

 smartsheet

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# API Tips and Tricks

**Kevin Fansler (and guests)**  
Developer Relations Advocate



# Guest Speakers

**Brett Gardner,**  
Commercial Sales Engineer

**Anthony Sanfilippo,**  
SDE in Test

**Tony Lucas,**  
Director of Product

**Garvice Eakins,**  
Sr Manager of Software Development



# Agenda



# Agenda

Event Reporting: automate Smartsheet policy (Brett)

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Using cell links to find your way (Anthony)

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Lessons from the API (Tony)

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Building applications for multiple users (Garvice)

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# Event Reporting: Automate Smartsheet Policy

**Brett Gardner**

Commercial Sales Engineer



# What is Event Reporting?

Event Reporting is accessed through the API.

It is a stream of events that illustrates all of the actions my users are doing in the Smartsheet environment

Seeing these events will give me a better understanding of what users are doing in Smartsheet

# What is the API?

The API stands for “Application Program Interface” and it is a set of **rules and protocols**



# Event reporting: the business problem

- I don't know how my users are leveraging Smartsheet
- How can I better protect my data?
- I can't enforce user policy
- Hard to discern user behavior and where/who my data is being shared to

```
{
  "eventId": "2.1.TtFtkgjl4NBPY06T0eWTb7c2ny6Vb9c1gMCpUwrt6KA",
  "objectType": "SHEET",
  "action": "UPDATE",
  "objectId": 6566322499807108,
  "eventTimestamp": "2019-08-19T18:00:04Z",
  "userId": 6341307250567044,
  "requestUserId": 6341307250567044,
  "source": "API_INTEGRATED_APP"
},
{
  "eventId": "2.1.aIZnRX50jFqQi3a7GeoXgcGbI3flgaTGDtkj0rgx5q0",
  "objectType": "DASHBOARD",
  "action": "LOAD",
  "objectId": 99105096656772,
  "eventTimestamp": "2019-08-19T18:00:06Z",
  "userId": 1828012137179012,
  "requestUserId": 1828012137179012,
  "source": "WEB_APP"
},
{
  "eventId": "2.1.LtIuUK958h1nva2Sozbs7yZvdrqI6b0gq4L1enZZv0Q",
  "objectType": "SHEET",
  "action": "LOAD",
  "objectId": 6975695948670852,
  "eventTimestamp": "2019-08-19T18:00:07Z",
  "userId": 2064768048621444,
  "requestUserId": 2064768048621444,
  "source": "API_INTEGRATED_APP"
}
```

# User perspective Login to core app

The screenshot displays the Smartsheet interface for a project named "Project Launch Plan". The interface includes a search bar, navigation tabs (File, Automation, Forms), and a rich toolbar with various editing and viewing options. The main workspace shows a Gantt chart with a table view below it. The table columns are Task Name, Status, Health, Start Date, End Date, and Assigned To. The Gantt chart shows task bars with different colors and progress indicators, overlaid on a calendar grid from November 26 to December 17. The tasks are organized into several categories: Q2 Plan, Sales Tools, Competitive Positioning, Product Marketing, Product Positioning, Social, and Product Release.

Task Name	Status	Health	Start Date	End Date	Assigned To
<b>Q2 Plan</b>			11/28/18	12/28/18	
<b>Planning Phase</b>			11/28/18	12/14/18	
Market Requirements Definition	In Progress	Green	11/28/18	12/04/18	BW Brent Williams
Business Case	At Risk	Red	12/04/18	12/12/18	JT June Taylor
Launch Plan	Complete	Yellow	12/10/18	12/14/18	AM Alexandra Mattson
Target Metrics	In Progress	Yellow	11/28/18	11/28/18	LG Lori Grimes
<b>Sales Tools</b>			12/05/18	12/14/18	
Prospect Presentation	In Progress	Green	12/05/18	12/11/18	BW Brent Williams
Demo	In Progress	Green	12/12/18	12/14/18	HM Henry McNeal
<b>Competitive Positioning</b>			12/11/18	12/12/18	
FAQ sheet	In Progress	Green	12/11/18	12/12/18	KK Kirk Caskey
<b>Product Marketing</b>			12/03/18	12/14/18	
Pricing Strategy	In Progress	Yellow	12/03/18	12/11/18	
<b>Product Positioning</b>			12/12/18	12/14/18	
Define Audience	In Progress	Yellow	12/12/18	12/13/18	
Core Messaging	In Progress	Yellow	12/12/18	12/14/18	
Executive Approval	In Progress	Red	12/12/18	12/13/18	
<b>Social</b>			12/12/18	12/14/18	
Define social media strategy	In Progress	Green	12/12/18	12/13/18	
Schedule social media posts	In Progress	Green	12/12/18	12/14/18	
<b>Product Release</b>			12/13/18	12/28/18	

# API perspective

# JSON payloads!

Row

```
{
  "id": 2361756178769796,
  "sheetId": 4583173393803140,
  "rowNumber": 2,
  "parentId": 4392908622194564,
  "version": 23,
  "expanded": true,
  "accessLevel": "OWNER",
  "createdAt": "2017-10-06T21:21:25Z",
  "modifiedAt": "2018-03-22T21:24:50Z",
  "cells": []
}
```

Column

```
{
  "id": 7960873114331012,
  "index": 2,
  "symbol": "STAR",
  "title": "Favorite",
  "type": "CHECKBOX",
  "validation": false
}
```

Attachment

```
{
  "name": "expense report sample.png",
  "url": "https://api.smartsheet.com/download/aa402974cdb74cb58d9",
  "attachmentType": "FILE",
  "mimeType": "image/png",
  "id": 4583173393803140,
  "urlExpiresInMillis": 120000
}
```

Sheet

```
{
  "id": 4583173393803140,
  "name": "sheet 1",
  "version": 6,
  "totalRowCount": 240,
  "accessLevel": "OWNER",
  "effectiveAttachmentOptions": [
    "EVERNOTE",
    "GOOGLE DRIVE",
    "EGNYTE",
    "FILE",
    "ONEDRIVE",
    "DROPBOX",
    "BOX COM"
  ],
  "readOnly": true,
  "gantEnabled": true,
  "dependenciesEnabled": true,
  "resourceManagementEnabled": true,
  "cellImageUploadEnabled": true,
  "userSettings": {
    "criticalPathEnabled": false,
    "displaySummaryTasks": true
  }
},
```

There is more :)

# Let's combine perspectives (User + API)

- Get/update/add a row

- Get/update/add a cell
- Get/update/add a column
- Get/add an attachment
- Get/add a comment
- Create a sheet/sheets
  - From template
  - From folder
  - From workspace
- Edit workflows
- Get events

Health

Market Requirements Definition

3		Market Requirements Definition	In Progress	11/28/18	12/04/18	BW Brent Williams
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Save as New...

Request an Update...

Set up an Approval Workflow...

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# Event Reporting

## The problem | The solution | The benefits

### Problem

- No control or oversight over the Smartsheet Environment
- Lack of information surrounding user behavior
- Inability to take quick and appropriate action when action is necessary
- Can't implement or consistently enforce policy

### Solution

- Event Reporting
- Implement policy
- Incorporate standards and behavioral metrics
- Keep historical record of all Smartsheet events

### Benefits

- Control over Smartsheet environment
- Data integrity will always be intact due to enforced policy standards
- Gain insights on usage and collaboration (know exactly where and who your data is being shared to)

# Demo

# Event Reporting

# Solution

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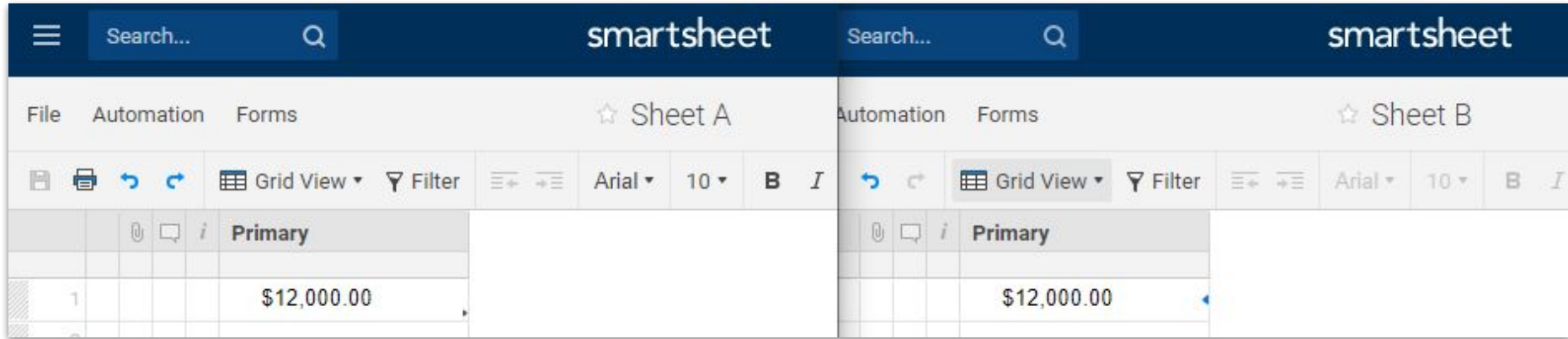
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# Using Cell Links to Find Your Way

**Anthony Sanfilippo**  
SDE in Test



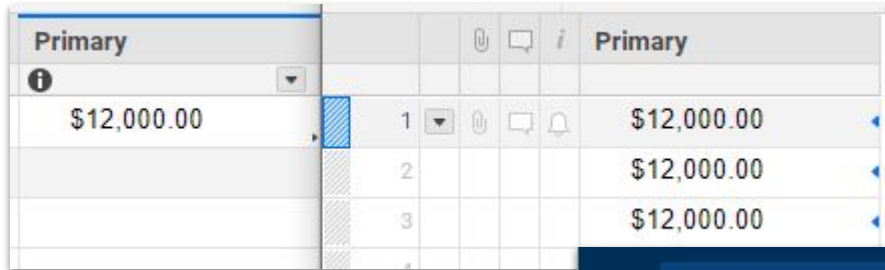
# What is a Cell Link?



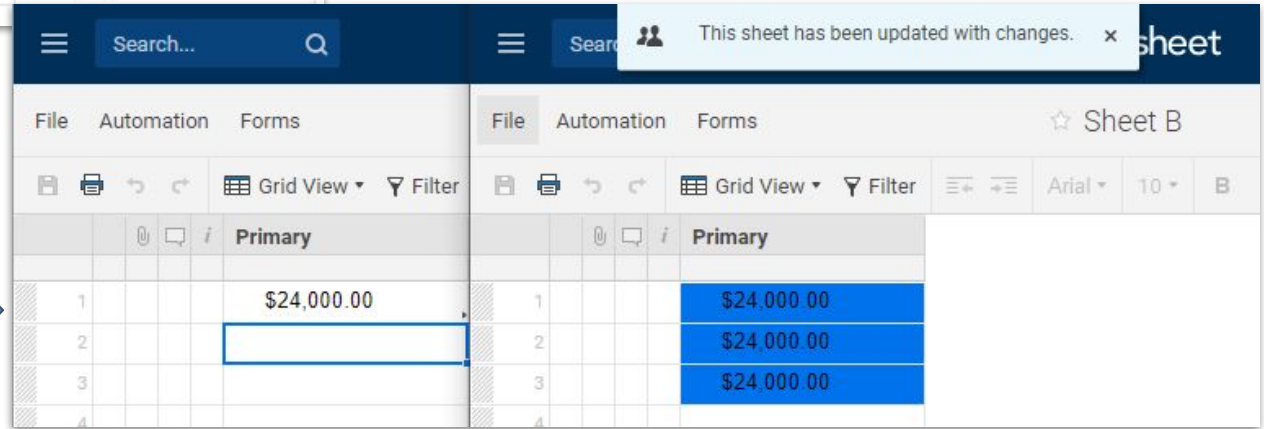
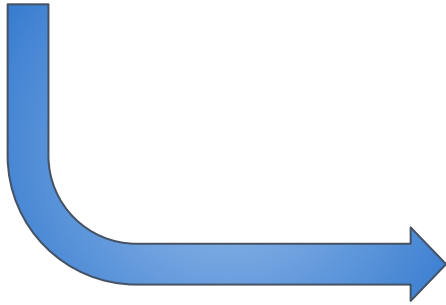
The image shows two side-by-side Smartsheet windows. The left window is titled "Sheet A" and the right window is titled "Sheet B". Both windows show a menu bar with "File", "Automation", and "Forms". Below the menu bar is a toolbar with icons for save, print, undo, redo, grid view, filter, and text formatting (font face, size, bold, italic). The main content area shows a table with a header row labeled "Primary" and a data row containing the value "\$12,000.00". A blue arrow originates from the "\$12,000.00" cell in Sheet A and points to the corresponding "\$12,000.00" cell in Sheet B, illustrating a cell link.



# What is a Cell Link?



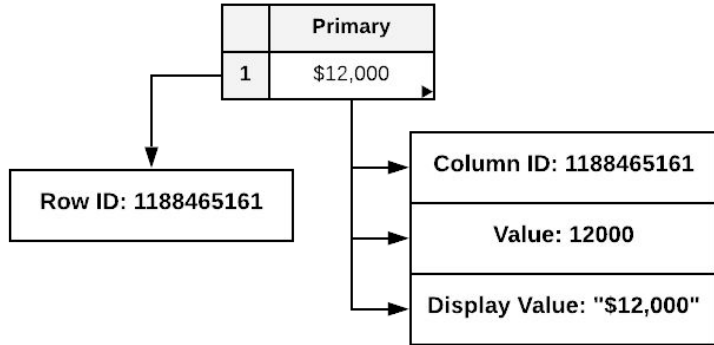
Primary				Primary
\$12,000.00	1			\$12,000.00
	2			\$12,000.00
	3			\$12,000.00



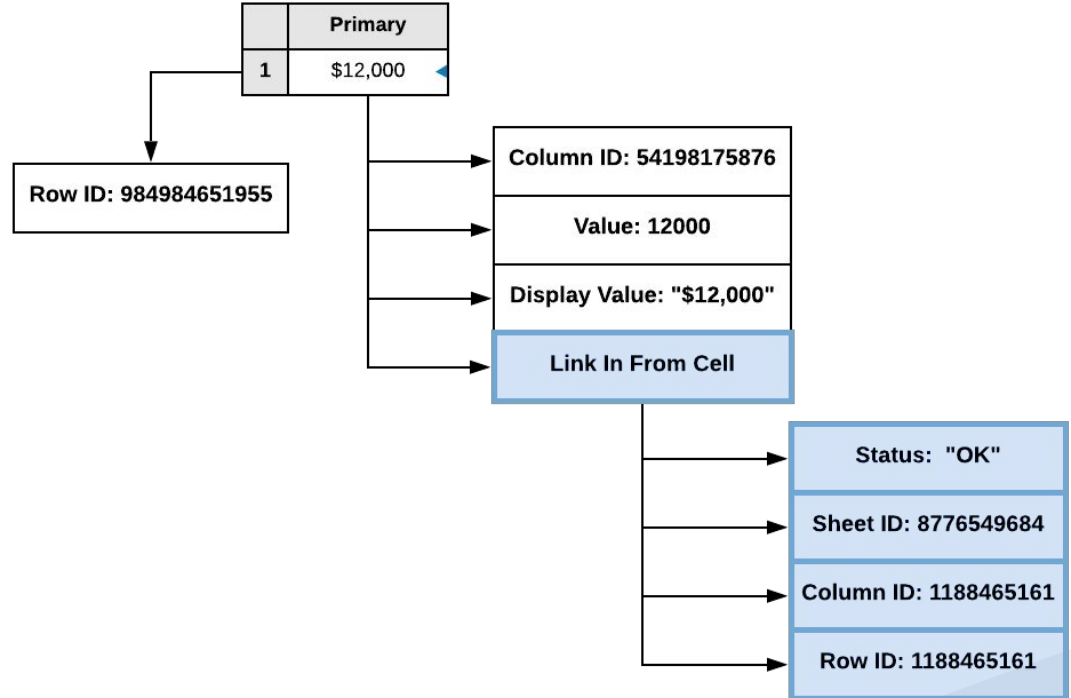
Primary				Primary
\$24,000.00	1			\$24,000.00
	2			\$24,000.00
	3			\$24,000.00

# Anatomy of a Cell Link

Source Sheet  
(ID: 8776549684)

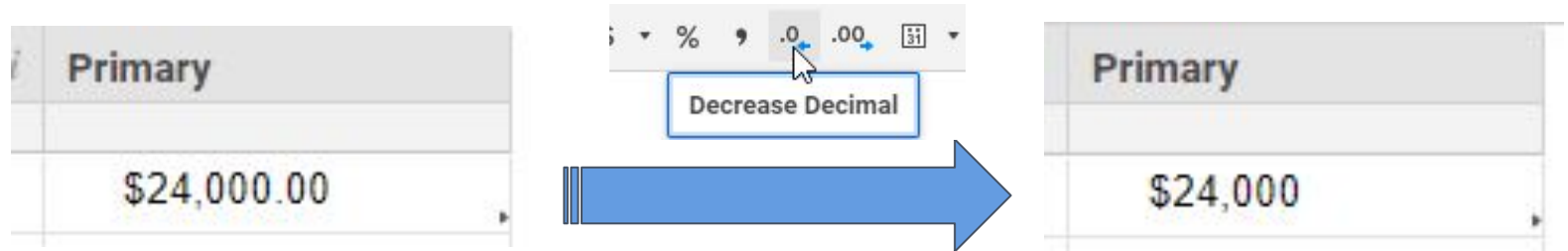


Destination Sheet

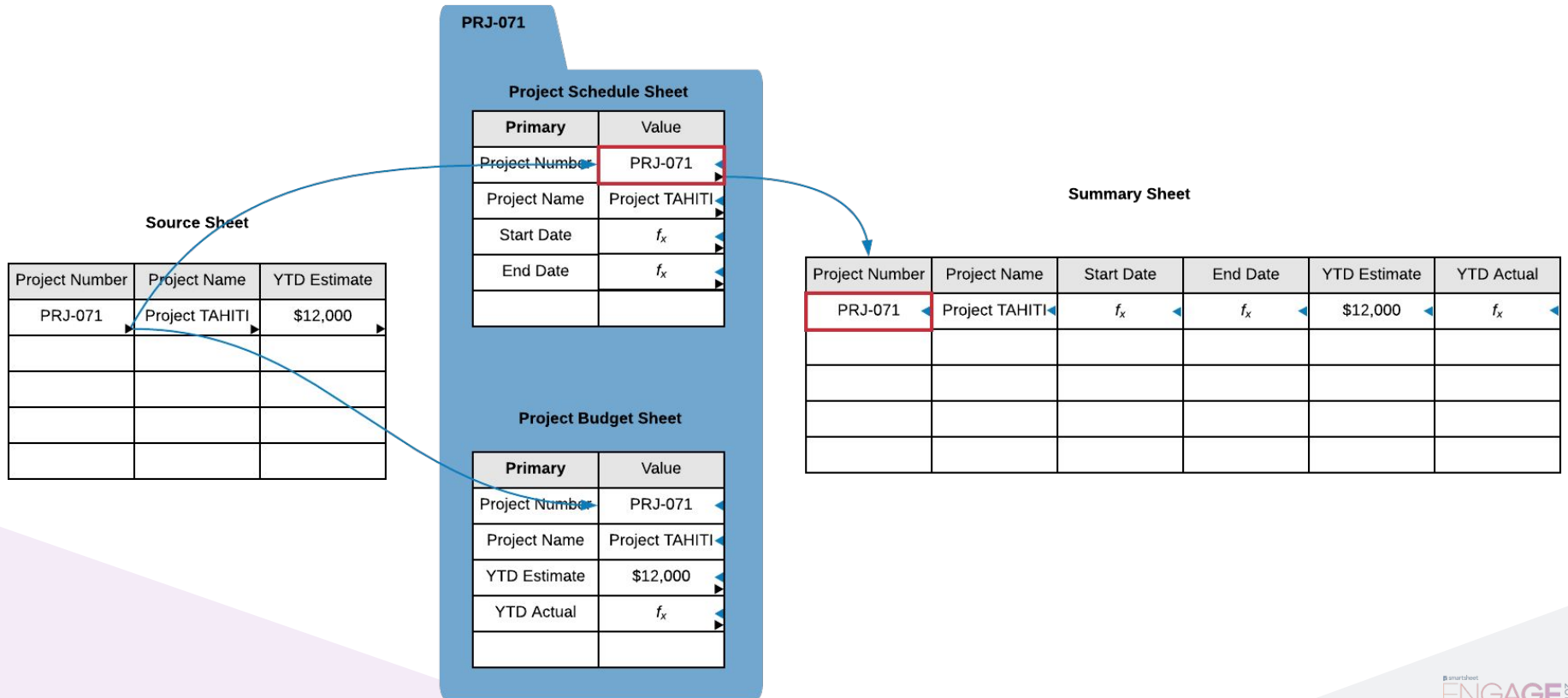


# Use Case: Following Cell Links

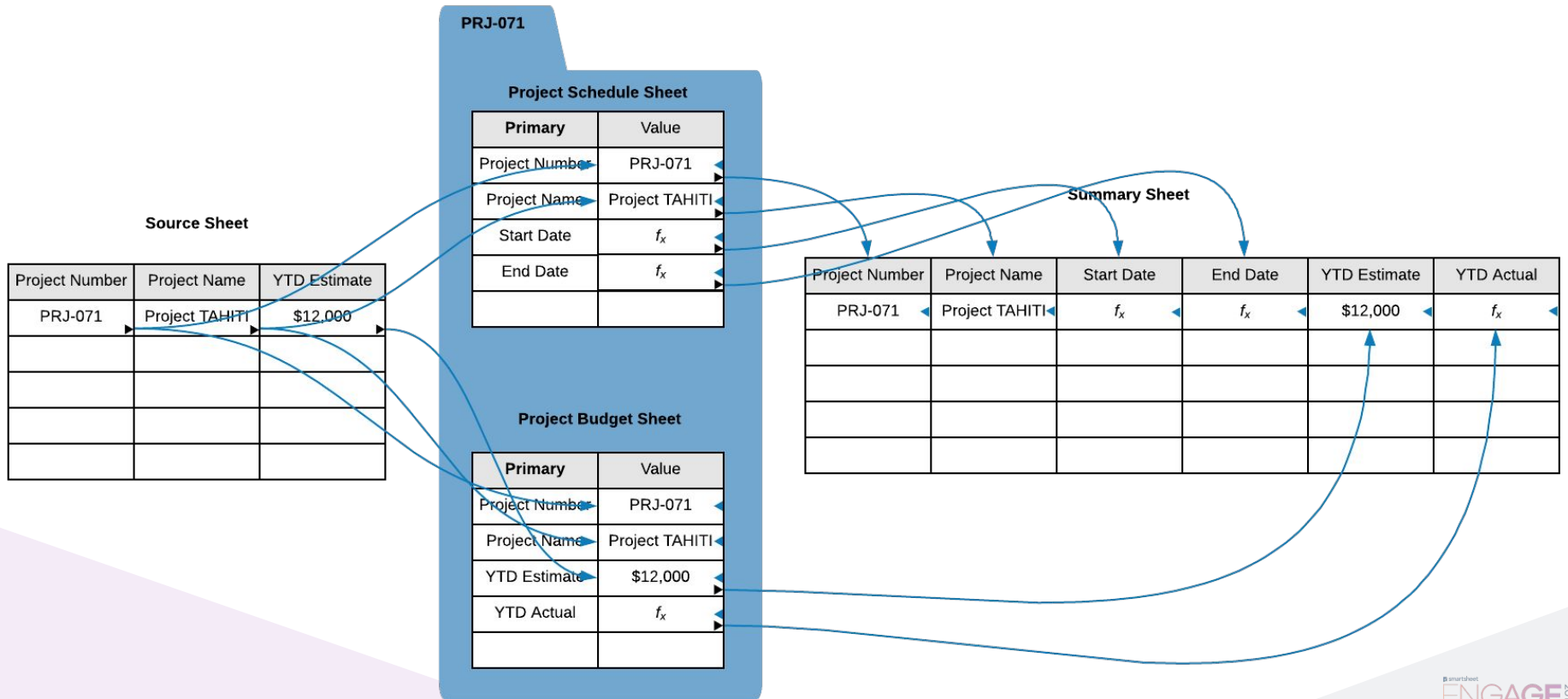
- “I need to make a simple change to all of my project plan sheets.”



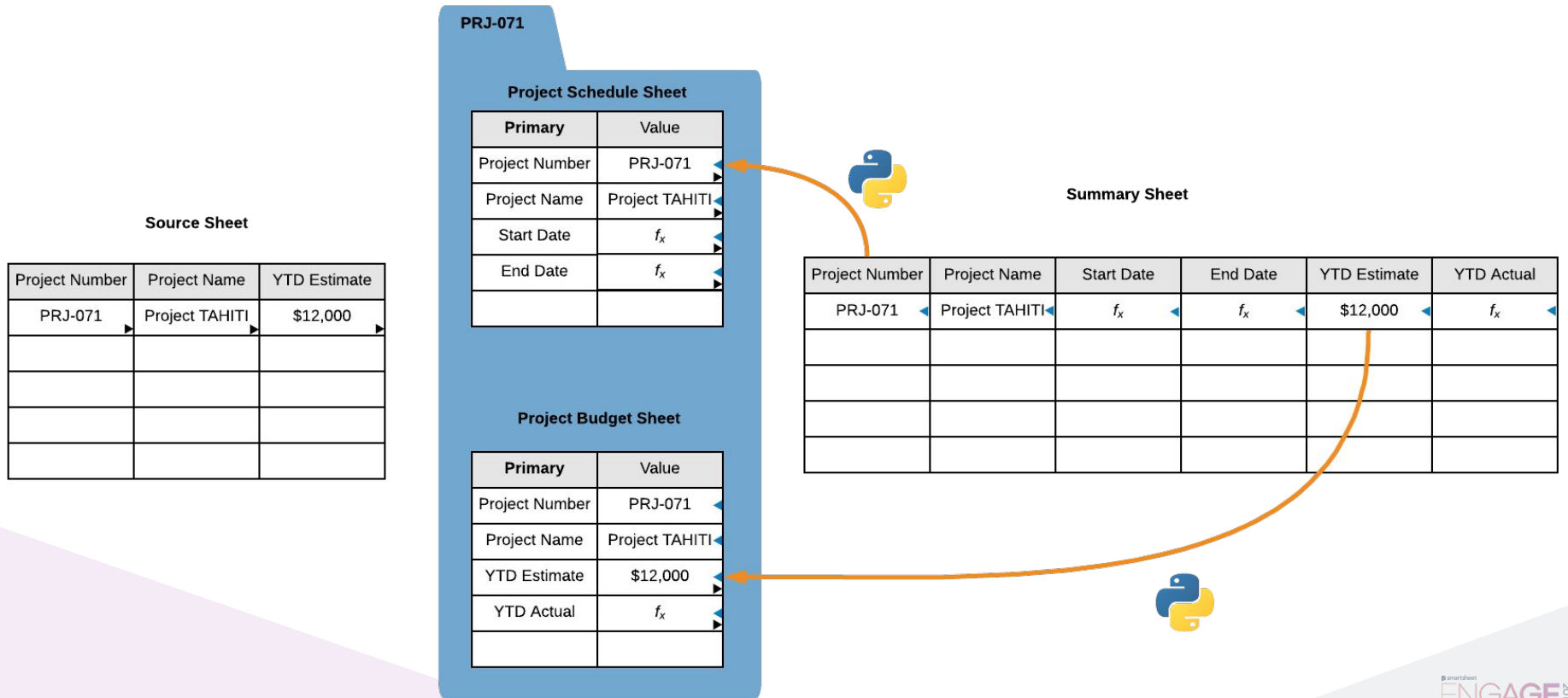
# Use Case: Following Cell Links



# Use Case: Following Cell Links



# Use Case: Following Cell Links



# Demo

## Using Cell Links to Find Your Way

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# Lessons from the API

**Tony Lucas**  
Director of Product





# Services – Connectors



Jira



Salesforce



Microsoft Dynamics



Data Uploader

# Services – Integrations



Google Docs Merge



Google Forms



Quip



Zapier

# Services – BI



Live Data Connector



Tableau



Power BI

# Services – Workflow



Bridge by Smartsheet

# Webhooks



Scopes



Payload Sizes



Retries



Disabling/Enabling

# Retrieving data from sheets



Sheet sizes, filtering, caching



Activity Log



Version handling

# Updating sheets



Smart ways to change data



API Token clashes



Column types & formatting



Error handling

# Building Apps - What to Consider

**Garvice Eakins**

Sr Manager of Software Development





# Keep it simple

If possible create an app users can run locally.

## Pros

- Easier to build
- Easier to secure
- Costs less

## Cons

- Updates are hard
- No shared functionality
- Great for scripts, not for web

# Keep it secure

## DON'Ts

- **Don't** - Store secrets, tokens, or passwords in source control
- **Don't** - Store user login Info
- **Don't** - Send Smartsheet tokens to the browser

## DOs

- **Do** - Use encrypted transmission (HTTPS/SSL)
- **Do** - Create your own session tokens

# Keep it efficient

- **Only Request the Data You Need**
- **Only Send the Data You Are Changing**
- **Compress the Data In Transit**



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