 25, 2022 12:00 AM	7-day Avg
Total Chlorine Use Daily	955.3 lb
Estimate Days of Use (6000lbs)	6.3 d
RW/Day	56.5 Mgal
Chlorine/ MGal	16.9 lb/Mgal

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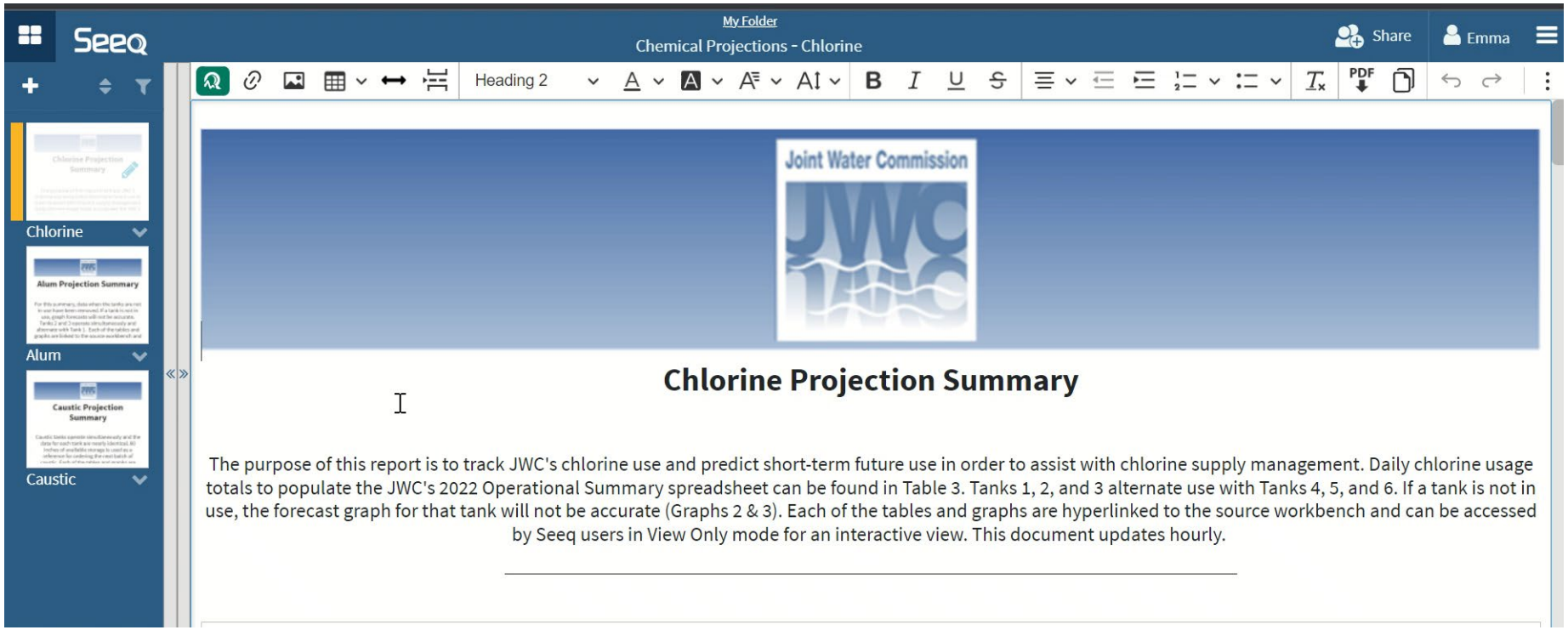
EXAMPLES: CHEMICAL PROJECTIONS



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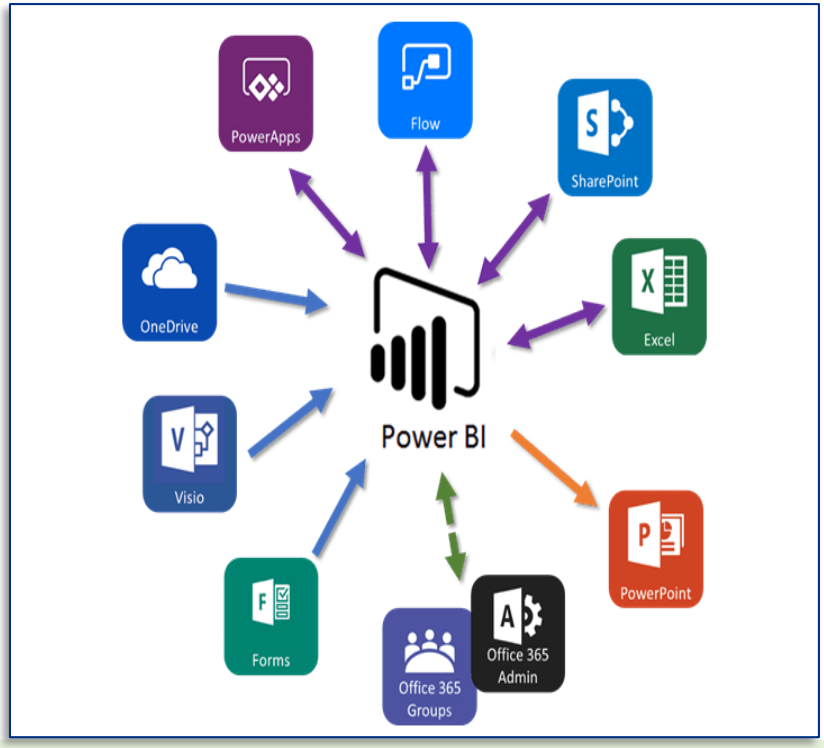
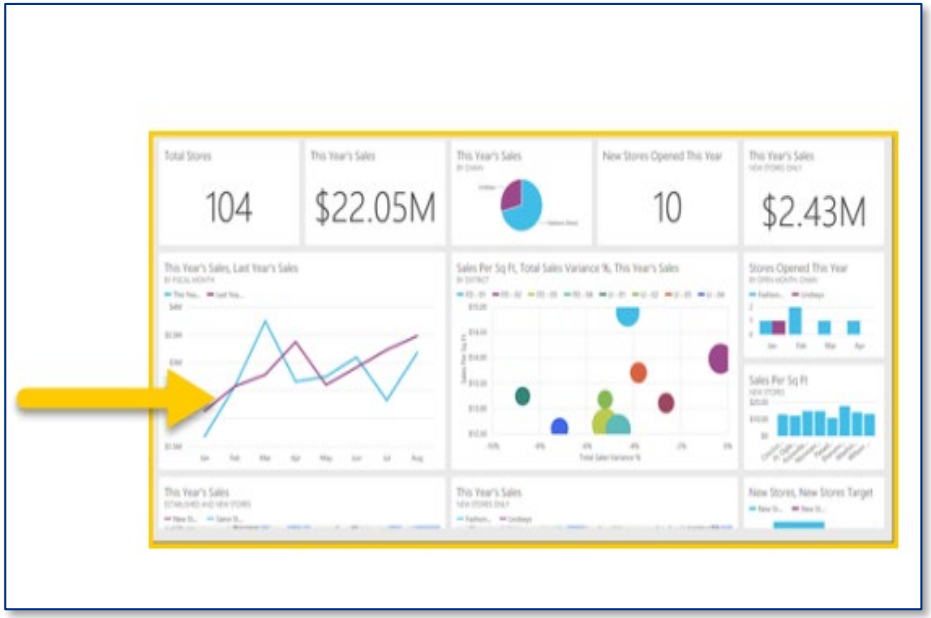
EXAMPLES: PROJECT TRACKING

Who	Hillsboro Water Staff
What	Categorical data, project benchmarks. Excel-based records.
When	TBD. Effort = Reward, eventually.
Where	PowerBI
Why	Track project progress.

EXAMPLES: PROJECT TRACKING

How Transition Tableau template to PowerBI platform. Make it modifiable to any project.





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City Council Priorities

Questions?
Thank you!

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