Ask Data Scaling Usage Across Any Organization

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Sr. Product Manager - Ask Data

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Engineering Manager - Ask Data
“This is awesome”

“I want people to Ask Data and not ask Dan (me).”

“Useful, clear, and intuitive.”

“I start all my analysis using Ask Data”
Agenda

- Quick intro to Ask Data

- Keynote examples (a closer look)

- Tableau Blueprint as a framework for scaling
  
  - Use cases, deployment, technology, best practices, and more!

- Q&A
Ruhaab By the Numbers

- ~8 years in Silicon Valley
- 4 Ask Data releases shipped
- 3 animals (2 cats + 1 dog)
- 2 Tableau Conferences
- 1.5 years at Tableau
A Little About Ryan

- Got married last week!
- Former Co-Founder & CTO of ClearGraph (acquired by Tableau in 2017)
Simply ask a question.

Get to your answer faster.
It Starts with a Question.

“Total sales for each region”
KEYNOTE DEMO

a closer look
But How Do I Start?
But How Do I Start?

Phase 1
I have Ask Data

Phase 2

Phase 3
Data-driven conversations for everyone
But How Do I Start?

Phase 1
I have Ask Data

Phase 2

Phase 3
Data-driven conversations for everyone
Tableau Blueprint as a Framework

- Agility
- Proficiency
- Community

TRUSTED & GOVERNED
Everyone Is on a Data Journey
It Starts with an Analytics Strategy

What is your self-service vision?

Driving a data culture.
Data Personas

- Data Consumers
- Data Conversationalists
- Data Analysts

- Need to answer questions
- Analytics is not their primary job
Analysts + IT Organization

Pre-Built Dashboards

Custom Reports

Ask Data

Role Conversation

Data Consumers

Data Conversationalists

Analysts + IT Organization
It Starts with an Analytics Strategy

What is your self-service vision?

Driving a data culture.

Decreasing dependency for basic insights.
Analytics for everyone
Advocacy and Project Teams

TOP DOWN
Driven by the business or IT

BOTTOMS UP

FIND AN ADVOCATE!
Everyone Is on a Data Journey

- Analytics Strategy
- Exec Advocacy & Project Teams

Trusted & Governed

- Deployment
- Monitoring
- Maintenance

Agility

- Education
- Measurement
- Analytics Best Practices

Proficiency

- Communications
- Engagement
- Support

Community

Blueprint
Everyone Is on a Data Journey

Analytics Strategy  Exec Advocacy & Project Teams

Deployment

Trusted & Governed

Monitoring  Maintenance

Agility

Proficiency

Community

Education  Measurement  Analytics Best Practices

Communications  Engagement  Support

Blueprint
**Version**
Check that you're on 2019.1+

**Use Case**
Identity use cases and data

**Curate**
Data curation elevates Ask Data

**Performance**
Boost performance
Version
Check that you’re on 2019.1+

Use Case
Identity use cases and data

Curate
Data curation elevates Ask Data

Performance
Boost performance
Check Whether You Have Ask Data

Platforms

Tableau Server
Tableau Online

Licenses

Creators
Explorers
Interactors

~ Available since 2019.1 ~
Overview of Our Recent Releases

- **2019.1**
  - LAUNCH!

- **2019.2**
  - CALCS MULTI-SHEET
  - USAGE ANALYTICS

- **2019.3**
  - EMBEDDED
  - VALUE SYNONYMS

- **2019.4**
  - SITE SETTINGS
  - LINK SHARING
  - YoY CALCS
Version

Check that you’re on 2019.1+

Use Case

Identity use cases and data

Curate

Data curation elevates Ask Data

Performance

Boost performance
How to Identify Use Cases

- Which teams use the report?
- Who is asking for the data?
- Who *should* be using data?
How to Identify Use Cases

Your Stakeholders

Identify the Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Views (all-time)</th>
<th>Workbooks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TFS-CurrentWork...</td>
<td>97,885</td>
<td>471</td>
</tr>
<tr>
<td></td>
<td>AckbarAWSAnalytics</td>
<td>67,425</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>TFS-DefectSummary</td>
<td>58,678</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td>TFS-Defects</td>
<td>49,001</td>
<td>210</td>
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<tr>
<td></td>
<td>PhoenixAnalytics</td>
<td>41,567</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>Pipeline Health</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How to Identify Use Cases

Your Stakeholders
- The “Business”
- Sales
- Marketing
- Operations
- Finance
- Etc...

Identify the Data

Common Use Cases
How to Apply Ask Data

**PUBLISHED DATA SOURCES**
- Search on the site
- Toolbar button
- Favorite in Tableau

**EMBEDDED IN DASHBOARDS**
- Web zone (or) floating container

**EMBEDDED IN OTHER APPS**
- Embed in analytics portals or internal websites
How to Embed in Dashboard

- Pick a published dashboard
- Select a floating container object
- Choose show/hide
- Drop a tiled web object in container
- Use the Ask Data URL
- Choose button style
- You’re done!!
Version: Check that you’re on 2019.1+

Use Case: Identity use cases and data

Curate: Data curation elevates Ask Data

Performance: Boost performance
Best Practices

Anticipate types of questions
  Join relevant data & decide level of detail
  Create calculated fields
Best Practices

Anticipate types of questions
   Join relevant data & decide level of detail
   Create calculated fields

Simplify data source
   Remove unnecessary rows & fields
   Use data extract to improve performance
Best Practices

Anticipate types of questions
  Join relevant data & decide level of detail
  Create calculated fields

Simplify data source
  Remove unnecessary rows & fields
  Use data extract to improve performance

Field properties
  Use unique, meaningful, & typeable names
  Set data type, default aggregation, & default format
  Add field synonyms, & value synonyms
CURATION DEMO
Version
Check that you’re on 2019.1+

Use Case
Identity use cases and data

Curate
Data curation elevates Ask Data

Performance
Boost performance
Key Configurations

● Ask Data enablement
  ○ Site level
  ○ Data source

● Optimize performance of the Ask Data experience
  ○ Data source indexing
  ○ Natural language parsing
  ○ Visualization rendering

● Leverage existing permissions
Site level defaults (2019.4)

Ask Data is enabled for all data published data sources

Enable individual data sources

Ask Data is disabled for all data published data sources

Disable individual data sources
Ask Data is enabled for all data published data sources.

Ask Data is disabled for all data published data sources.

Can disable individual data sources.

### Availability of Ask Data
When enabled, Ask Data is available to any user with permission to connect to a data source. By default, data source analysis is triggered by user request, but you can customize this setting for each data source. [Learn more](#).

To control the availability of Ask Data for all published data sources, choose from these options:
- **Enabled by default**
  - Data source owners and administrators can disable Ask Data for specific data sources.
- **Disabled by default**
  - Data source owners and administrators can enable Ask Data for specific data sources.

### Automatic Access to Metadata about Databases and Tables
Tableau, through its APIs, enables access to metadata about databases and tables. Database and table metadata is associated with content (data sources, workbooks, and flows) published to your site.

- **Automatically grant authorized users access to metadata about databases and tables**

### Cross-Database Joins
Choose where the join process happens when joining data from multiple sources. Allowing Tableau to use an existing database connection can be faster, but data from a file connection may be temporarily moved to the database. [Learn more](#).
Levels of Performance for Ask Data

Data source indexing

<table>
<thead>
<tr>
<th>Analyzing Data Source...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enriched: 9 / 30 eligible fields</td>
</tr>
<tr>
<td>Indexed: 3 / 13 eligible fields</td>
</tr>
<tr>
<td>Skipped: 2 unsupported fields</td>
</tr>
</tbody>
</table>

Natural language parsing

- show all the sales in Nevada
- sum of Sales with State in Nevada
Semantic Data Model

NLP Semantic Model

Parser

Semantics

Statistics

Popularity

Automatic Enrichment

User Defined Ontology

Scale and Governance
Intelligent Query Parsing
Ambiguity resolution and semantic understanding

**QUERY**
recent income from chairs in Germany

**RESULT**
- sum of *Sales*
- filter *Product Sub-Category* to Chairs
- *Country* in DE
- *Order Date* in the last 3 weeks

Combine methodologies from linguistic research and statistics

**Vague Predicates**
**Synonym Resolution (+)**
**Usage Based Inferencing**

**Value Indexing**
**Semantic Knowledge**
## Optimize Performance of Ask Data

<table>
<thead>
<tr>
<th></th>
<th>Indexing</th>
<th>Parsing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reduce Rows</td>
<td>✓️</td>
</tr>
<tr>
<td>2</td>
<td>Reduce Fields</td>
<td>✓️  ✓️</td>
</tr>
<tr>
<td>3</td>
<td>Use Extracts</td>
<td>✓️</td>
</tr>
<tr>
<td>4</td>
<td>Rename Fields</td>
<td>✓️</td>
</tr>
<tr>
<td>5</td>
<td>Elasticserver Memory</td>
<td></td>
</tr>
</tbody>
</table>
## Data source details

### About
- **Project**: Default
- **Owner**: workgroupuser
- **Tags**: Edit Tags
- **Modified**: Nov 13, 2018, 4:26 PM

### Ask Data
- **Enabled**
- **Data source analysis**:
  - Automatic
  - Triggered by user request
  - Disabled

### Certification
- **Not certified**

[Save] [Cancel]
Boost Performance for Ask Data Parsing

- Ask Data will automatically scale memory allocation for its data index (Elasticserver) up to 1GB

<table>
<thead>
<tr>
<th></th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data source update events per hour (publish or extract refresh)</td>
<td>200</td>
<td>1000</td>
<td>2000</td>
</tr>
<tr>
<td>Queries per minute</td>
<td>500</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>Concurrent Ask Data users (approx)</td>
<td>25</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>Elasticserver memory</td>
<td>512MB</td>
<td>2G</td>
<td>8G+</td>
</tr>
<tr>
<td>Instances of Data Server</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>
Permissions Made Simple

Existing permissions model inherited
A Note on Row Level Security

Single Data Source

- North
- South
- East
- West

Multiple Data Sources

- North
- South
- East
- West
<table>
<thead>
<tr>
<th>Check Version</th>
<th>Identify Use Cases</th>
<th>Curate Data</th>
<th>Optimize Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Starting in 2019.1</td>
<td>1. Identify use cases</td>
<td>1. Anticipate questions</td>
<td>1. Ask Data enablement</td>
</tr>
<tr>
<td></td>
<td>1. Pick how to apply</td>
<td>1. Field properties</td>
<td>1. Permissions</td>
</tr>
</tbody>
</table>
Now we’re ready to roll!
Educate and On-board

- Lots of great documentation published
- Walk through your organization's data
- Facilitate a kickoff / ask Tableau
- Find a communication model that works for your organization
Start with a Quick Pilot

- If you’re driving from IT:
  - Engage with the various teams

- If you’re driving from the business side:
  - Curation is easy! Get the data prepped and get things rolling

- Find users who will be engaged and are willing to provide feedback
Engage with the Users

- Analytics Strategy
- Exec Advocacy & Project Teams
- Education
- Communications
- Measurement
- Engagement
- Deployment
- Monitoring
- Maintenance
- Agility
- Proficiency
- Community
- Support
Measure and Engage w/ Ask Data Usage Analytics

1. Overall engagement
2. Who’s using?
3. Add field synonyms
4. What are the questions?
Engage with the Users
Recap

Analytics Strategy
- What is it?
- How does Ask Data fit?

Project Teams
- Find an advocate
- Determine use cases

Deployment
- Find data
- Curate
- Setup your server

Engage & Iterate
- Start with a pilot
- Onboard your users
- Iterate and improve

Leverage your Tableau CSM!
Partner With Us!

Want to pilot Ask Data in your organization?

Want to help shape the future of the Ask Data roadmap?

Visit:

tinyurl.com/AskDataTC19
Please complete the session survey in the mobile app

View ‘My Evaluations’ in the menu or find your session under ‘Schedule’
RELATED SESSIONS - Ask Data

Intro to Ask Data
1 session | Friday

Hands on with Ask Data
2 sessions | Today - Friday

Data Roles, Semantics, and Metadata Inheritance Across Data Sources
Today | 2:15 – 3:15
Tableau Showcase:
- Feature Demos
- Feedback Sessions

Every Day | Data Village
Thank you! Questions?

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CONFERENCE