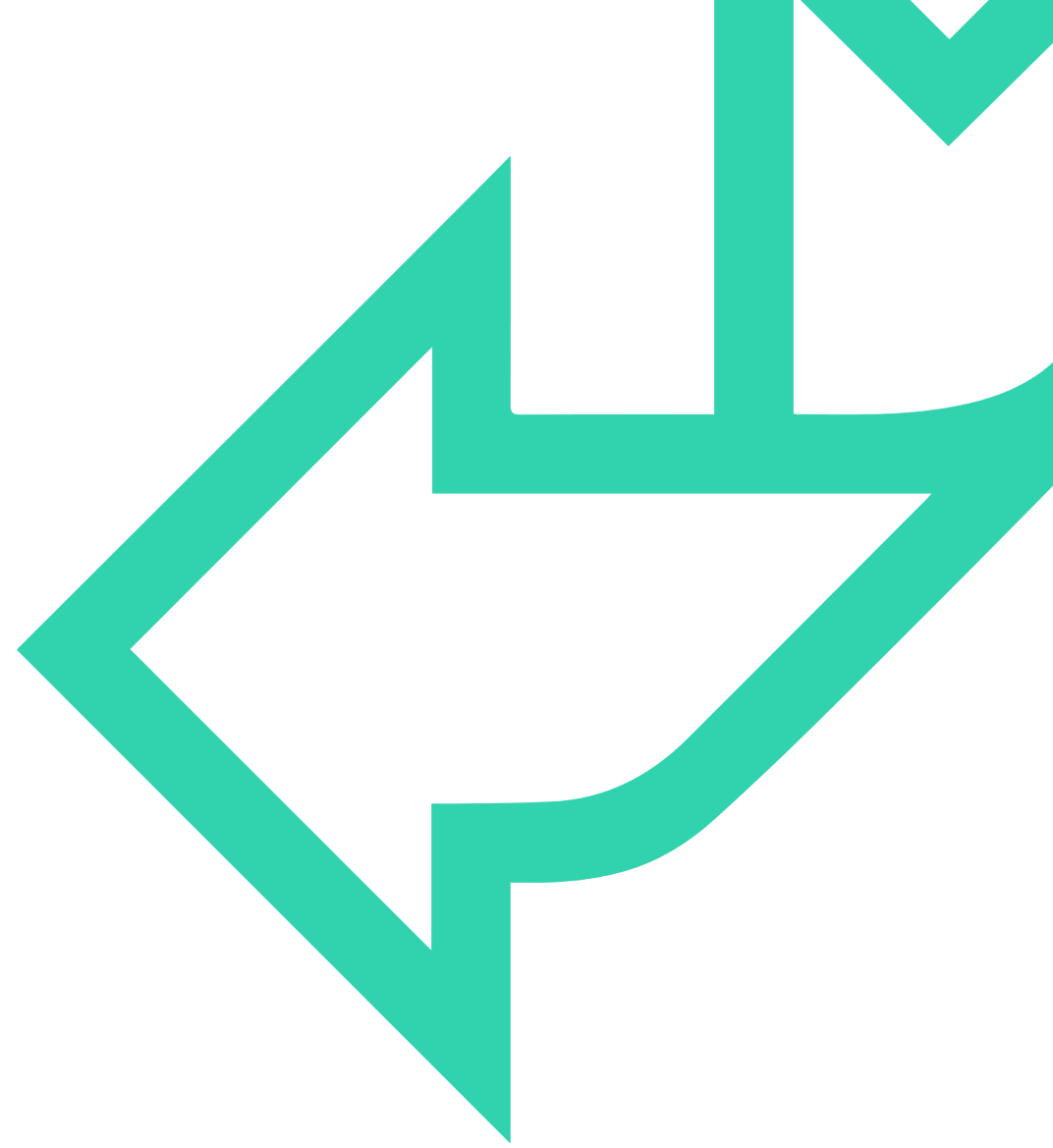


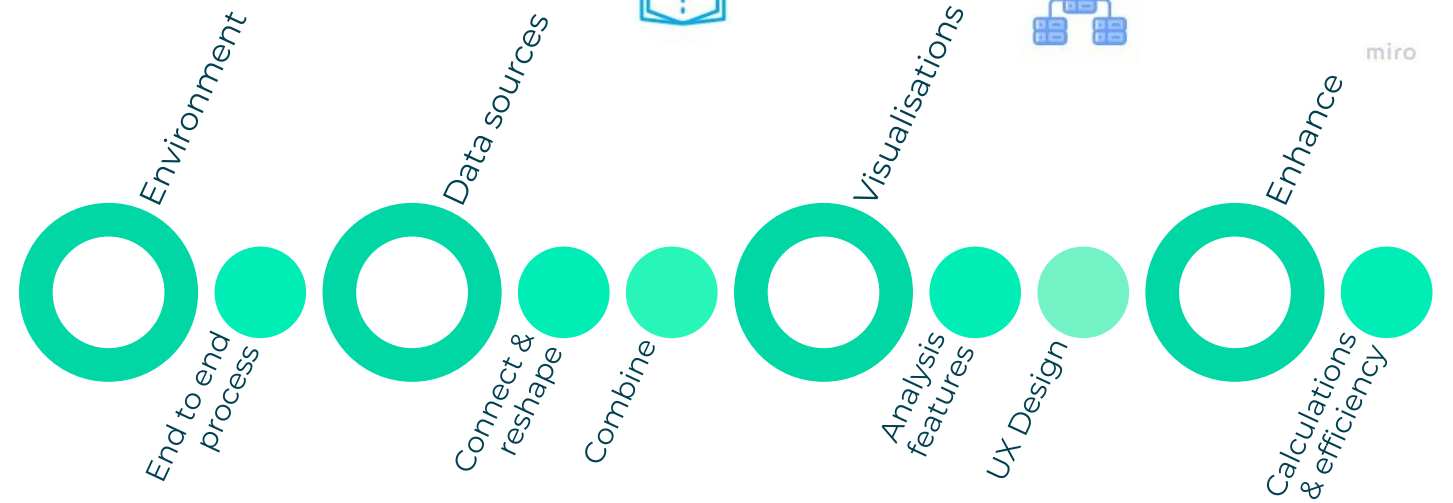
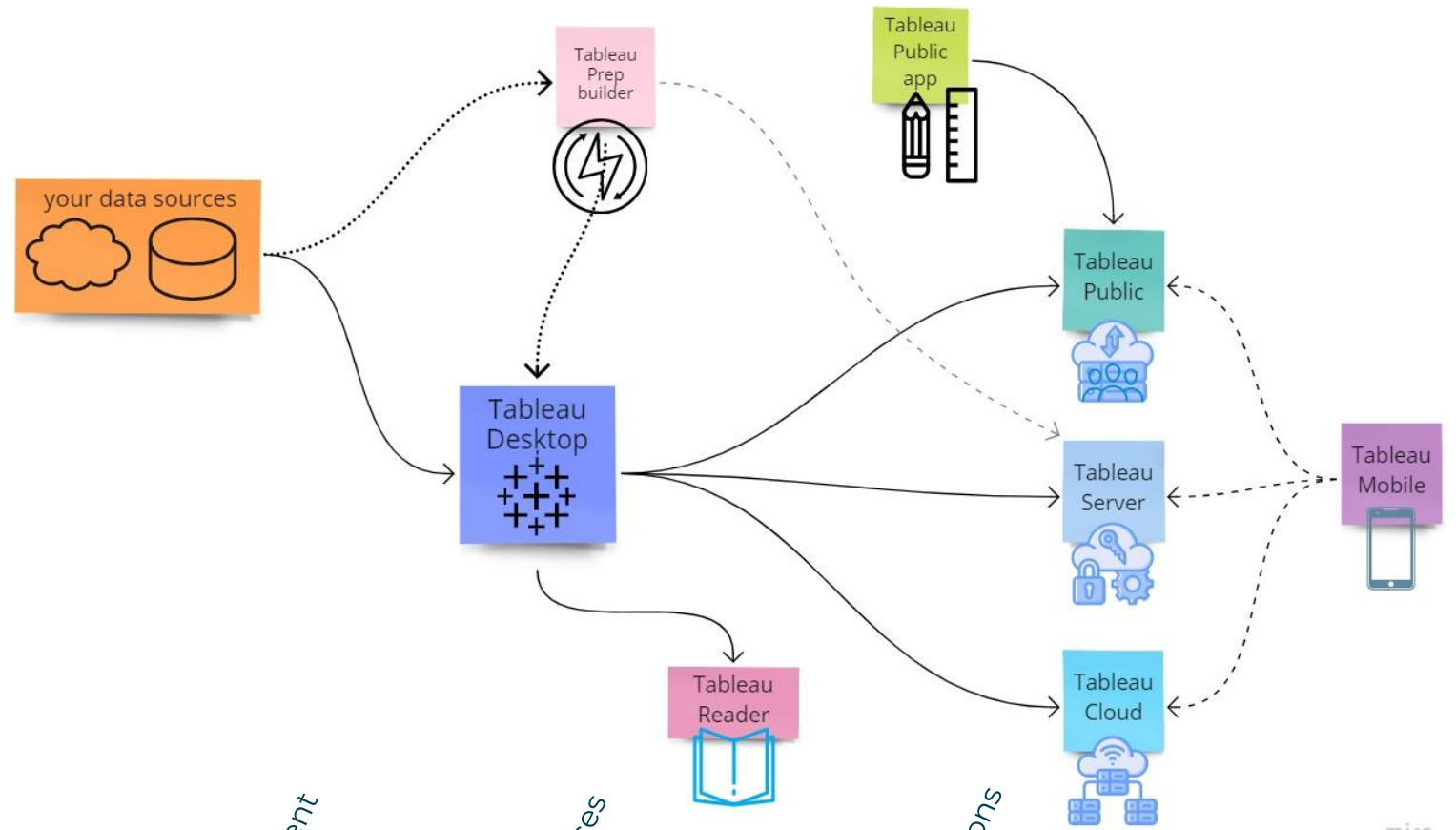


Tableau for Technical Users

Tableau v 2022.2 +

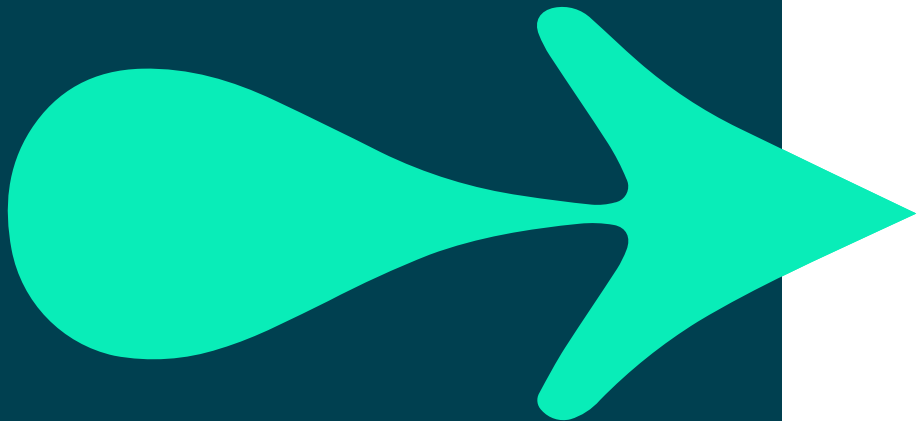


Orientation



Course Outcomes

- Curate data sources
- Add knowledge layer on top of data
- Design engaging, interactive vizzes
- Super user tips and tricks
- Enhance product knowledge



A large, stylized cyan arrow pointing to the right, composed of three horizontal bars of increasing width, set against a dark teal background.

Module 1

Product and Overview

Product releases

PRODUCT DOWNLOADS AND RELEASE NOTES

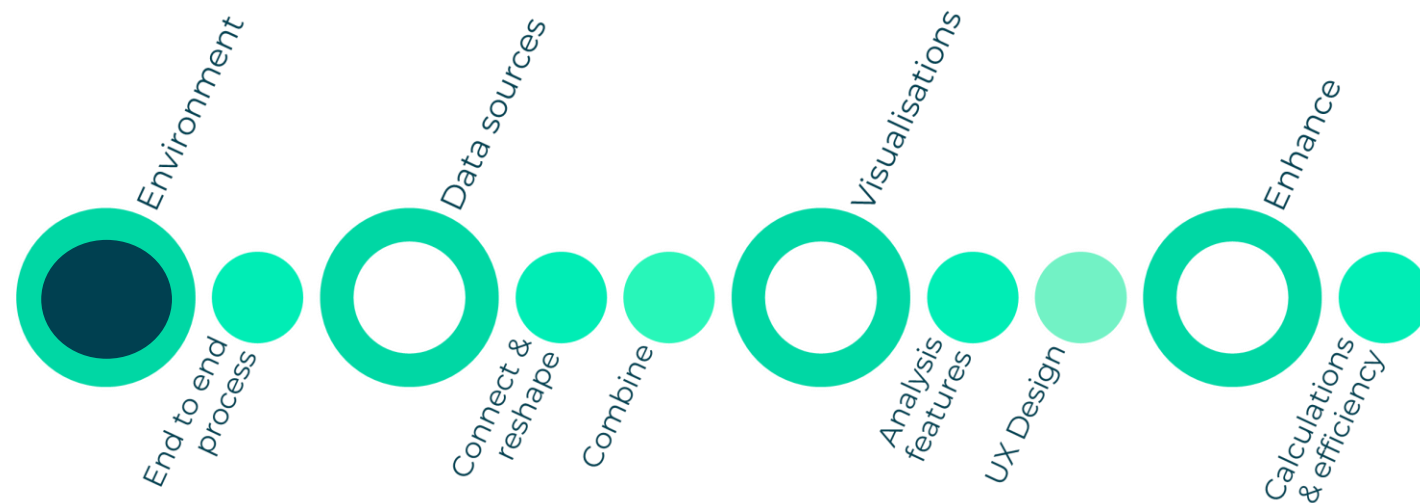
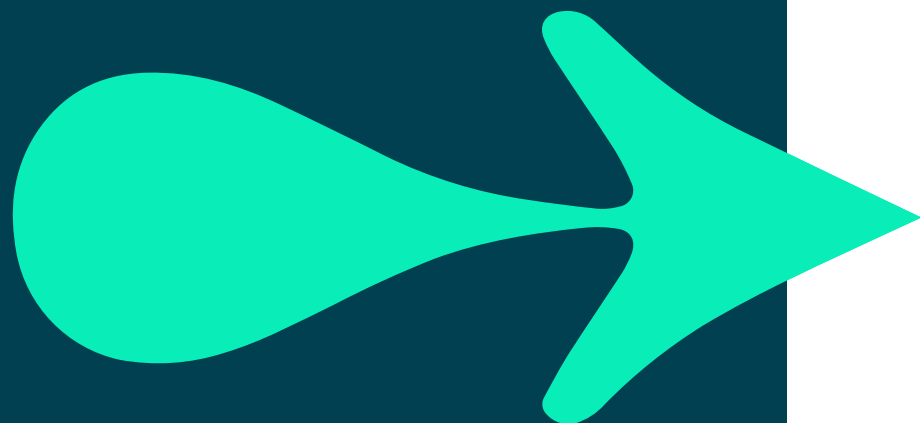
Tableau Desktop

[VIEW THE CURRENT VERSION 2022.2.1](#)

RELEASE NOTES

[EXPAND ALL](#) [COLLAPSE ALL](#)

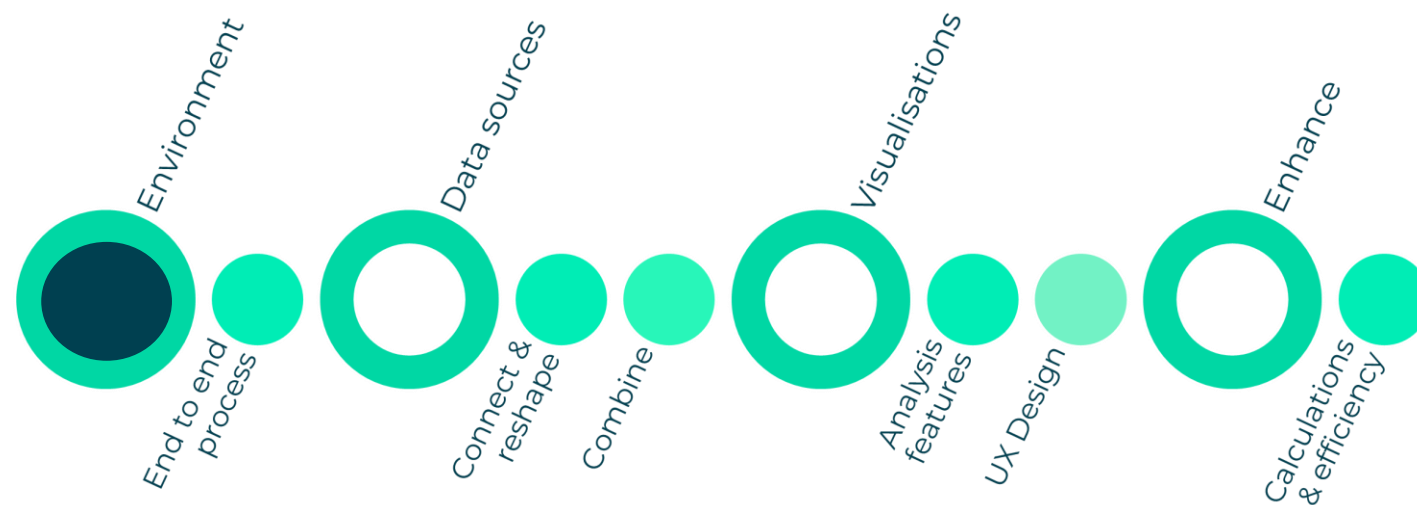
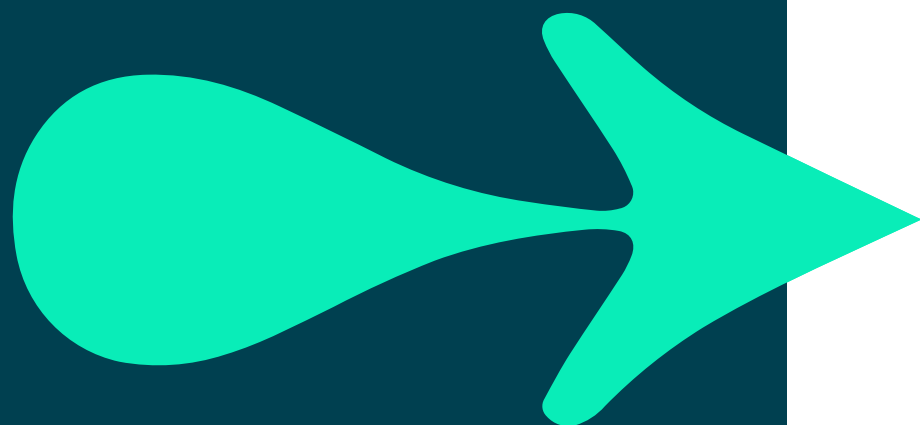
Desktop	2022.2	Downloads and Release Notes
Prep	2022.1	Downloads and Release Notes
Server		
Online	2021.4	Downloads and Release Notes
Bridge		
Advanced Management	2021.3	Downloads and Release Notes
Mobile		



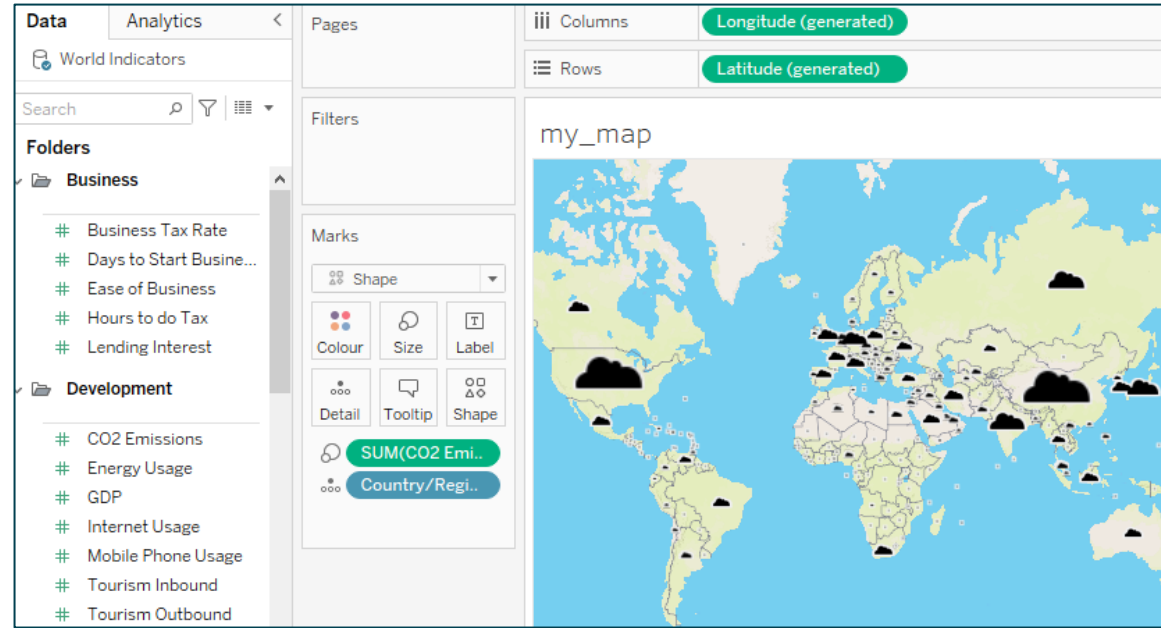
My Tableau Repository

This PC > Documents > My Tableau Repository

Name	File ownership	Date modified	Type	Size
Bookmarks		18/07/2022 10:32	File folder	
Connectors		18/07/2022 10:32	File folder	
Data sources		18/07/2022 10:32	File folder	
Datasources		10/08/2022 09:50	File folder	
Extensions		18/07/2022 10:32	File folder	
Logs		16/09/2022 15:32	File folder	
Mapsources		18/07/2022 10:32	File folder	
OAuthConfigs		18/07/2022 10:32	File folder	
Services		18/07/2022 10:32	File folder	
Shapes		16/09/2022 15:26	File folder	
Workbooks		16/09/2022 15:56	File folder	
Preferences		15/07/2022 09:44	Tableau Preferenc...	1 KB

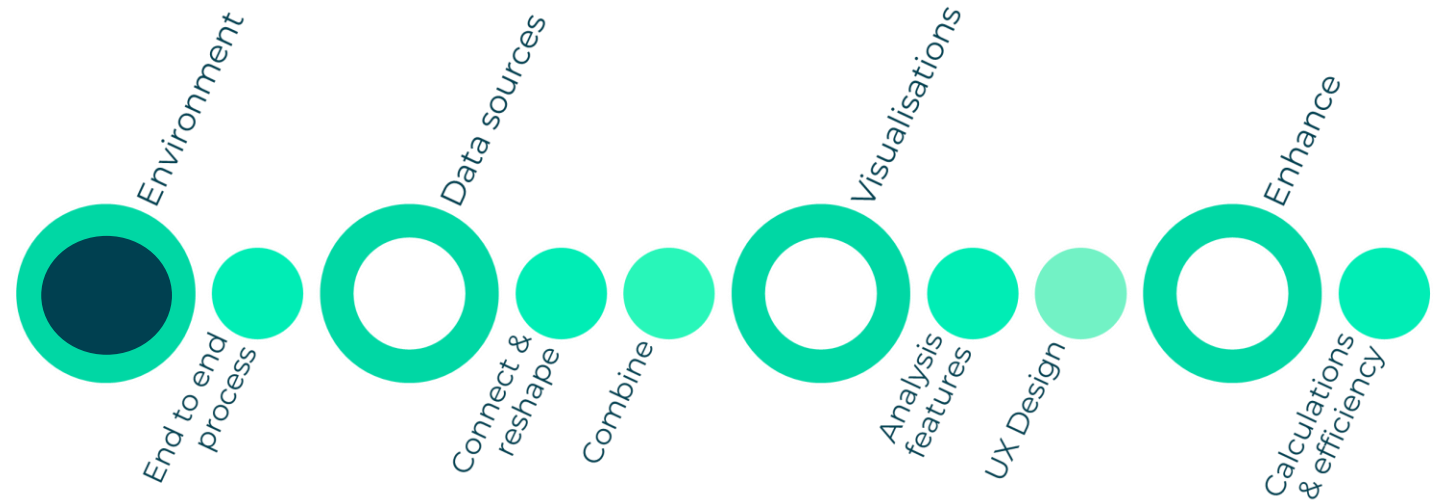
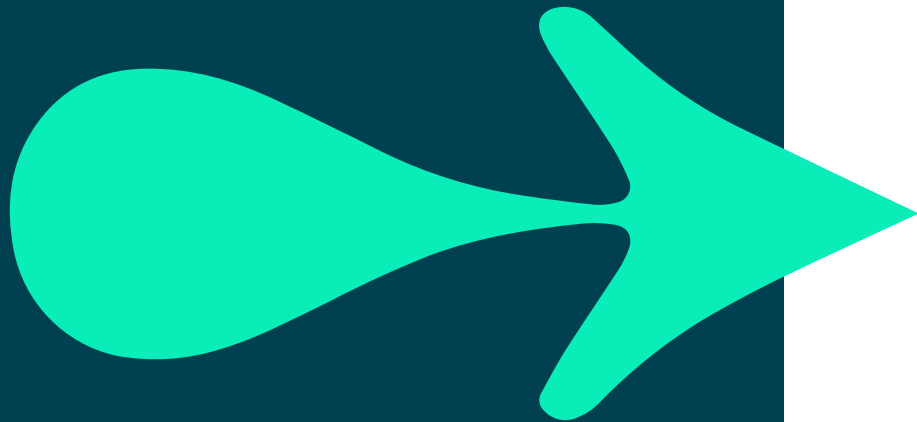


Open .tds and create a viz for publishing



Q - Which country produces the most CO2 emissions?

1. Connect to data source
2. Create viz
3. Publish



Activity 1.1:

Set-up for publishing

- Find specific version of Tableau
- View **Documents/My Tableau Repository**
 - ◇ Open sample tds
 - ◇ Register product
- Log in to tableau public
- Create map viz and publish

End to end flow

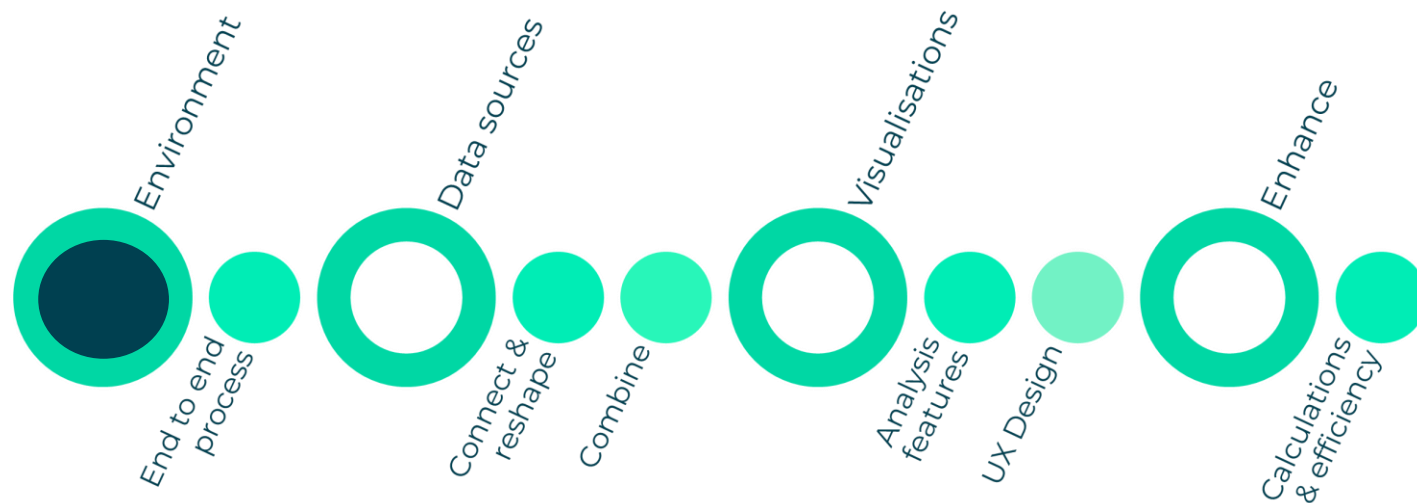
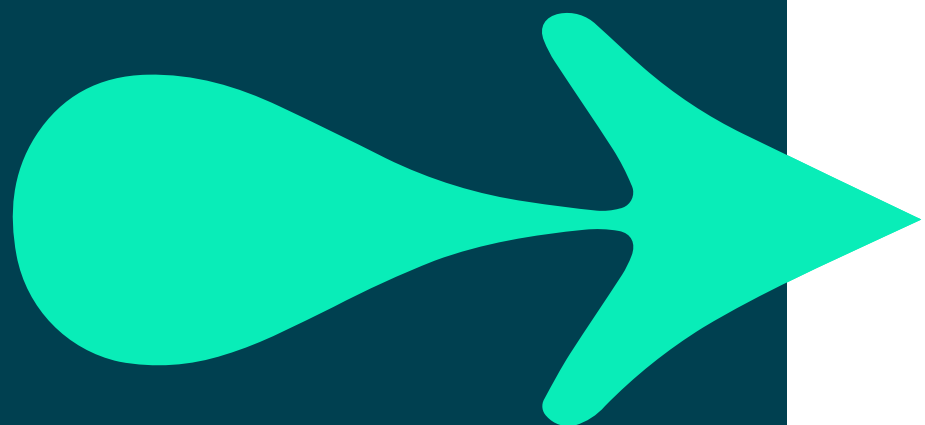
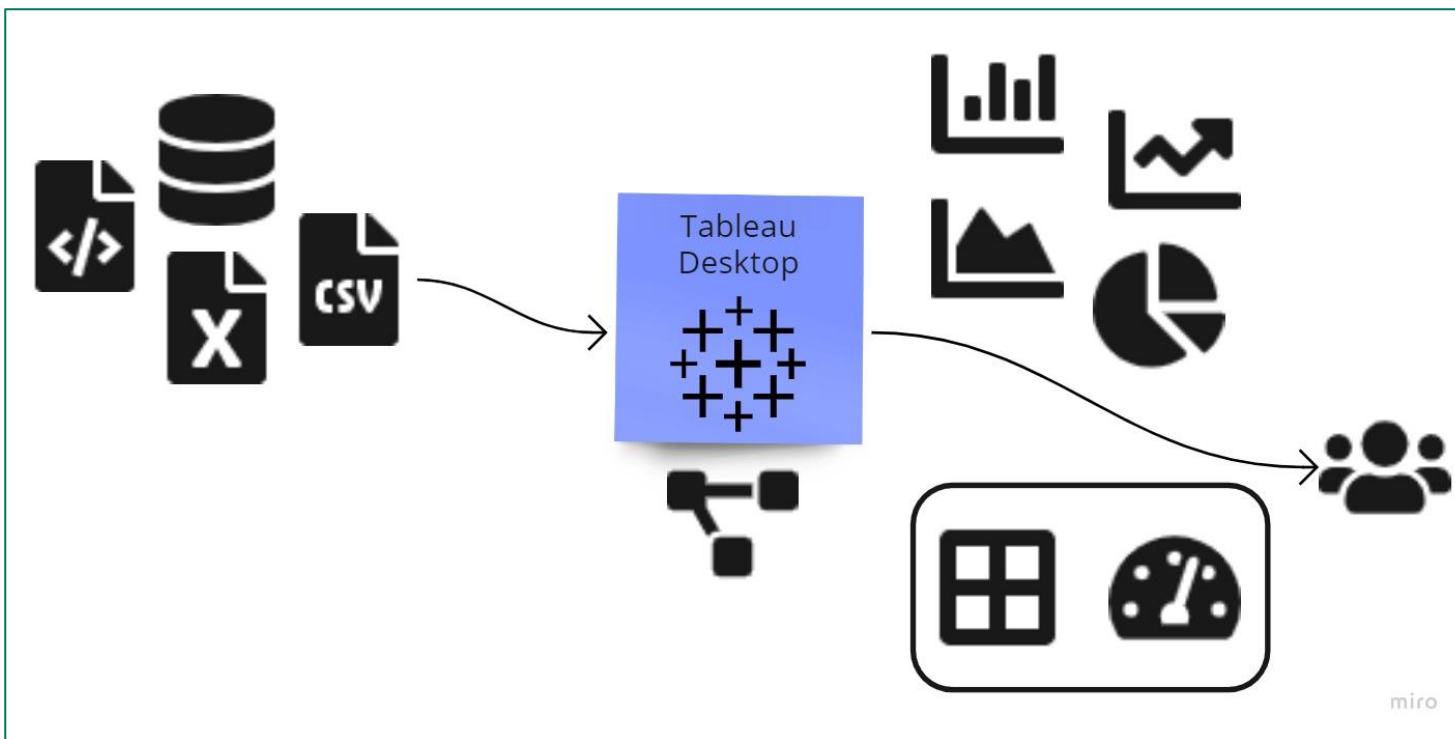
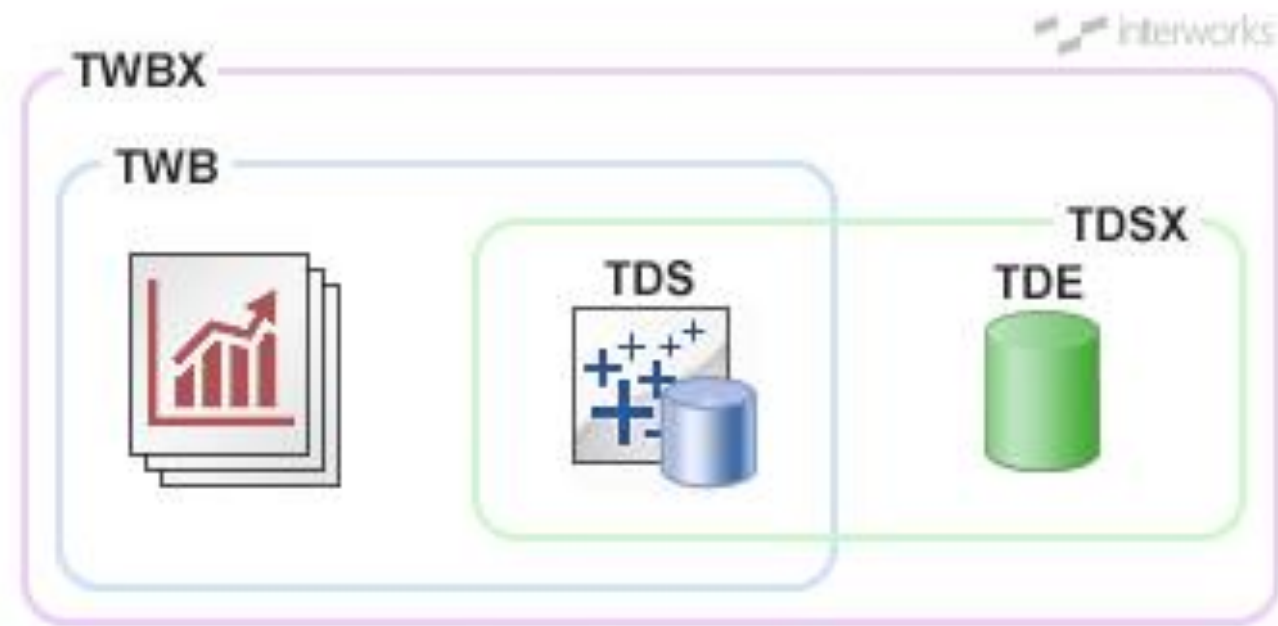
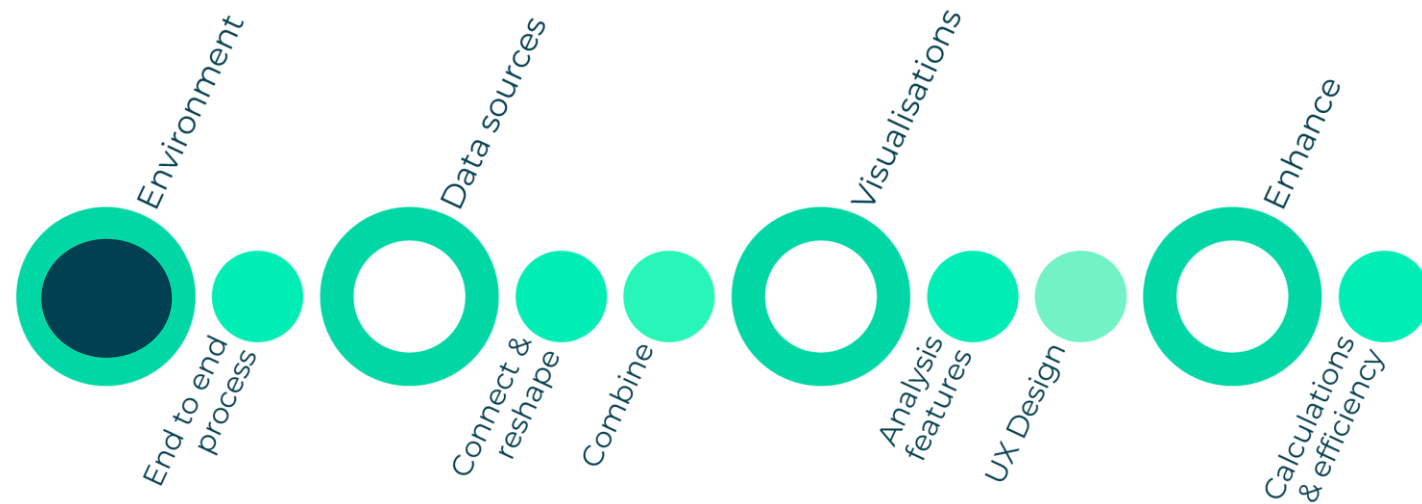
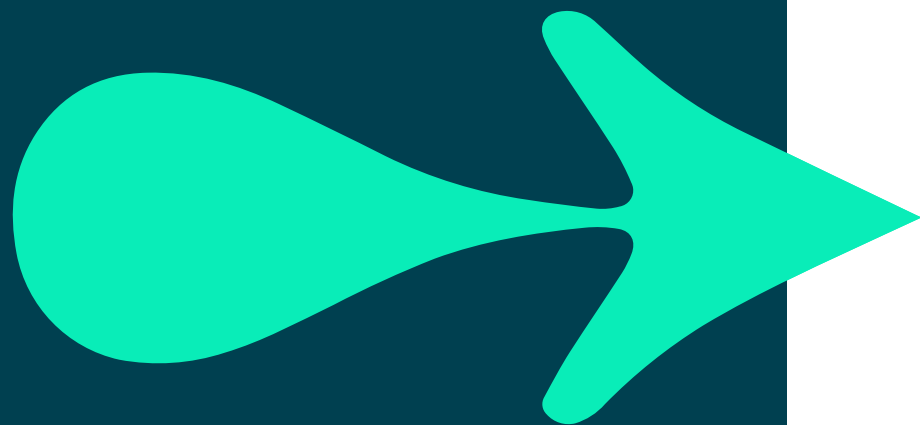


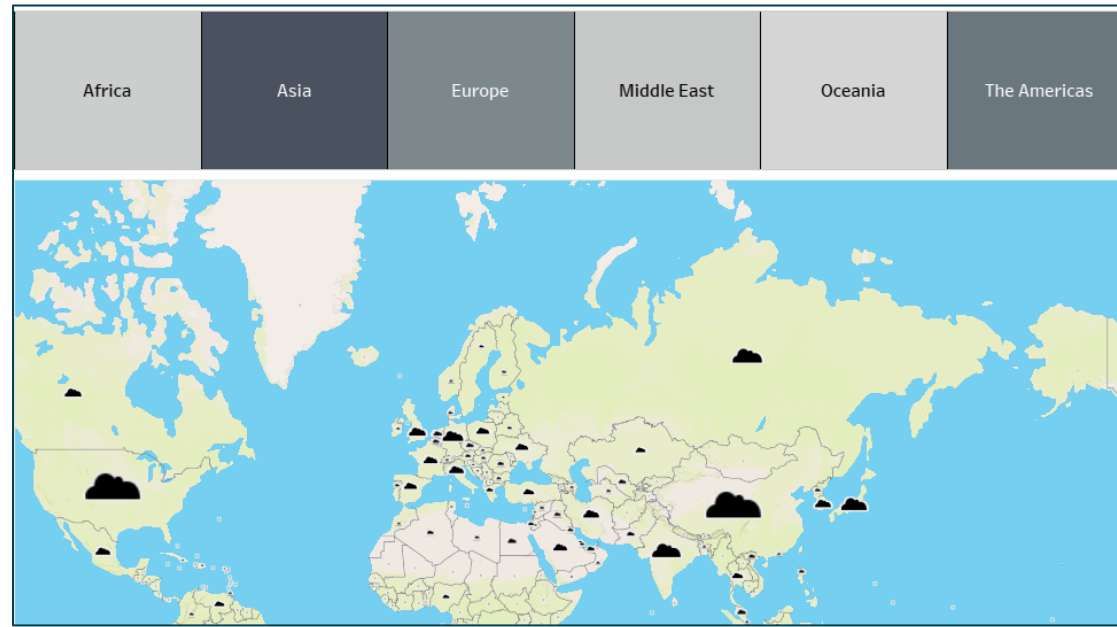
Tableau file types



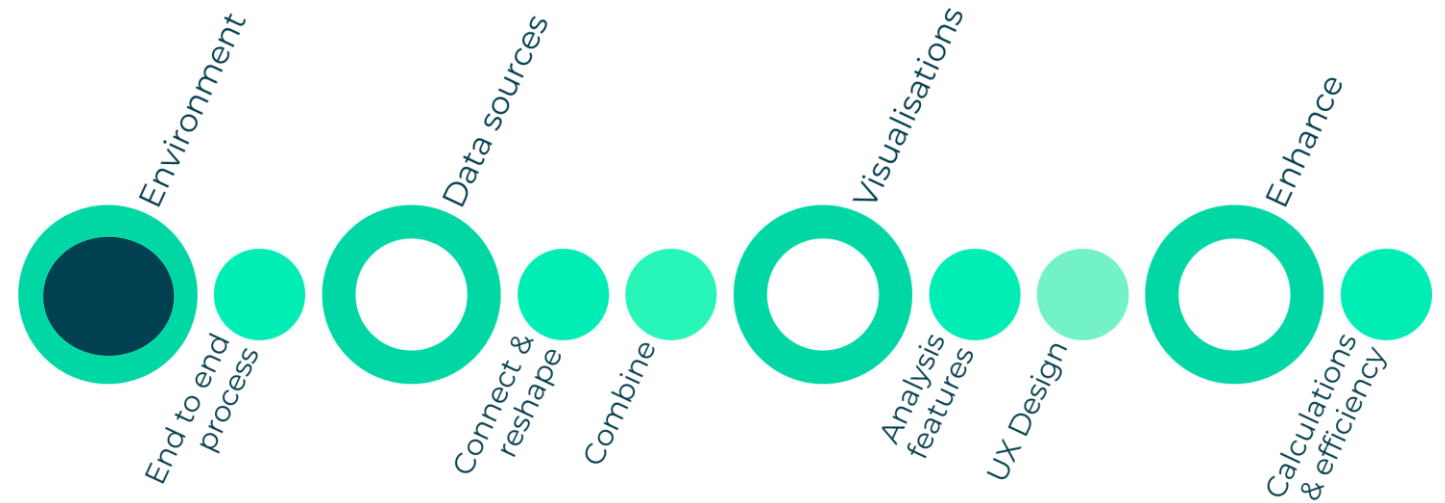
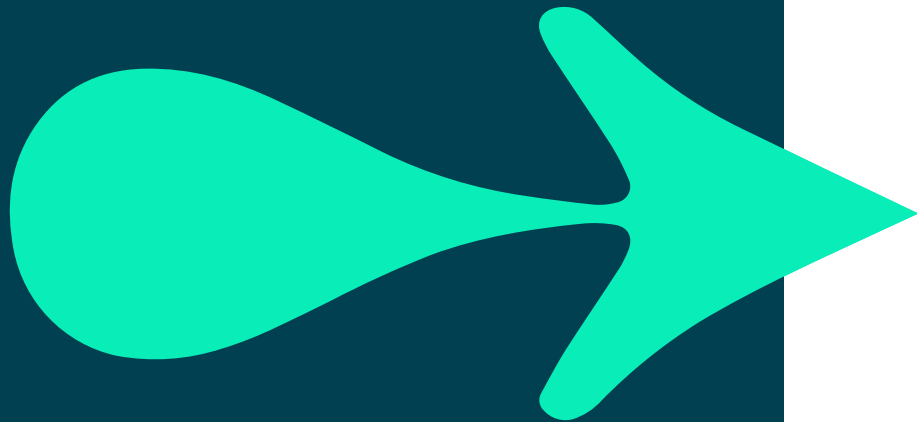
Credit – Robert Curtis



Interactivity



Use a filter on continent to make the viz more interactive



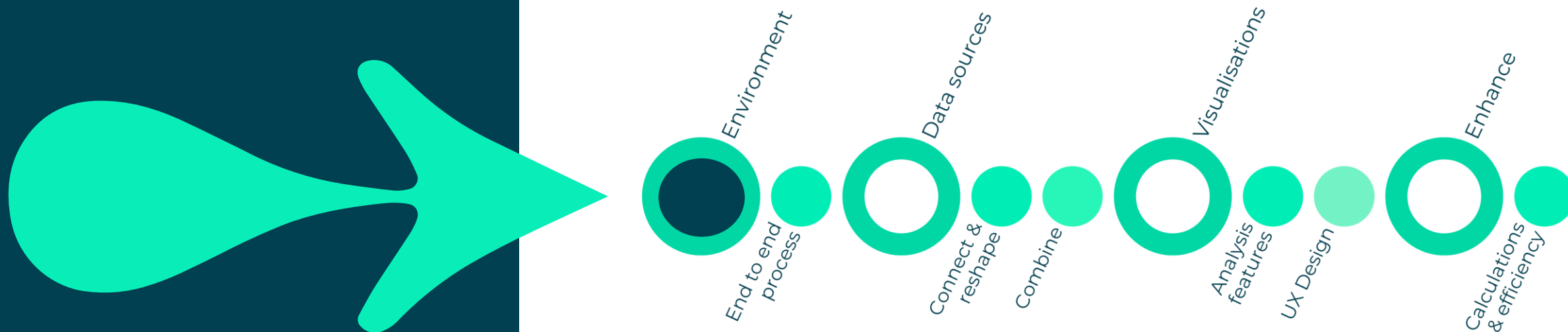
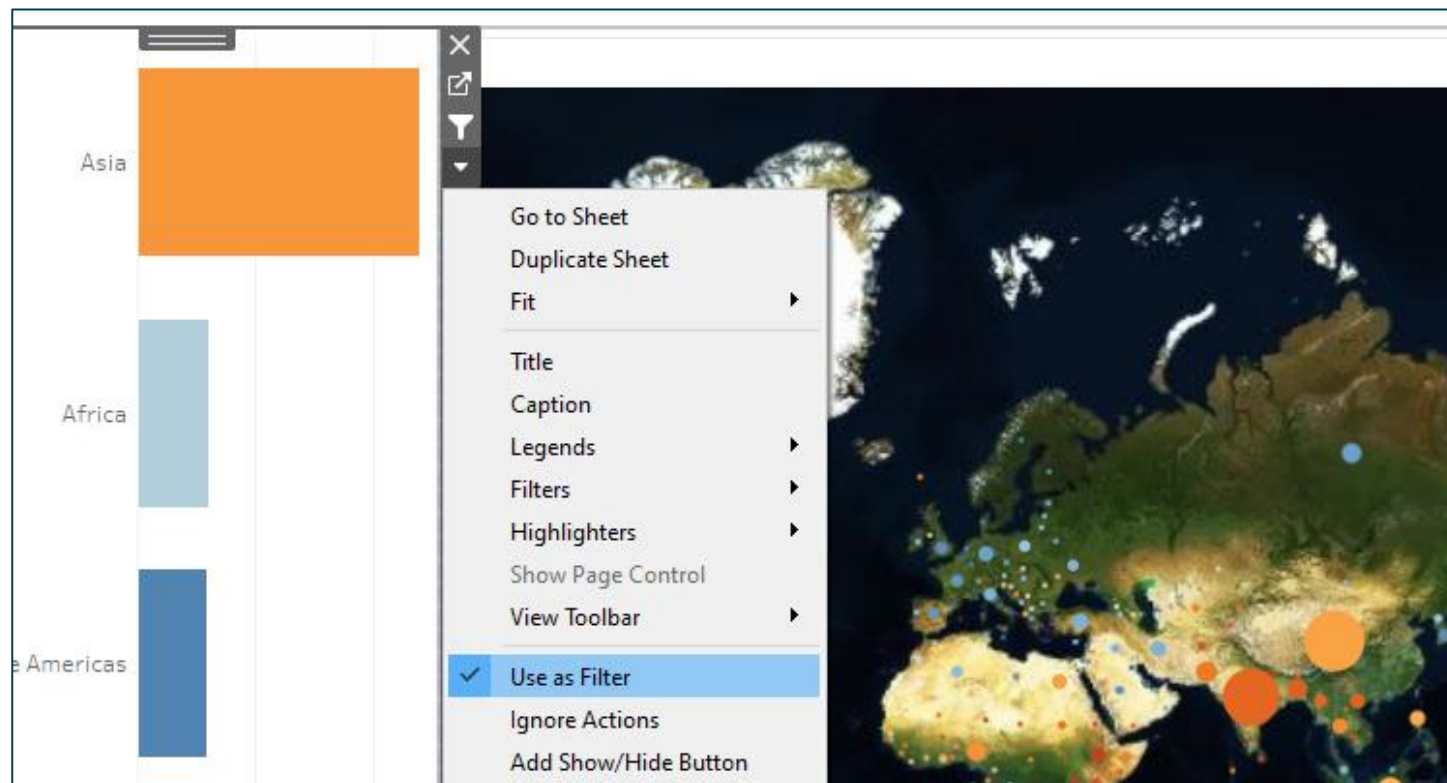
Activity 1.2:

Introduce interactivity

- Create a second worksheet
- Place on dashboard
- Use second sheet as a filter
- Publish again

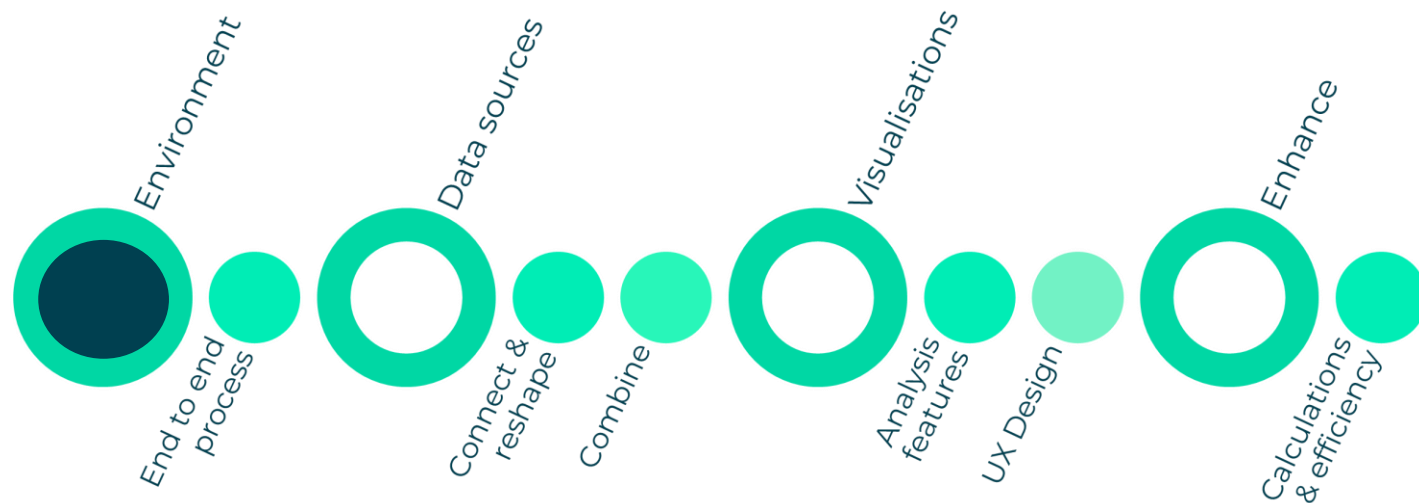
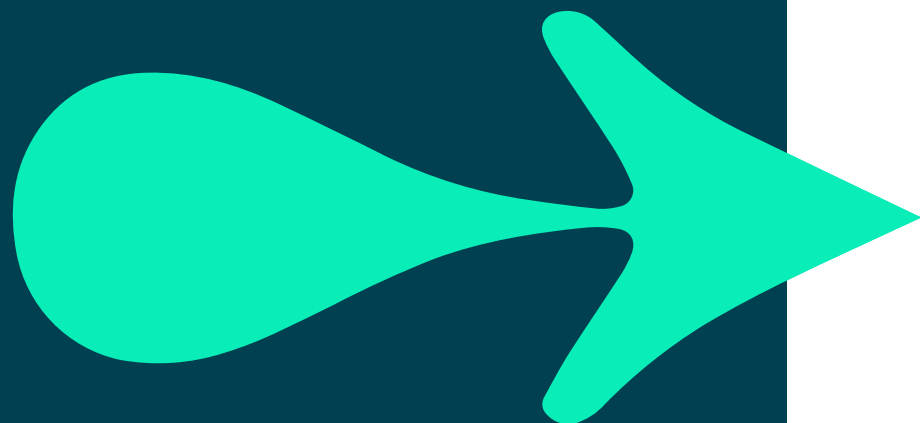


User Interaction



Licenses

Every deployment requires at least one Creator		
Tableau Creator \$70 USD/user/month billed annually Discover insights with a powerful suite of products that support your end-to-end analytics workflow.	Tableau Explorer \$35 USD/user/month billed annually Explore trusted data and answer your own questions faster with full self-service analytics.	Tableau Viewer \$12 USD/user/month billed annually min. 100 Viewers required View and interact with dashboards and visualizations in a secure, easy-to-use platform.
Includes D TABLEAU DESKTOP P TABLEAU PREP And one Creator license of S TABLEAU SERVER	Includes one Explorer license of S TABLEAU SERVER	Includes one Viewer license of S TABLEAU SERVER



Getting technical help

Tableau help

Tableau Prep

Tableau Desktop and web authoring

HTML | PDF

Help

[What's new](#)

[Get started](#)

[Connect to and prepare data](#)

[Build charts and analyse data](#)

[Create dashboards](#)

[Create stories](#)

Tutorials and guides

[Getting started with Tableau Desktop](#)

[Tableau Desktop and Tableau Prep deployment guide](#)

Trailhead

[Tour the Tableau environment](#)

[Get started with data visualisation in](#)

Community

LOGIN

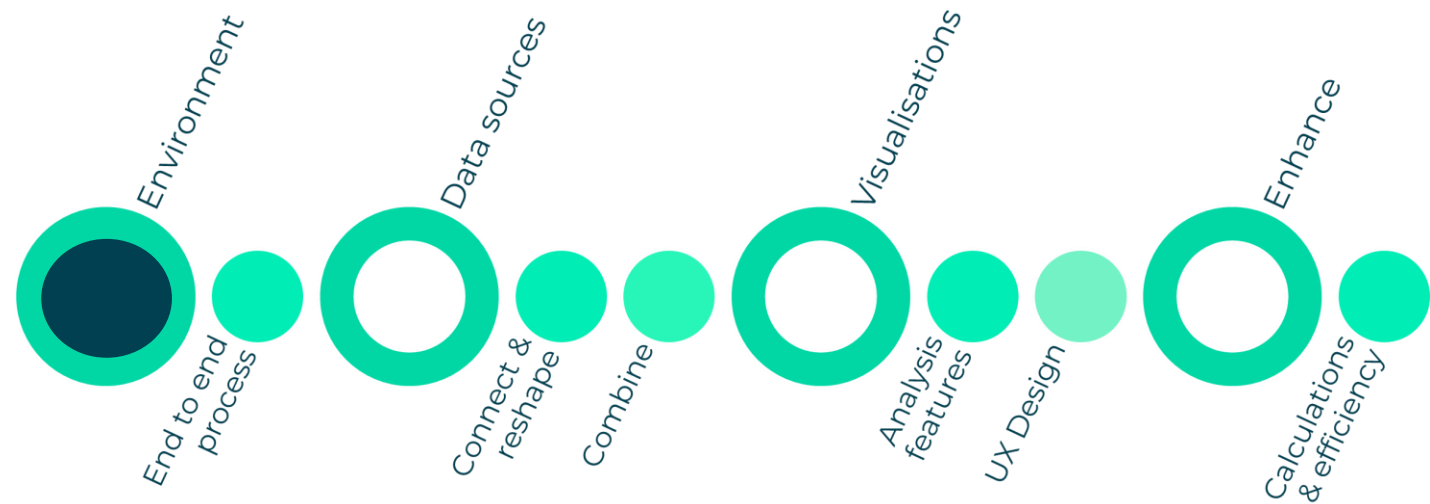
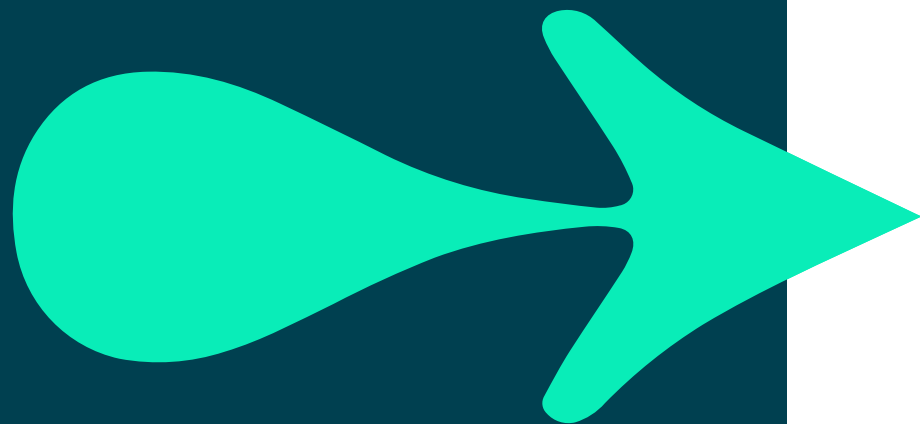
Welcome to the Community!

The Tableau Community Forums is a place to get your Tableau questions answered, collaborate with others and a space to help you get the most out of Tableau. We have more than 195k questions and over 450 user groups right here! Welcome to the #DataFam!

Search for help

Have a Question? Check out our [video](#) on how to best ask a question in the Forums

ASK A QUESTION



Activity 1.3:

Using the Help

- Navigate around the Help resources
- Filter by Product and Topic
- Find 'Rebrand a Dashboard'
 - Change workbook theme font and size
 - Optional -add an image



Summary of what we learnt



1. The product(s)
2. Installation and Releases
3. Licensing
4. Sharing what you create

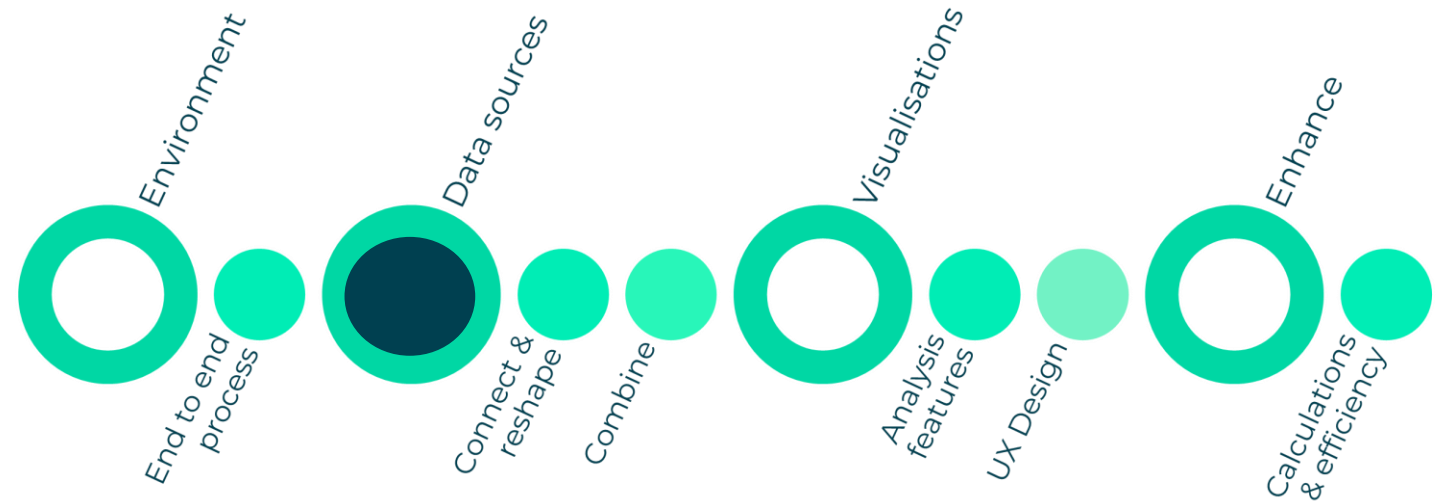
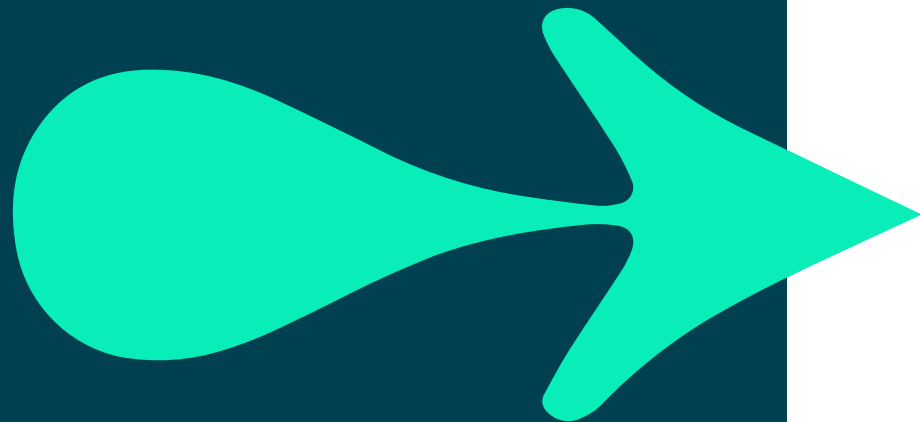
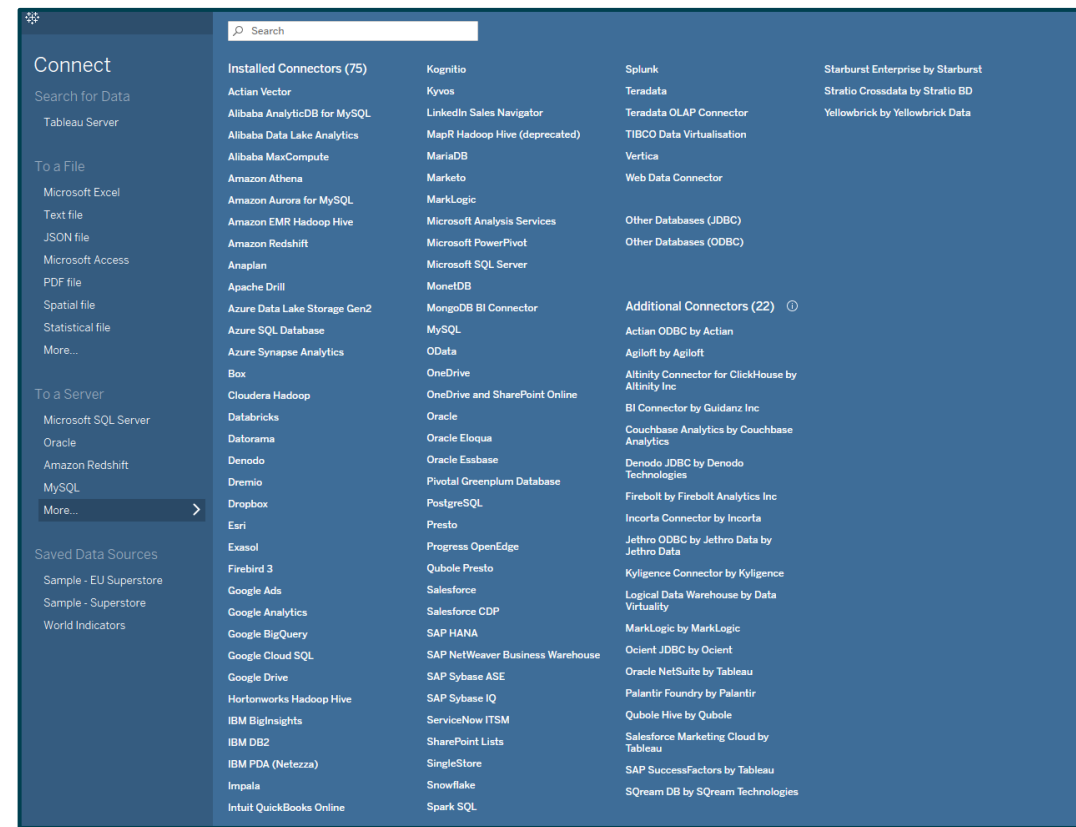


Module 2

Data Sources:

Connections & Purpose

Data source connections



Server sources - drivers

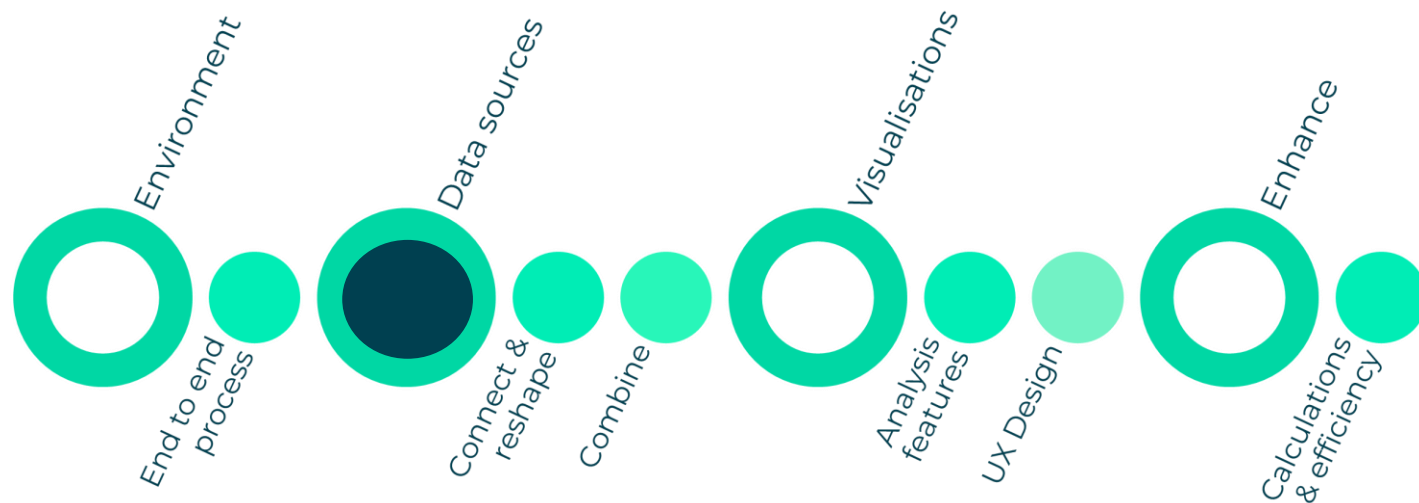
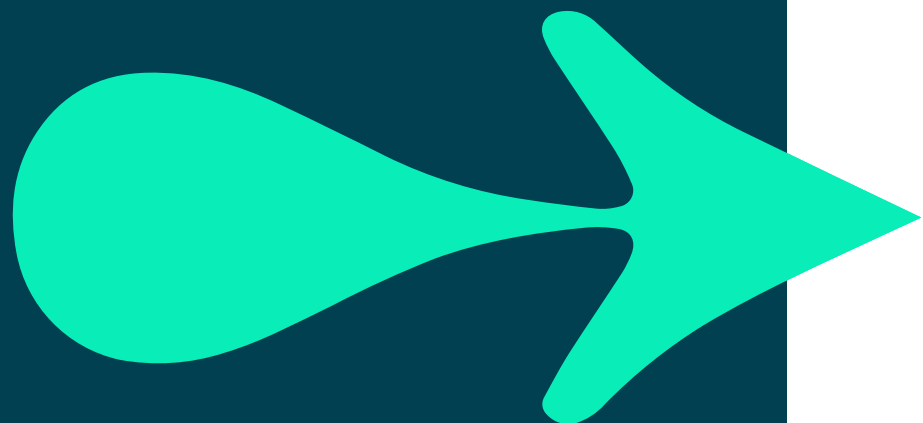
Data Source	Operating System	Bit Version
Amazon Athena	Windows	64-bit

⬆ Amazon Athena

Tableau Desktop, Tableau Server: 2020.2 - 2022.2.2

Complete the following steps to install the JDBC driver for Amazon Athena on your Windows computer:

1. Download the JDBC Driver with AWS SDK (.zip file) from the [Amazon Athena User Guide](#) on Amazon's website.
2. Extract the contents of the .zip file and move the JDBC 4.2 version of the extracted .jar file to C:\Program Files\Tableau\Drivers.



File sources

To a File

Microsoft Excel

Text file

JSON file

Microsoft Access

PDF file

Spatial file

Statistical file

More...

```
"ISBN";"Book-Title";"Book-Author";"Year-Of-Publication";"Publisher";"Image-URL-S";"Image-URL-M";"Image-URL-L"
"0195153448";"Classical Mythology";"Mark P. O. Morford";"2002";"Oxford University Press";"http://images.amazon.
"0002005018";"Clara Callan";"Richard Bruce Wright";"2001";"HarperFlamingo Canada";"http://images.amazon.com/ima
"0060973129";"Decision in Normandy";"Carlo D'Este";"1991";"HarperPerennial";"http://images.amazon.com/images/P/
"0374157065";"Flu: The Story of the Great Influenza Pandemic of 1918 and the Search for the Virus That Caused I
"0393045218";"The Mummies of Urumchi";"E. J. W. Barber";"1999";"W. W. Norton & Company";"http://images.amaz
"0399135782";"The Kitchen God's Wife";"Amy Tan";"1991";"Putnam Pub Group";"http://images.amazon.com/images/P/03
"0425176428";"What If?: The World's Foremost Military Historians Imagine What Might Have Been";"Robert Cowley";
"0671870432";"PLEADING GUILTY";"Scott Turow";"1993";"Audioworks";"http://images.amazon.com/images/P/0671870432.
"0679425608";"Under the Black Flag: The Romance and the Reality of Life Among the Pirates";"David Cordingly";"1
```

books.csv

books.csv X

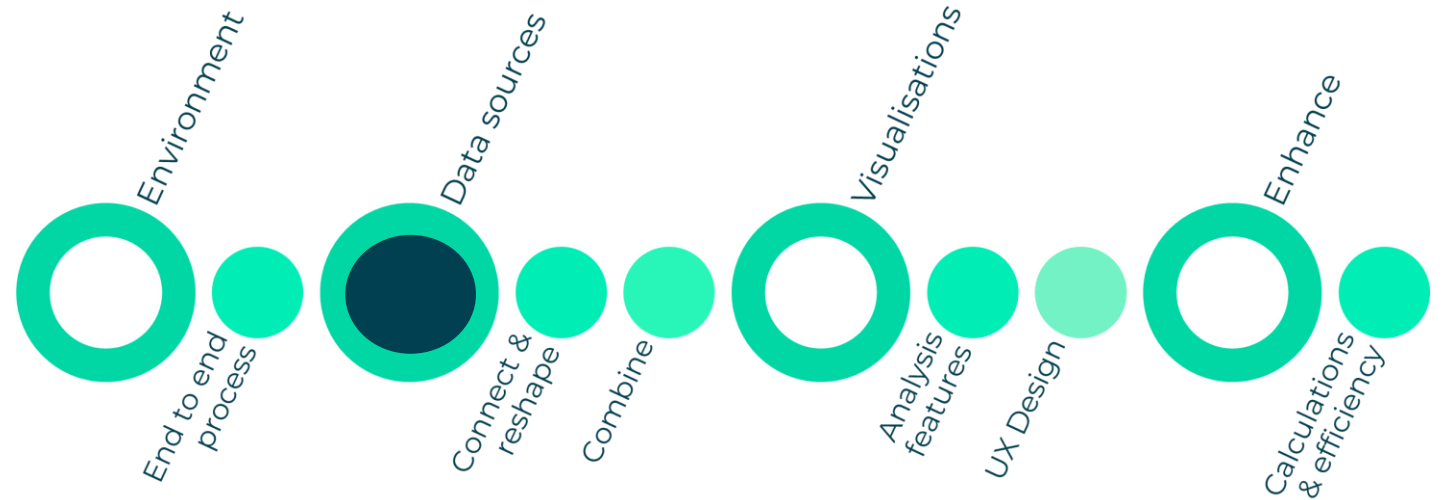
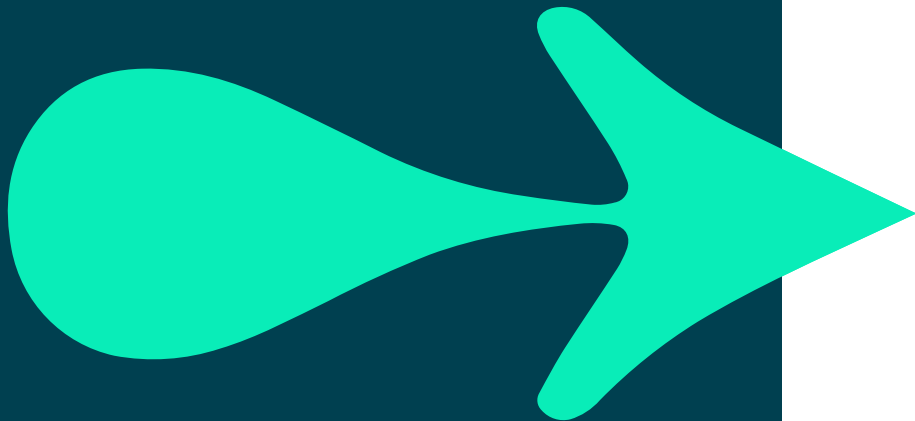
Field separator Semicolon

Text qualifier Automatic

Character set W. European ANSI

Locale English (United Kingdom)

delimiter



Interpretation of data sources

Files

☒ Cleaned with Data Interpreter

[Review the results.](#) (To undo changes, clear the check box.)

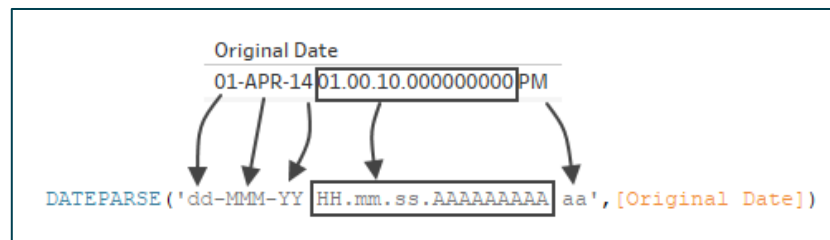
Key:															

Data types and roles

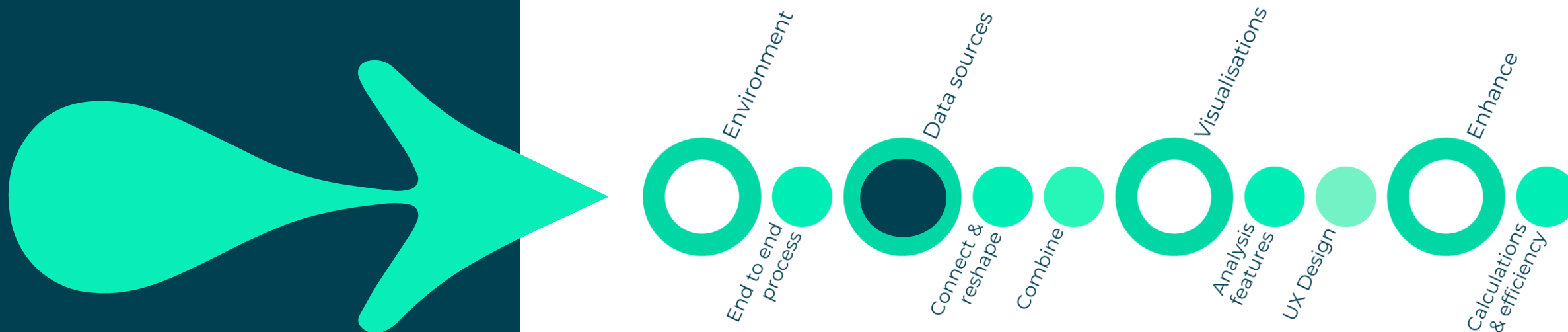
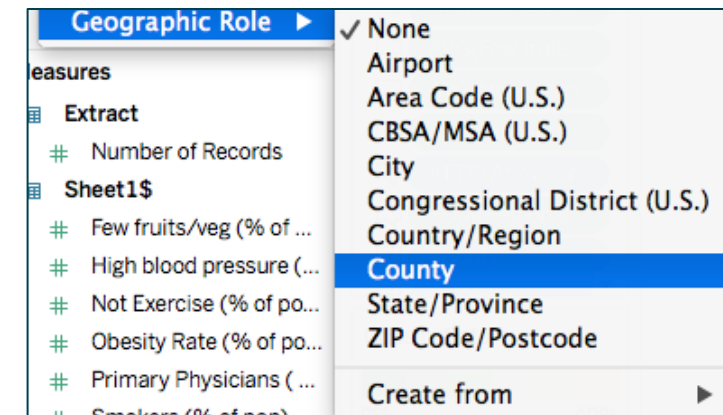
Data type icons

Abc google_books_1299.csv	Abc google_books_1299.csv	# google_books_1299.csv
Title	Author	Rating

Date parsing

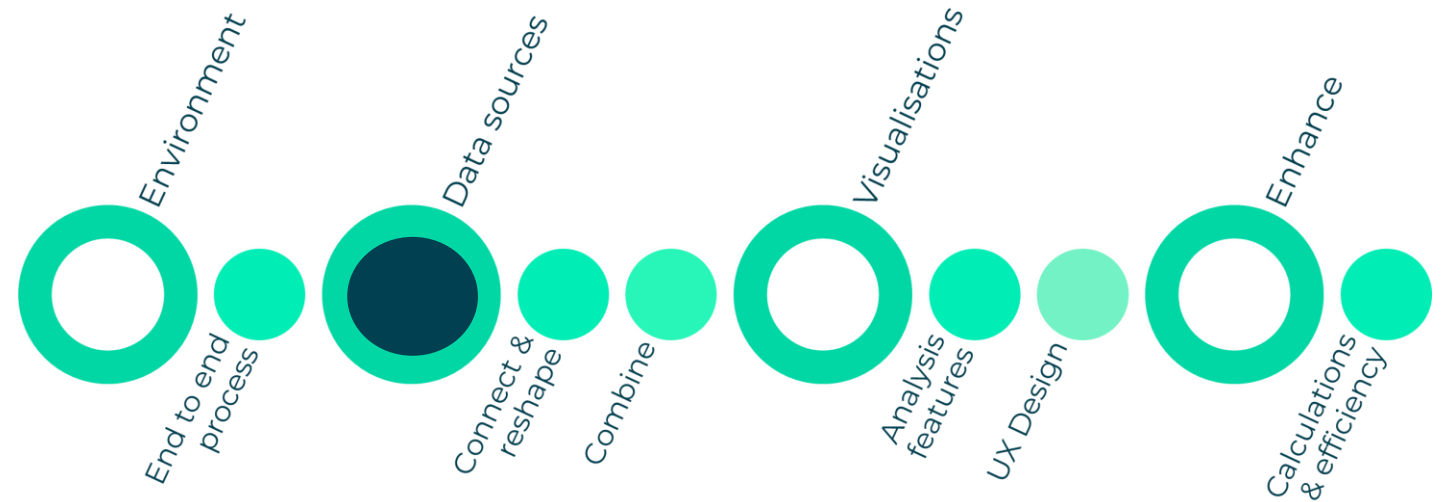


Roles

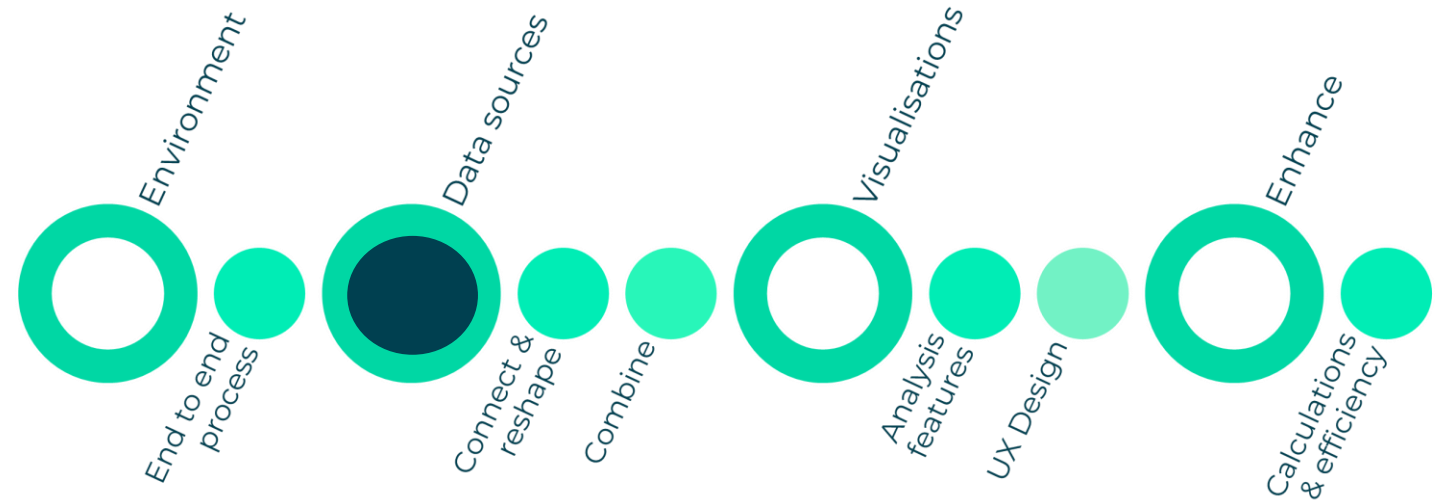
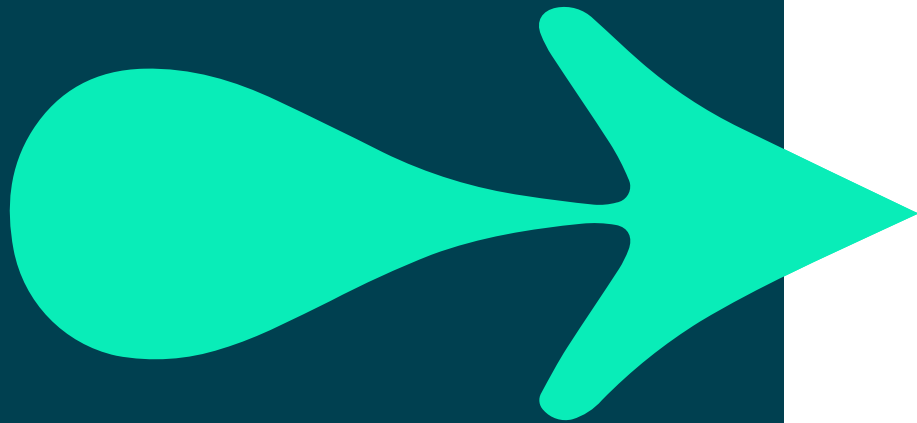



Splitting columns

Google Books	Abc	#	Abc
google_books_1299.csv	google_books_1299.csv	google_books_1299.csv	google_books_1299.csv
on	Publisher	Page Count	Genres
PLAC		192	none
ed to		288	Fiction , Mystery & amp, Dete...
betro		368	Games & amp, Activities , Vid...
len fe		320	none
ing d		544	Fiction , Fantasy , Dark Fantasy
serie		864	none
ization of the highly...	Titan Books	400	Fiction , Media Tie-In
New York Times best...	Tor Books	226	Fiction , Fantasy , Epic
L BESTSELLERDev...	HarperCollins	304	Games & amp, Activities , Vid...
ft book of festive ho...	Pan Macmillan	112	Biography & amp, Autobiogra...



Filtering for performance

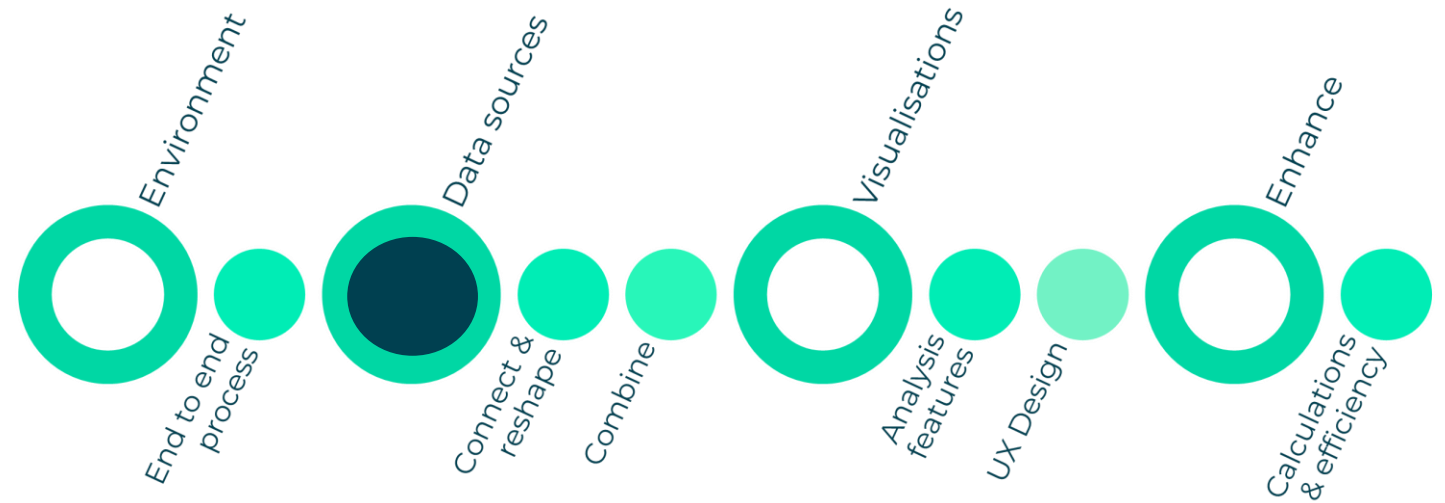
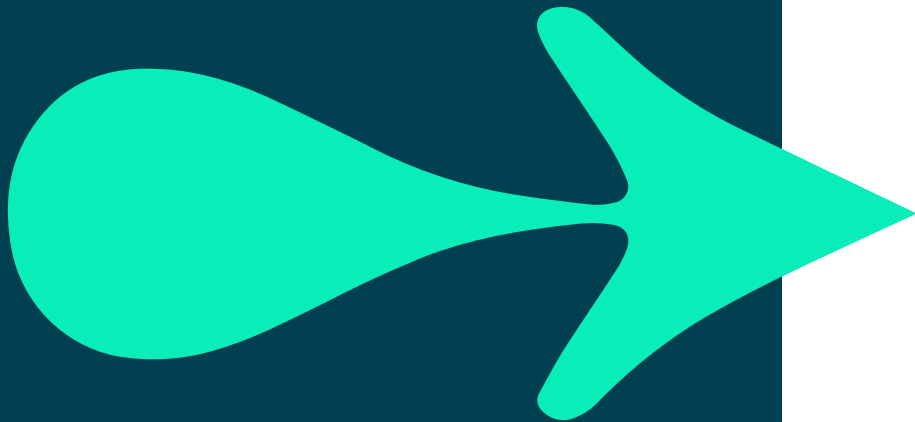
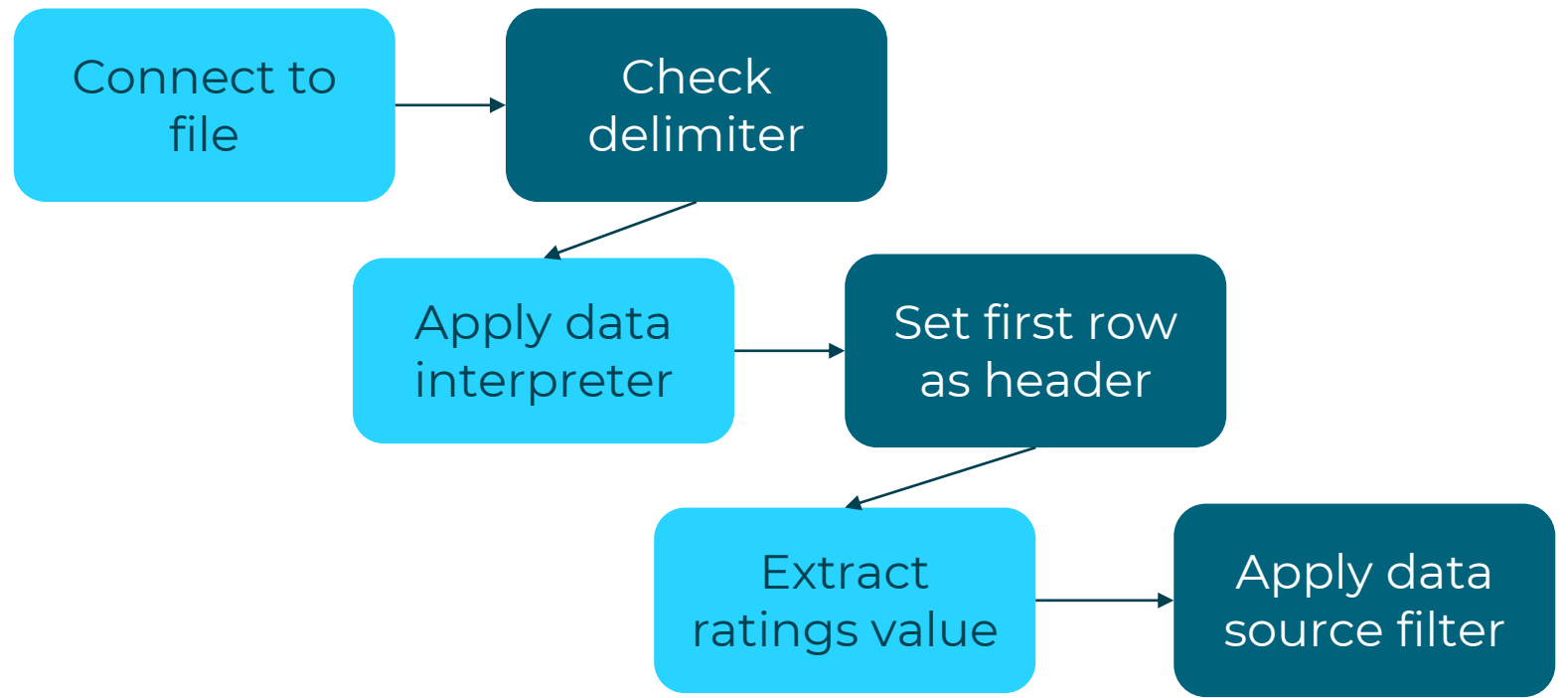




Activity 2.1: Connect to problematic text file

- Connect to a text file
- Data reshaping needed?
- Review data types
- Keep only books with > 100 votes

Review: working with a problematic text file



Extension: working with a problematic text file

regex rating solution

AuthorName	AverageRating	
A.G. Chacon	it was amazing 5.00 avg rating	5.000
A.G. Slatter	4.02 avg rating	4.020
A.J. Locke	4.19 avg rating	4.190
A.K. Larkwood	4.17 avg rating	4.170
Aaron Foley	4.29 avg rating	4.290
Aaron H. Aceves	4.47 avg rating	4.470
Abby Jimenez	4.48 avg rating	4.480
Abdi Nazemian	3.73 avg rating	3.730
Adalyn Grace	4.33 avg rating	4.330
Adam Green	it was amazing 5.00 avg rating	5.000
Adam Sass	4.58 avg rating	4.580
Adib Khorram	3.79 avg rating	3.790
Adiba Jaigirdar	4.38 avg rating	4.380
Adriana Trigiani	4.09 avg rating	4.090
Adrienne Young	4.30 avg rating	4.300
Agatha Christie	4.19 avg rating	4.190
	4.27 avg rating	4.270
Aiden Thomas	4.72 avg rating	4.720
Aimee Pokwatka	4.77 avg rating	4.770
Akshaya Raman	3.82 avg rating	3.820
Akwaeke Emezi	3.98 avg rating	3.980
	4.20 avg rating	4.200
Alan Lastufka	3.81 avg rating	3.810
Alan Moore	it was amazing 5.00 avg rating	5.000
Alantha Davis	4.45 avg rating	4.450

derived rating regexp

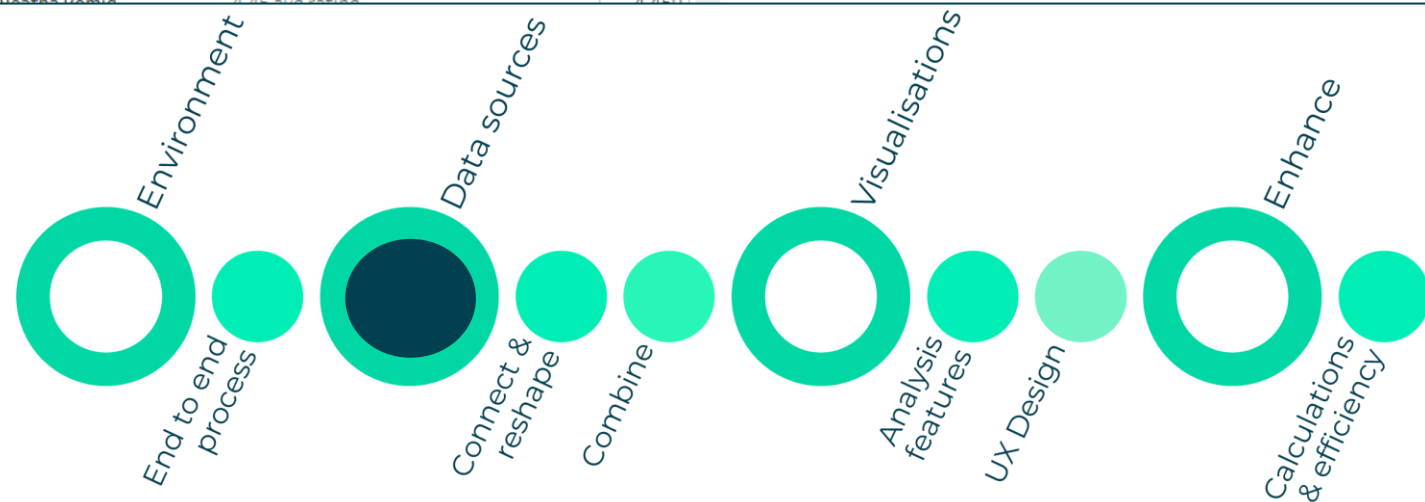
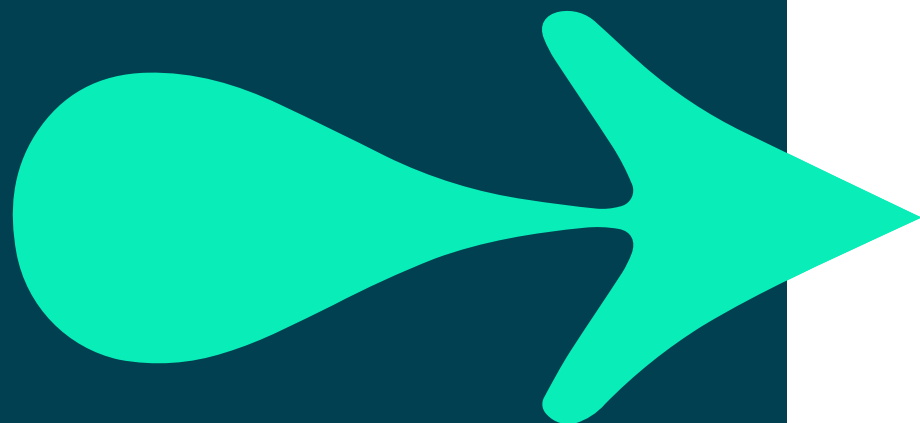
```
AVG(FLOAT(REGEXP_EXTRACT([AverageRating],  
'(\d+(\.\d+)?)')))
```

The calculation is valid.

1 Dependency ▾

Apply

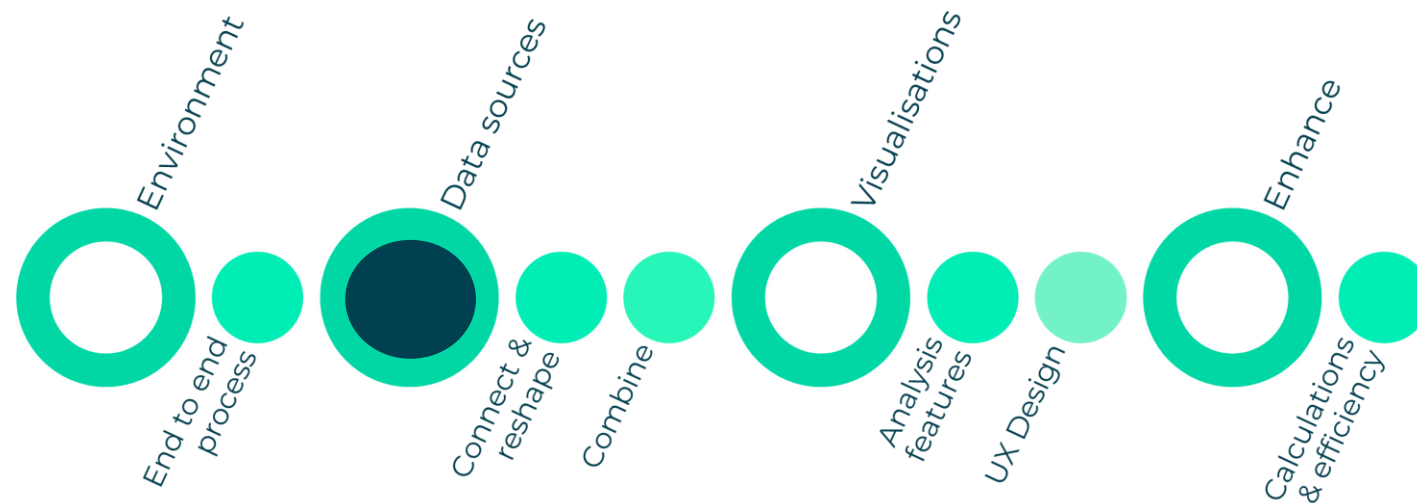
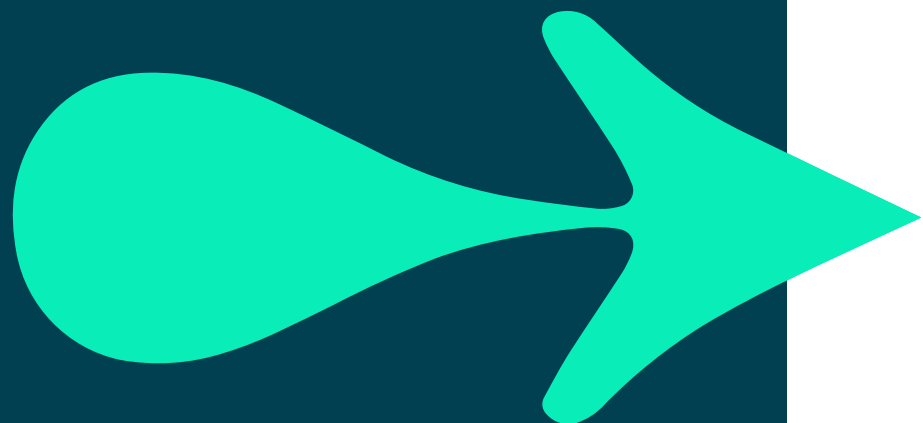
OK



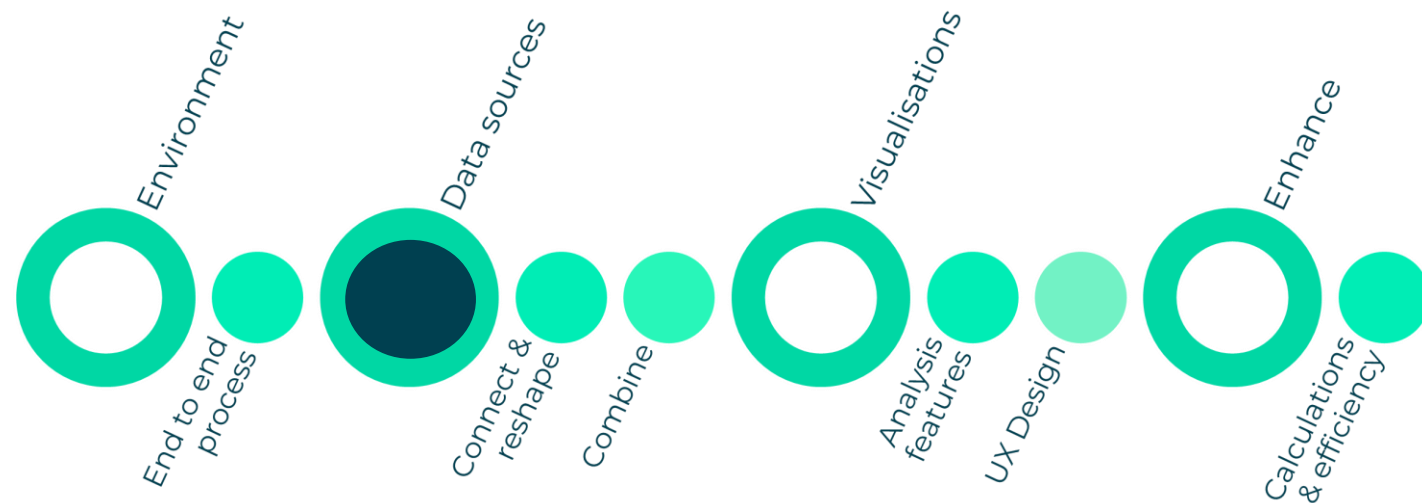
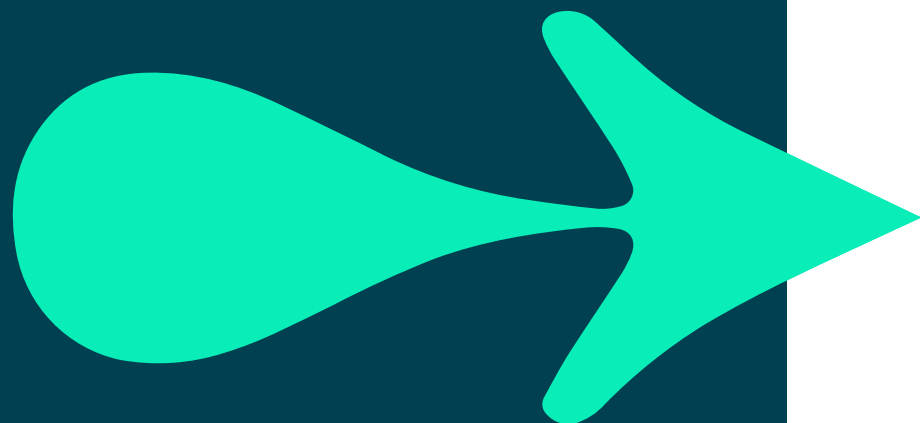
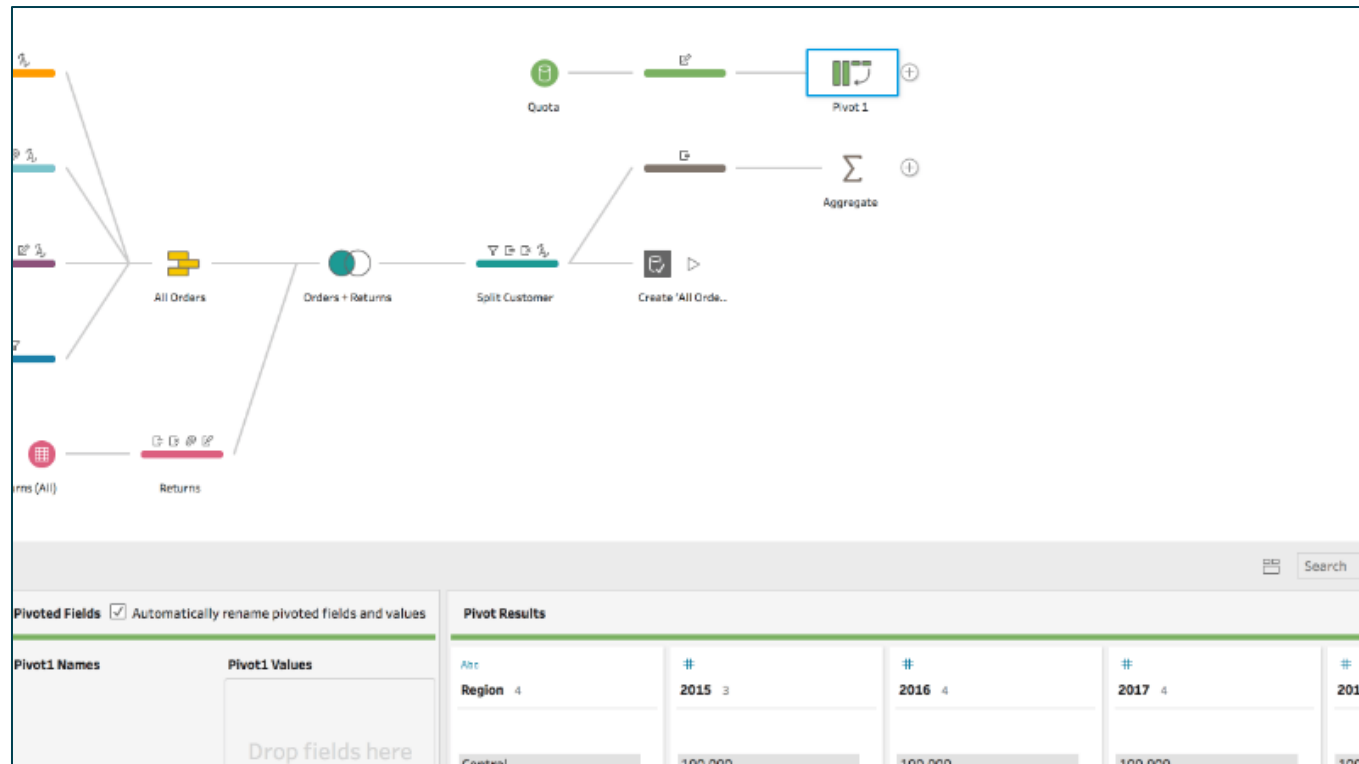
Pivot columns to rows

Abc	#	#	#
Data	Data	Data	Data
Quarter	Samsung	Nokia	Apple
Q1 '12	89.2800	83.1600	33.1200
Q2 '12	90.4300	83.4200	28.9400
Q3 '12	97.9600	82.3000	24.6200
Q4 '12	106.9600	85.0500	43.4600
Q1 '13	100.6600	63.2200	38.3300
Q2 '13	107.5300	60.9500	31.9000
Q3 '13	117.0500	63.0500	30.3300
Q4 '13	119.2100	63.5800	50.2200

Abc	Abc	#
Data	Pivot	Pivot
Quarter	Pivot Field Names	Pivot Field Values
Q4 '12	Apple	43.460
Q1 '13	Apple	38.330
Q2 '13	Apple	31.900
Q3 '13	Apple	30.330
Q4 '13	Apple	50.220
Q1 '10	Nokia	110.110
Q2 '10	Nokia	111.470
Q3 '10	Nokia	117.460
Q4 '10	Nokia	122.280



Prep builder & data sources



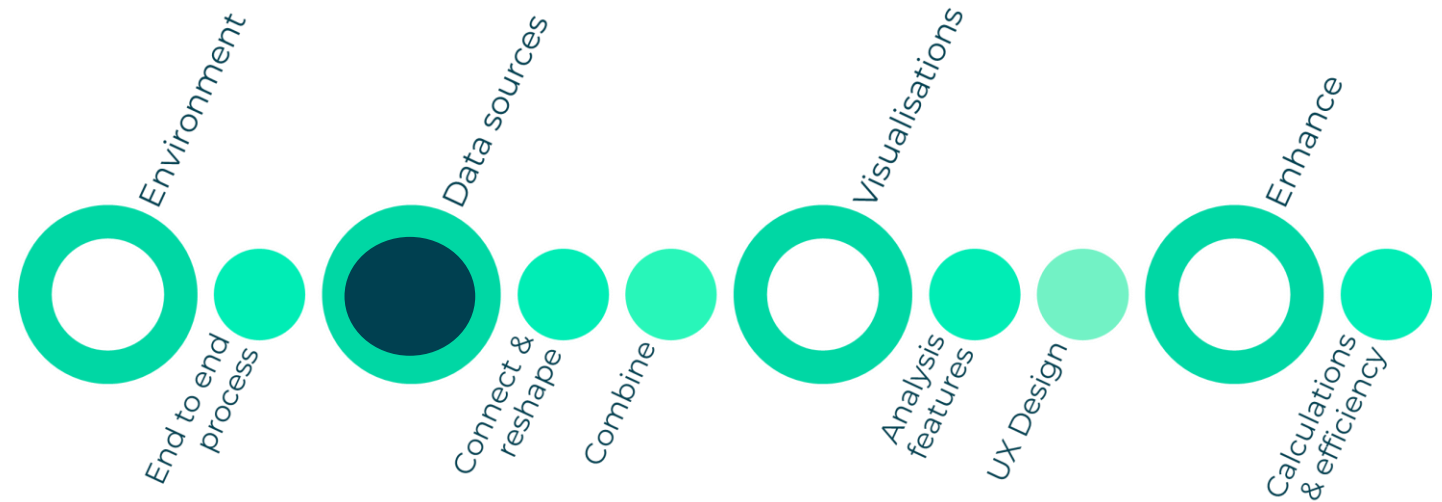
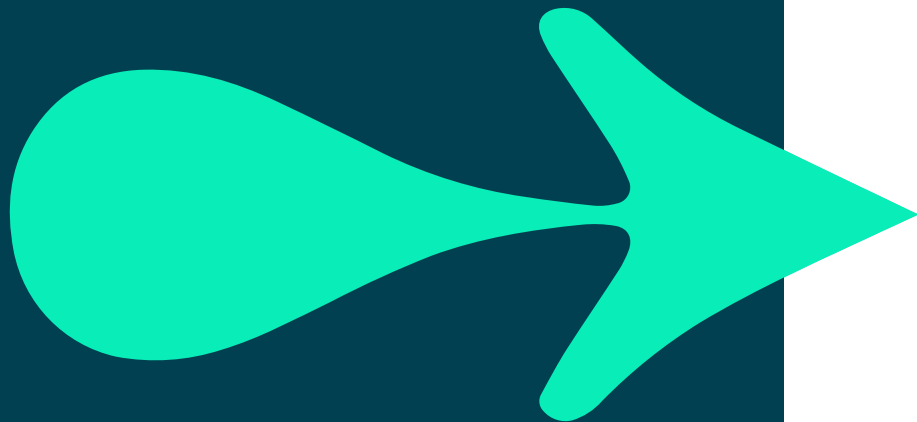
Case study: discussion



Independent Book Shop

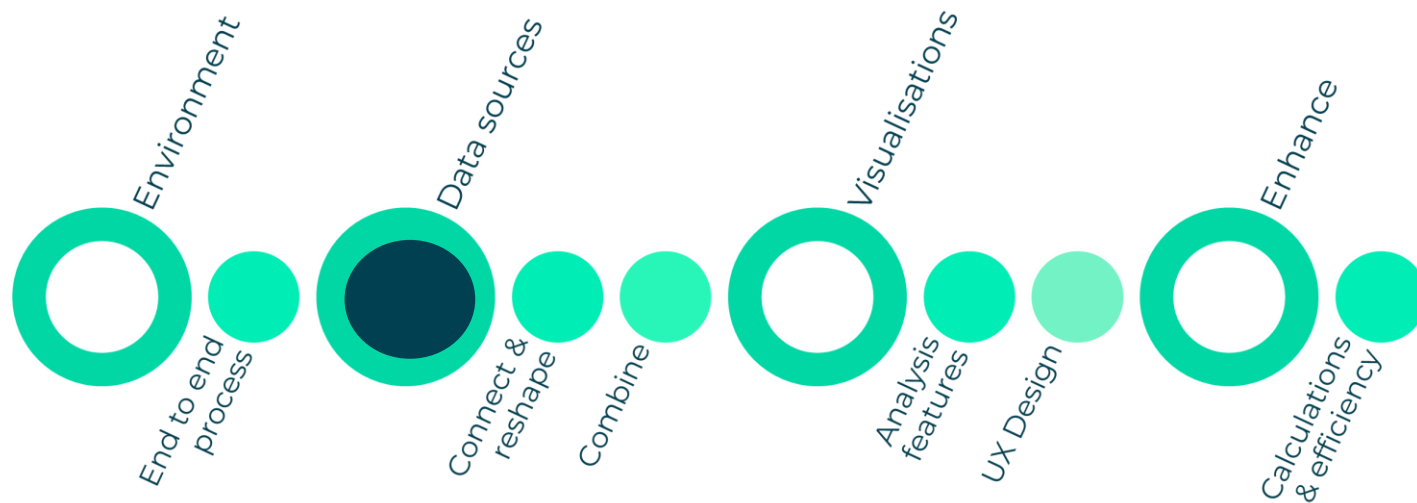
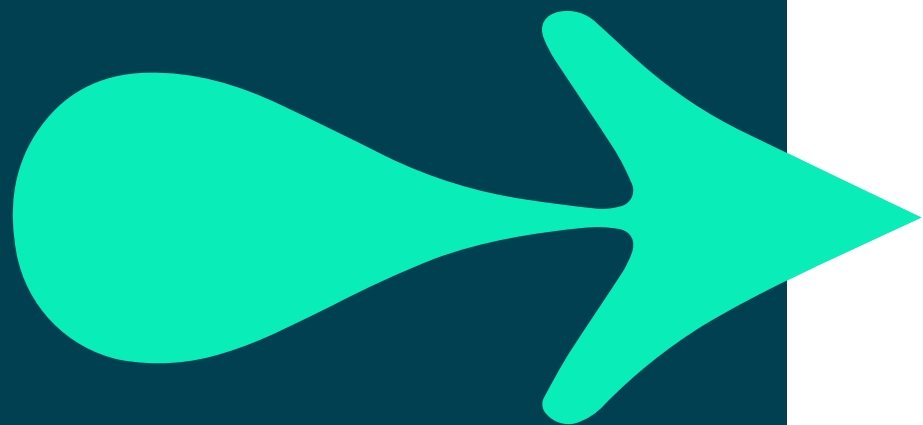
Aim: attract more customers...

What are the best sellers?
Which new titles should we stock?
Which authors are popular now?



Case study: available data

Name	File ownership	Type	Size
Amazon_book_reviews		File folder	
Books_Ratings		File folder	
Bookshop_Sales		File folder	
google_books		File folder	
amazon_bestsellers_categories		Microsoft Excel Comma Separated Values...	50 KB
Amazon_stock_prices		Microsoft Edge PDF Document	208 KB
Books_amazon_bs_20102020		Microsoft Excel Comma Separated Values...	98 KB
Bookshop		Microsoft Excel Worksheet	1,496 KB
Bookshop_Series		Microsoft Edge PDF Document	76 KB
competitor_sales		Microsoft Excel Comma Separated Values...	153 KB
goodreads_books.json		JSON File	8,986,558 KB
goodreads_cantwait_2022		Microsoft Excel Comma Separated Values...	92 KB
goodreads_reviews_1.5k		Microsoft Excel Comma Separated Values...	1,648 KB
goodreads_reviews_11k		Microsoft Excel Comma Separated Values...	1,524 KB
goodreads-twitter		Microsoft Excel Worksheet	53 KB
leeds_library_checkouts		Microsoft Excel Comma Separated Values...	3 KB
man-booker-prize-winners		Microsoft Edge PDF Document	4,859 KB



Activity 2.2:

Explore data sources


- Assess source contents, size, type
- Preview with excel, text reader or tableau
- Consider if data is useful to case study
- Any needed data preparation/interpretation?



Summary of what we learnt



1. How to connect to data sources
2. Reshaping data options
3. Desktop v Prep features
4. What we do need to know about data sources before using them?

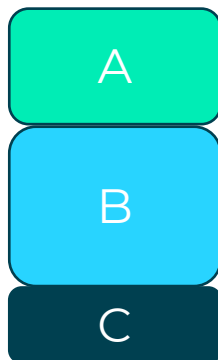


Module 3

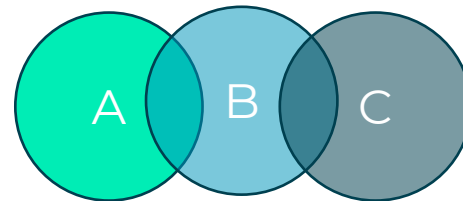
Combining Data Sources

DS methods of combining data

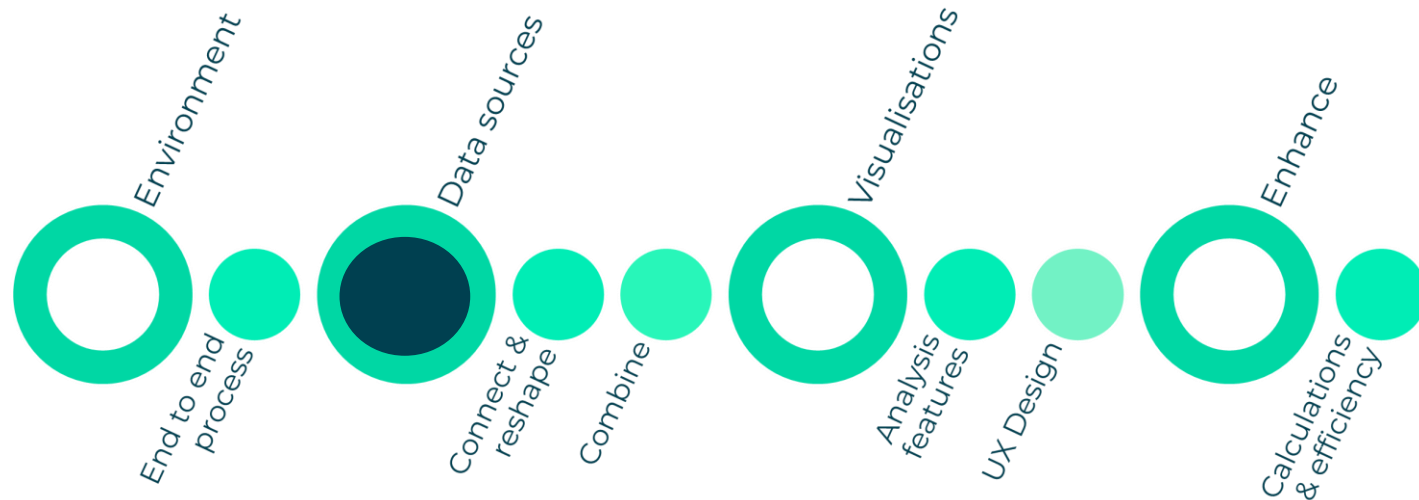
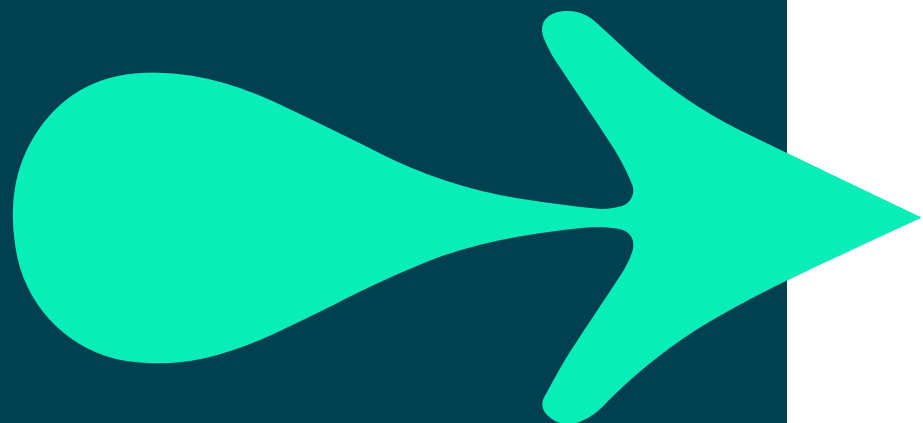
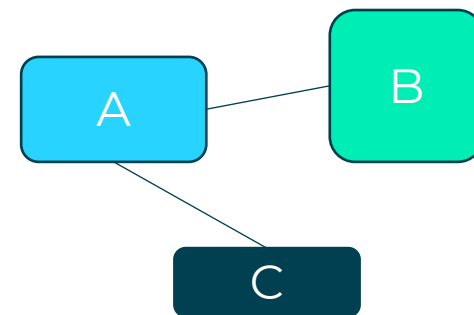
Union



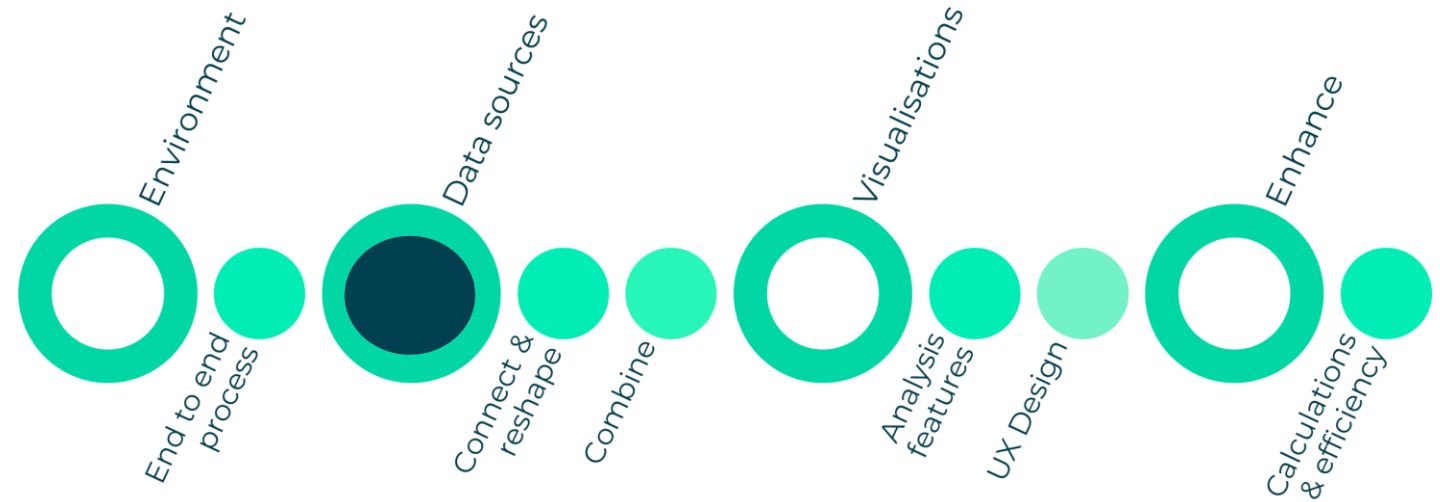
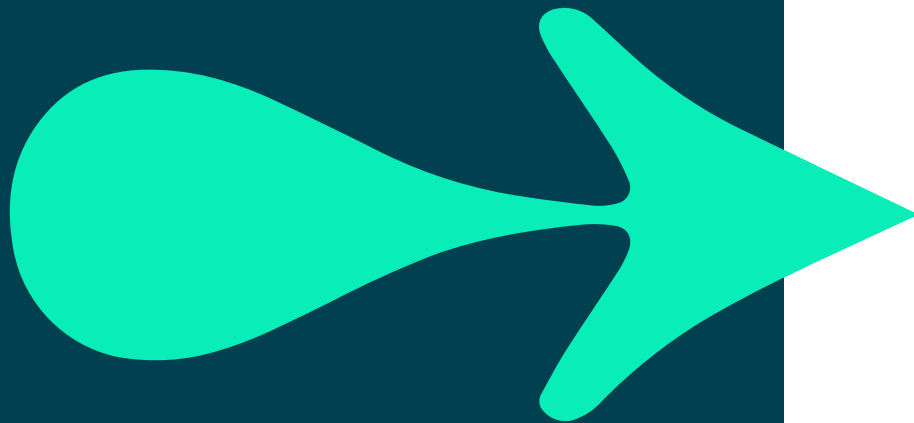
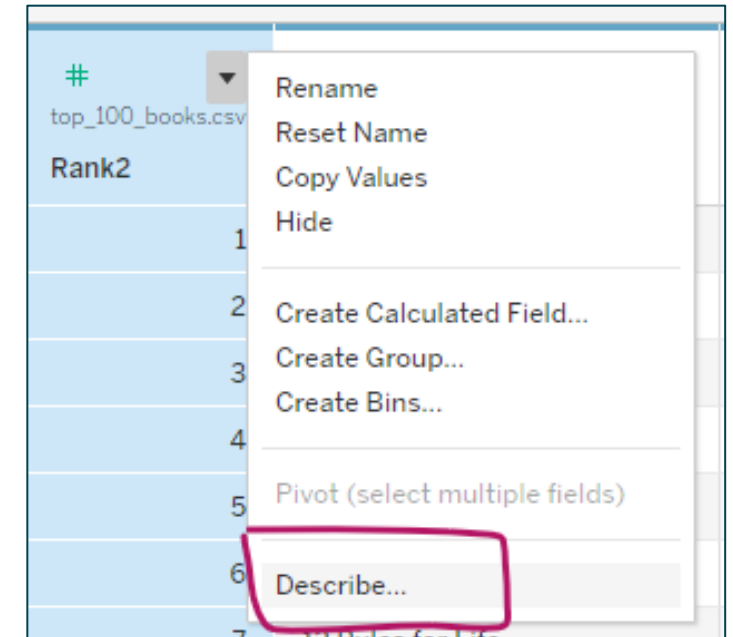
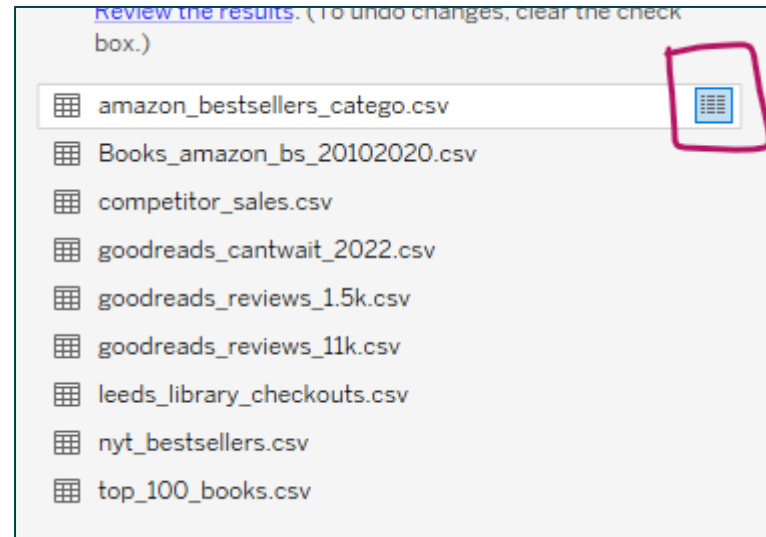
Joins



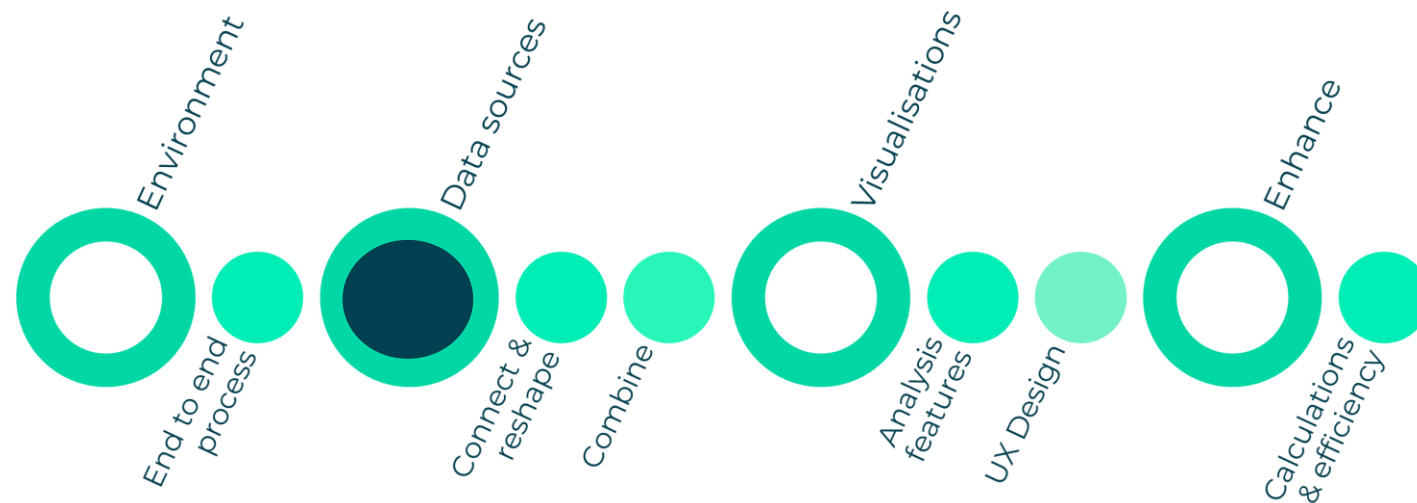
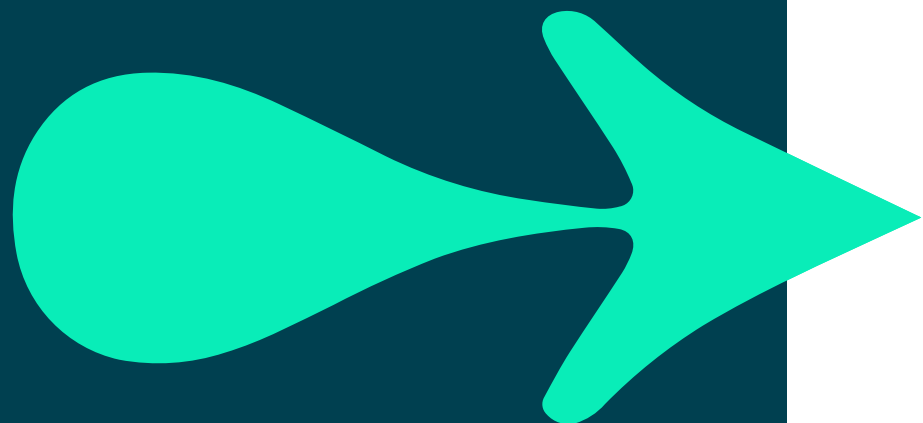
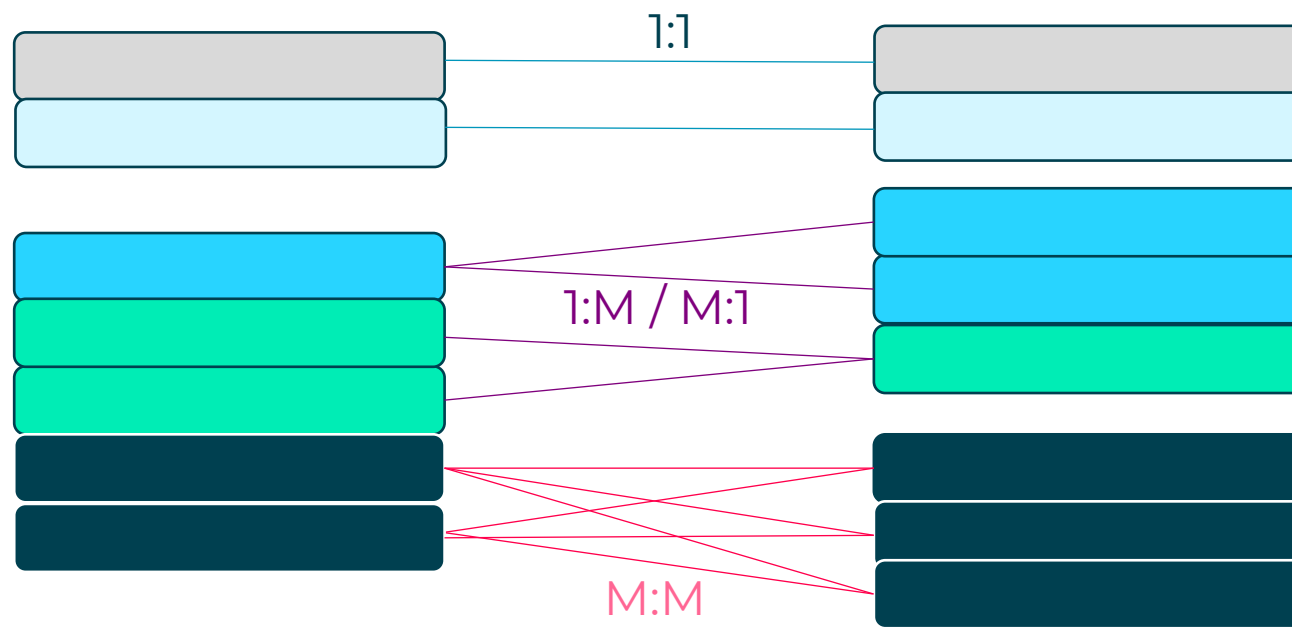
Relationship



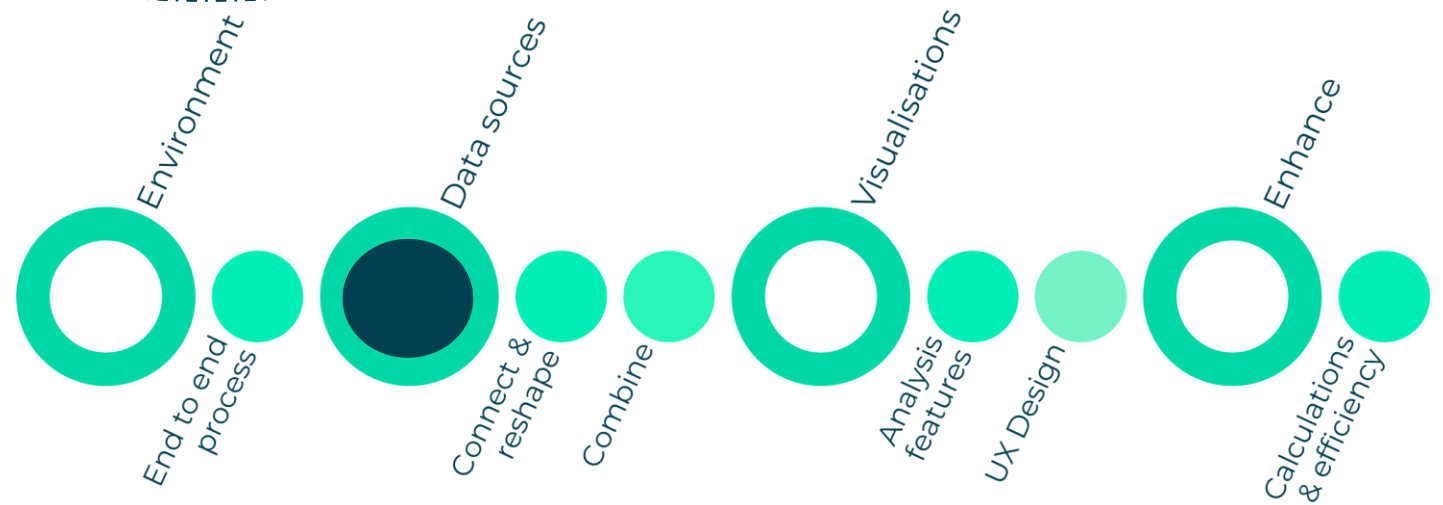
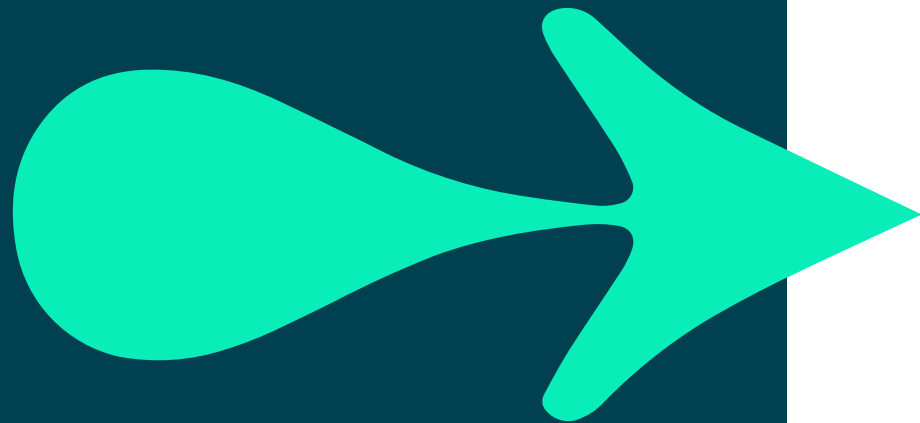
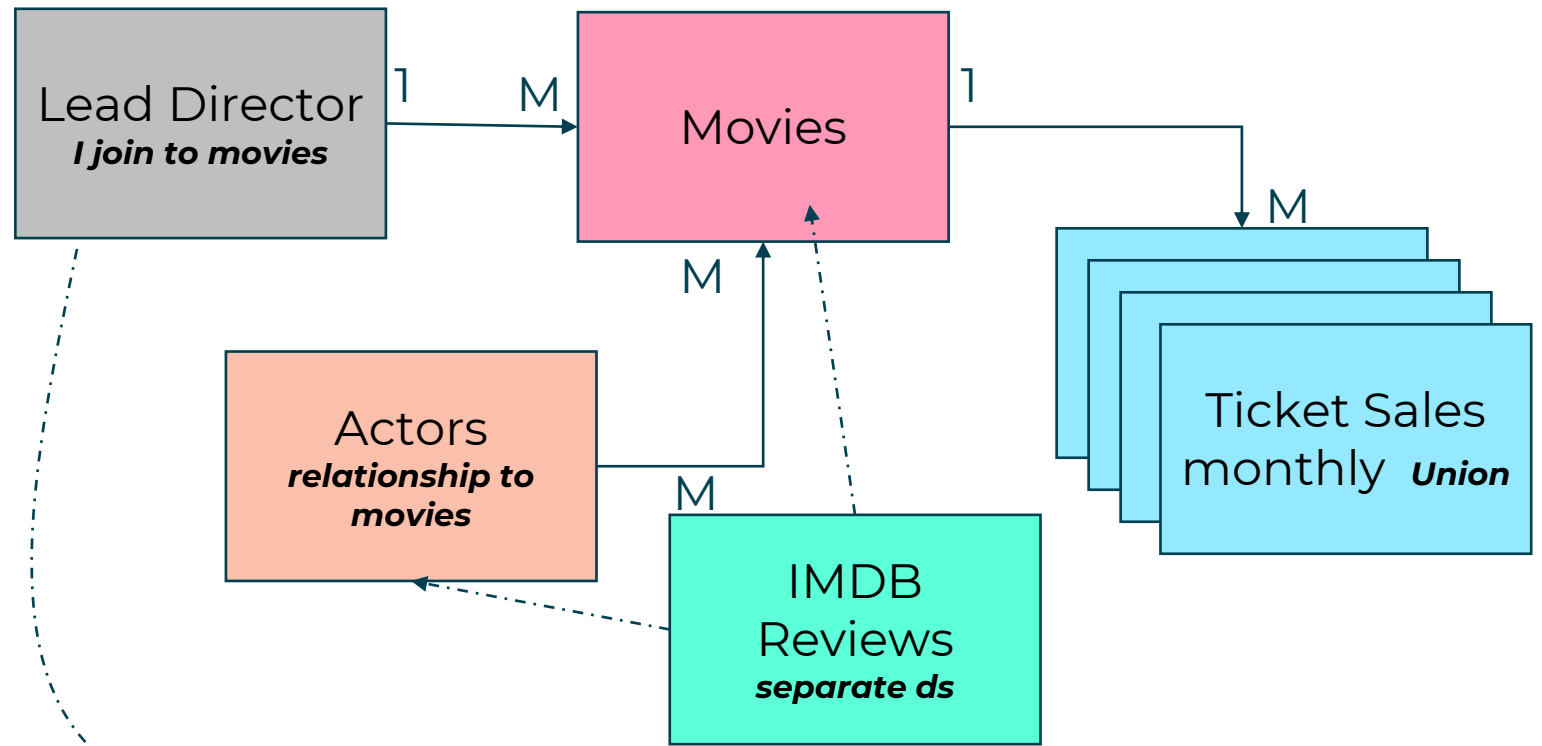
Linking data sources



Cardinality



Simplified data schema





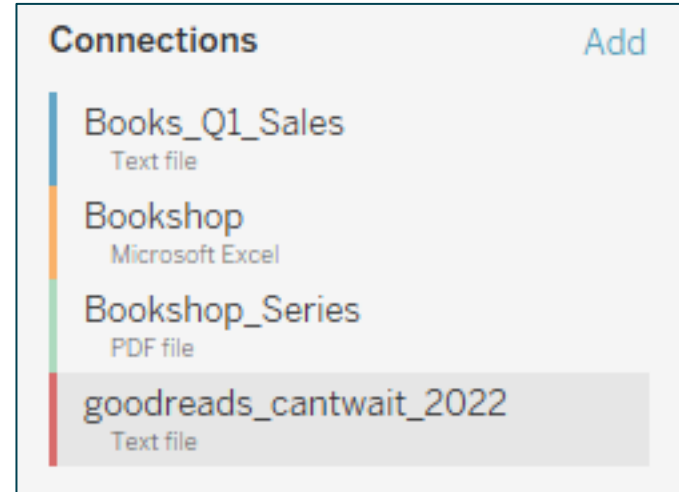
Activity 3.1:

Cardinality and design

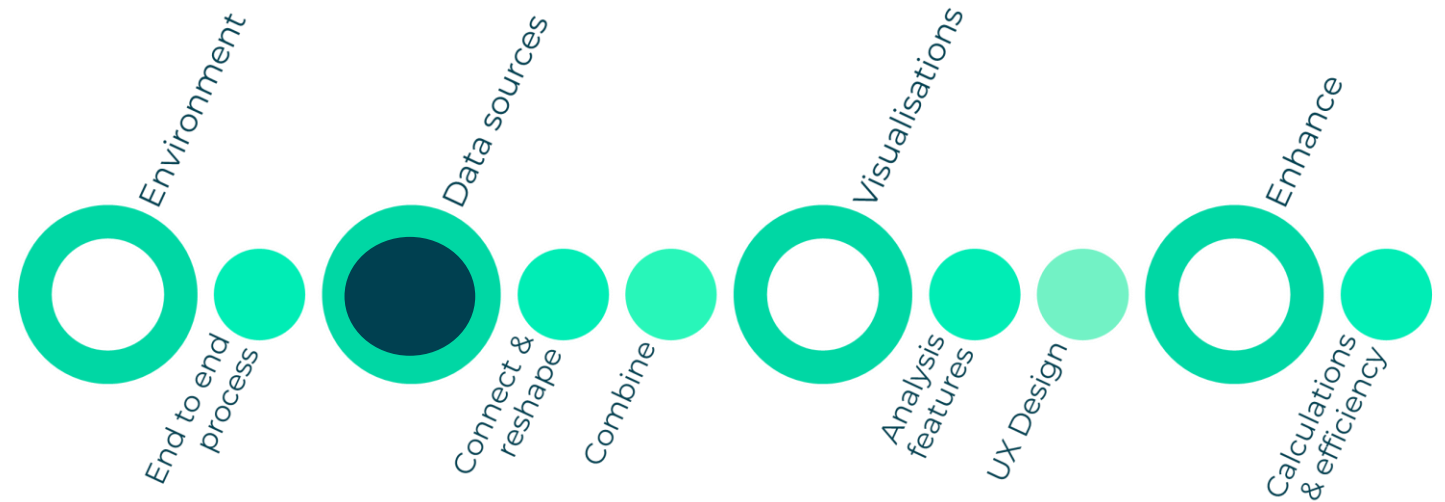
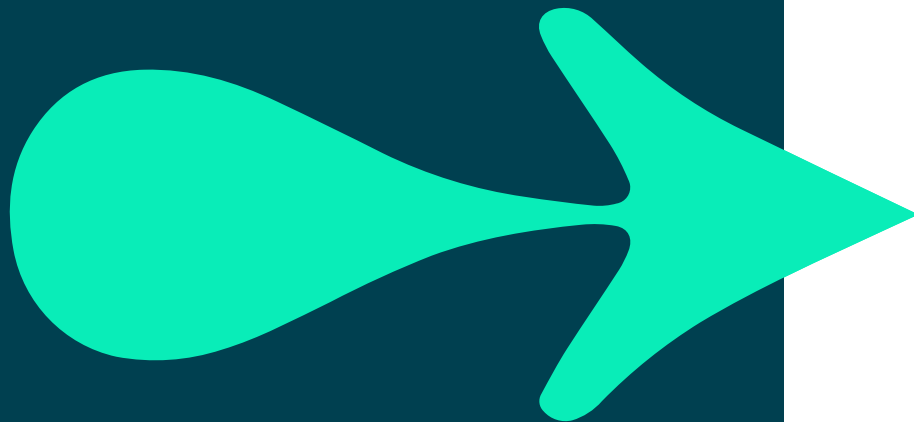
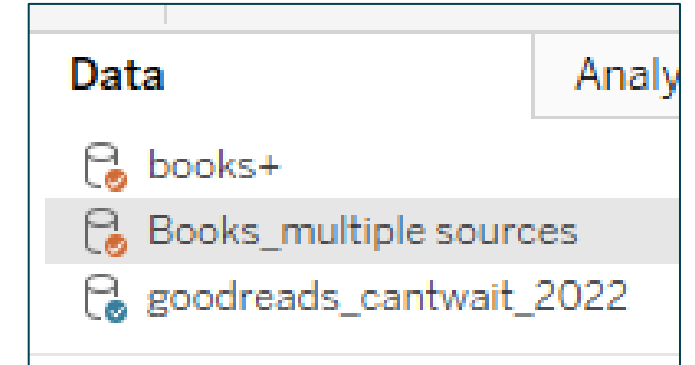
- Open three data sources in tableau
- Identify potential linking fields
- Assess the cardinality in each direction
- Draw and label a simplified schema

Primary and secondary colours

Combining data in the data source screen



Using blend relationships in the worksheet canvas

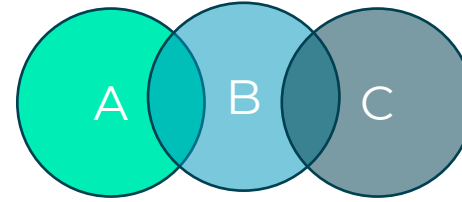


Demonstration - combining data sources

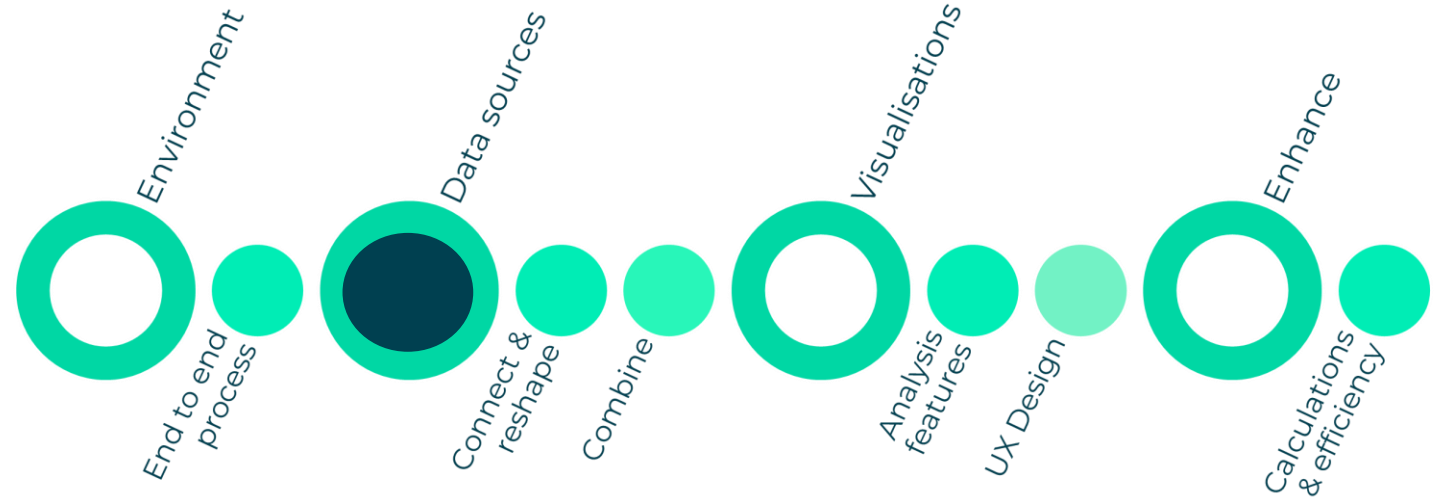
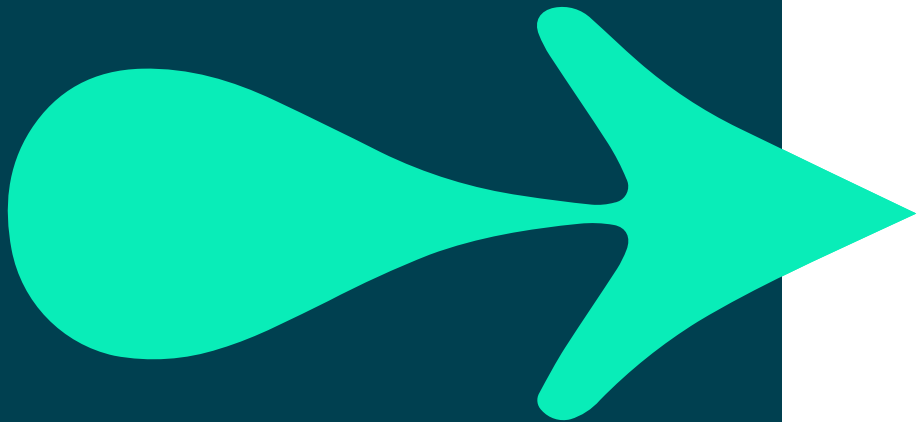
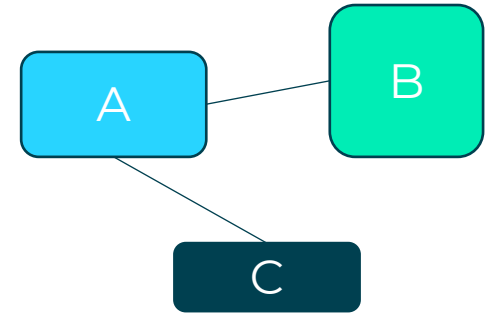
Union



Joins



Relationship



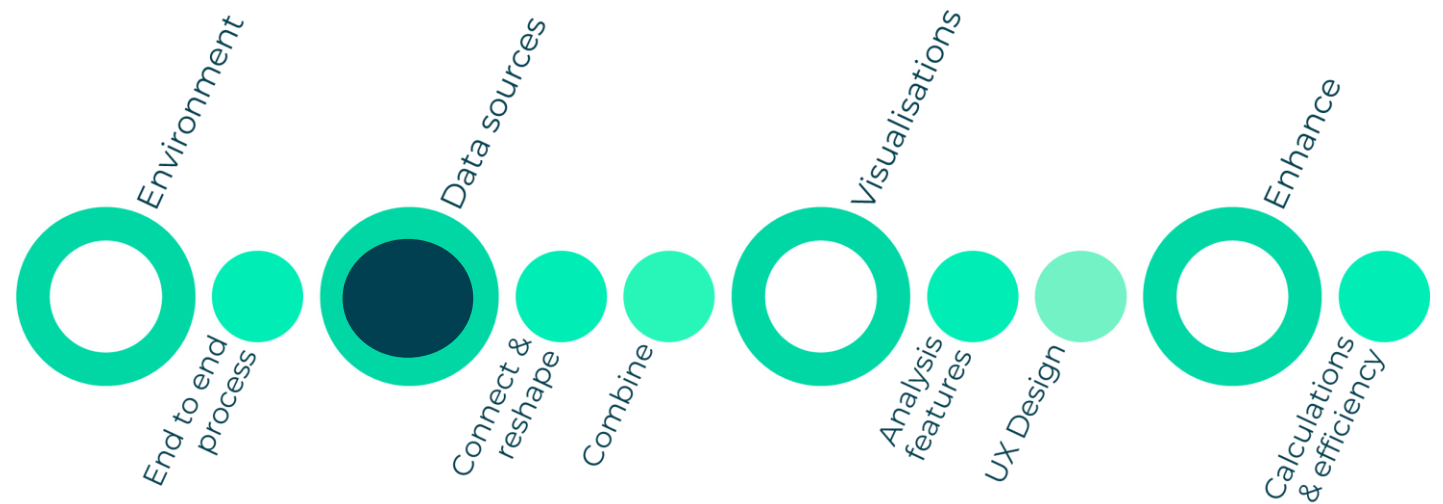
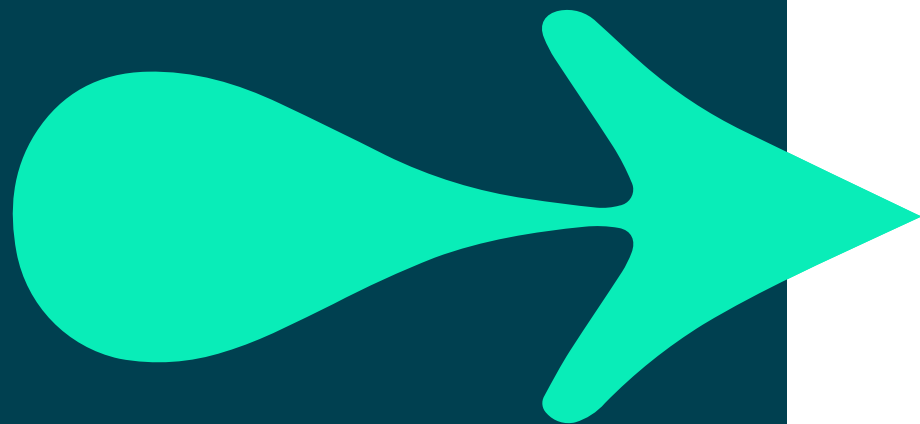
Combine mis-matching fields with calculations


books_ratings.csv is made of 2 tables. ⓘ

books_ratings.csv — books_users.csv

Join

Data Source		books_users.csv
User-ID	=	INT(REPLACE(["User-ID"], "'", ""))
<i>Add new join clause</i>		





Activity 3.2: joining or relating?

- Review 3 new data sources
- identify matching criteria
- join and relate with join calculation

Review: activity 3.2

Pages

Columns: Measure Names

Rows: firstname lastname Author Author (amazon bests..)

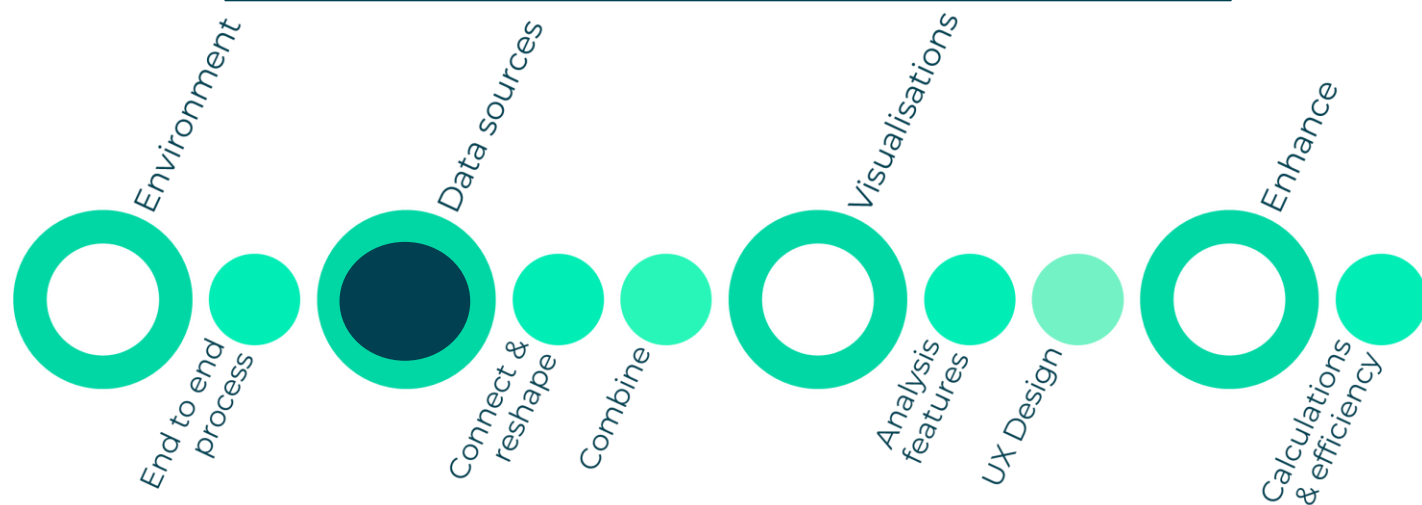
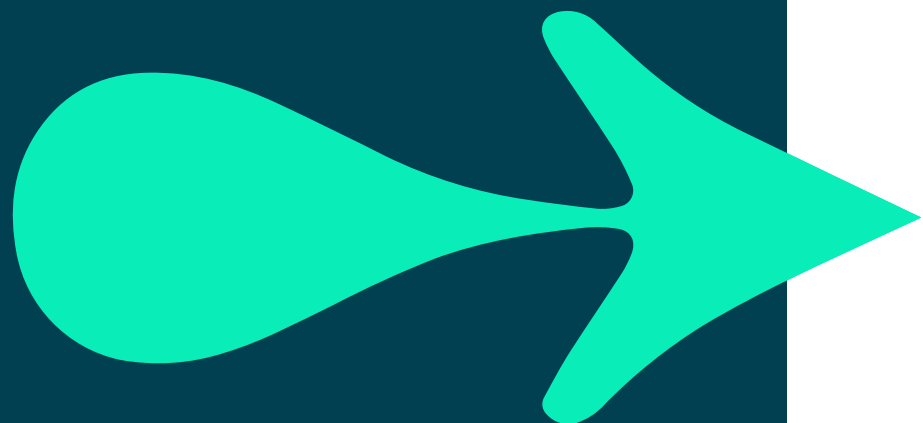
Filters: Measure Names

Marks: Automatic

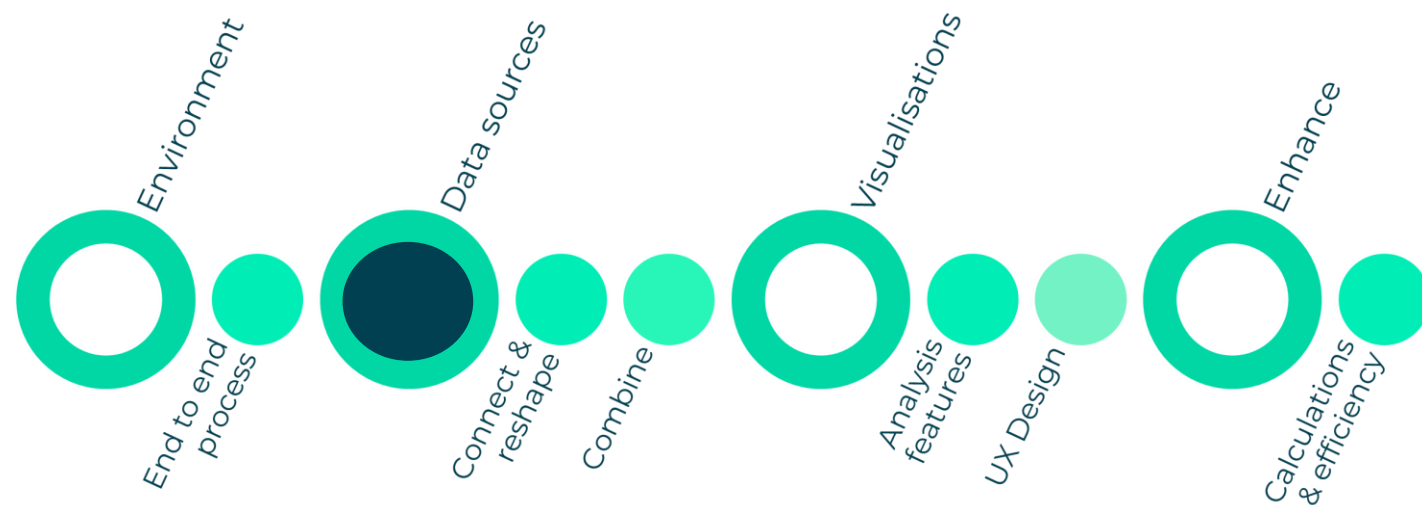
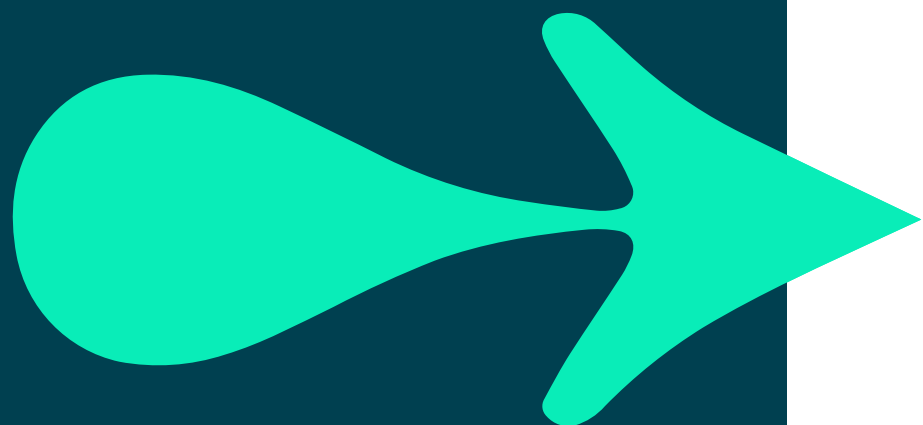
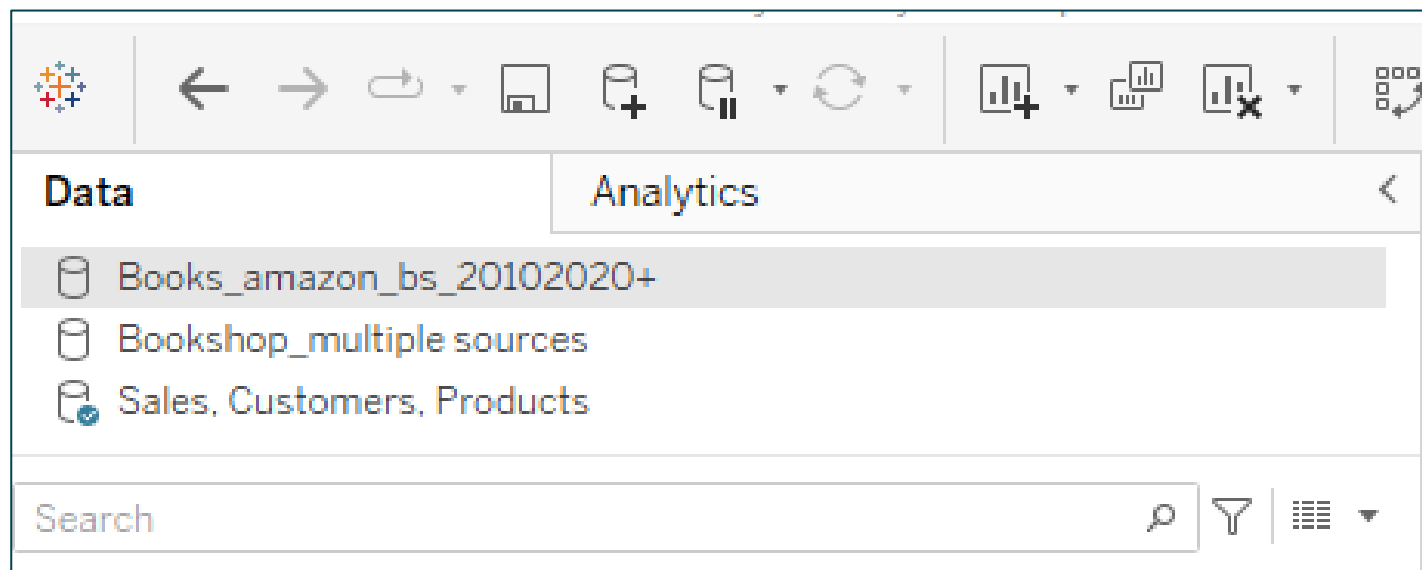
Measure Values: SUM(Circulations), SUM(Units Sold), SUM(Reviews)

comparing authors in data sources

firstname lastname	Author	Author (amazon bests..	Circulations	Units Sold	Reviews
Margaret Dickinson	Null	Null	1,134		
Mark Billingham	Null	Null	1,934		
Martina Cole	Null	Null	1,008		
Mary Higgins Clark	Null	Null	1,270		
Maxine Paetro	Null	Null	1,702		
Michael Connelly	Michael Connelly	Null	3,314	6,048	
Milly Johnson	Null	Null	1,190		
Nicci French	Null	Null	1,174		
Nora Roberts	Nora Roberts	Null	2,597	5,940	
Peter James	Null	Null	2,631		
Peter May	Null	Null	1,659		
Peter Robinson	Null	Null	4,762		
Philip Kerr	Null	Null	906		
Philippa Gregory	Philippa Gregory	Null	1,065	5,351	
Quintin Jardine	Null	Null	1,571		
Rebecca Tope	Null	Null	1,796		
Robert Galbraith	Null	Null	961		
Rosie Goodwin	Null	Null	2,136		
Sally Rooney	Null	Null	873		
Santa Montefiore	Null	Null	1,131		
Sheila O'flanagan	Null	Null	902		
Simon Brett	Null	Null	1,104		
Simon Kernick	Null	Null	1,280		
Simon Scarrow	Null	Null	959		
Sophie Hannah	Null	Null	1,179		
Sophie Kinsella	Sophie Kinsella	Null	1,030	20,311	
Stephen Booth	Null	Null	1,465		
Stephen King	Stephen King	Stephen King	2,068	1,113,288	852,165
Stephen Leather	Null	Null	1,859		

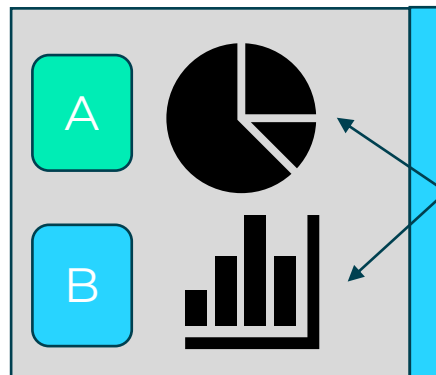


**One
workbook,
many data
sources**

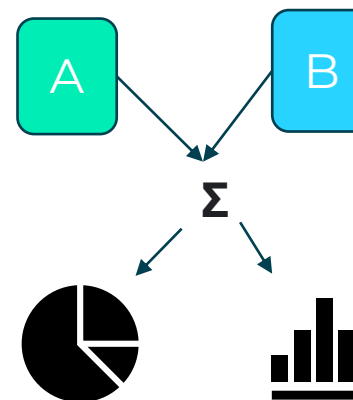


Viz methods of combining data

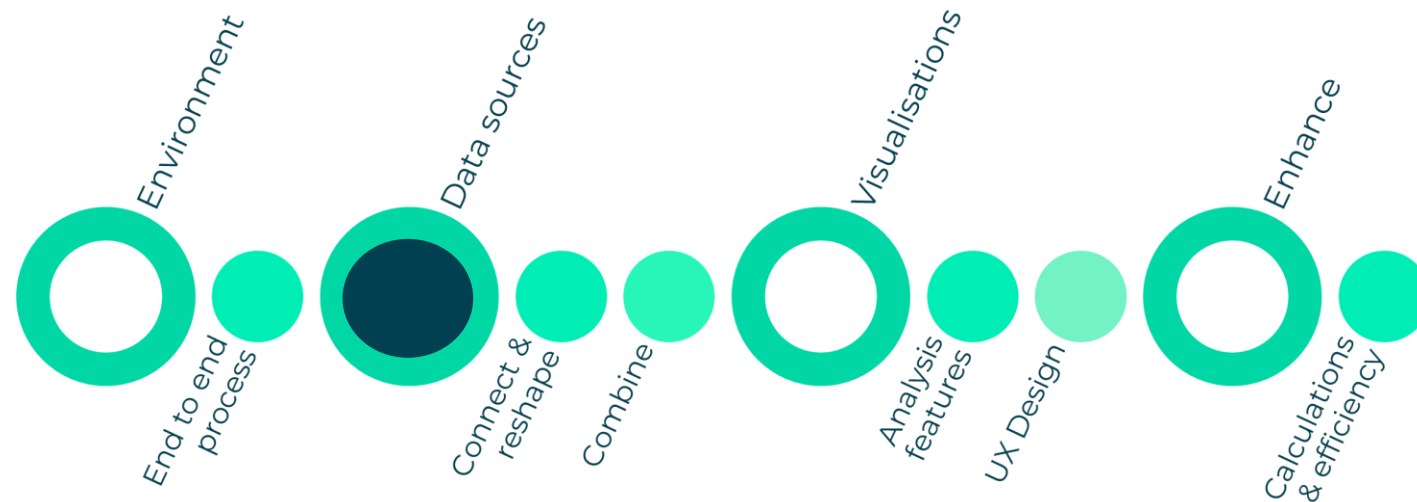
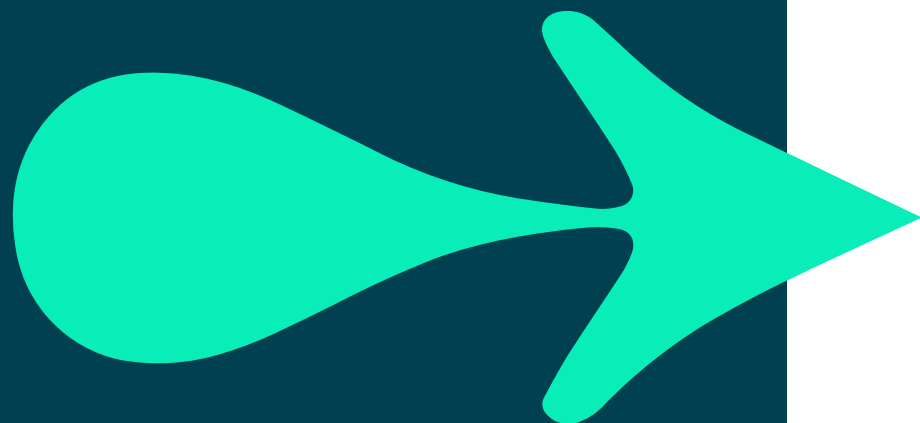
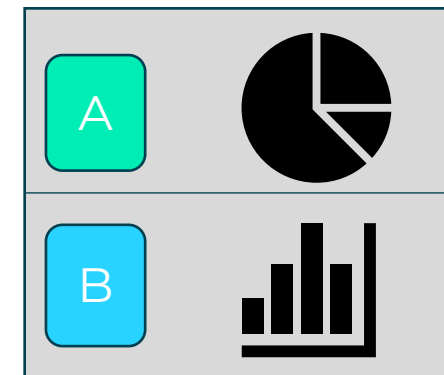
Cross DS filtering



Blends



Presentation only



Activity 3.3:

Cross source filtering

- Open the pre packaged workbook
- Test out the filters on the dashboard
- Make notes on the filter behaviour



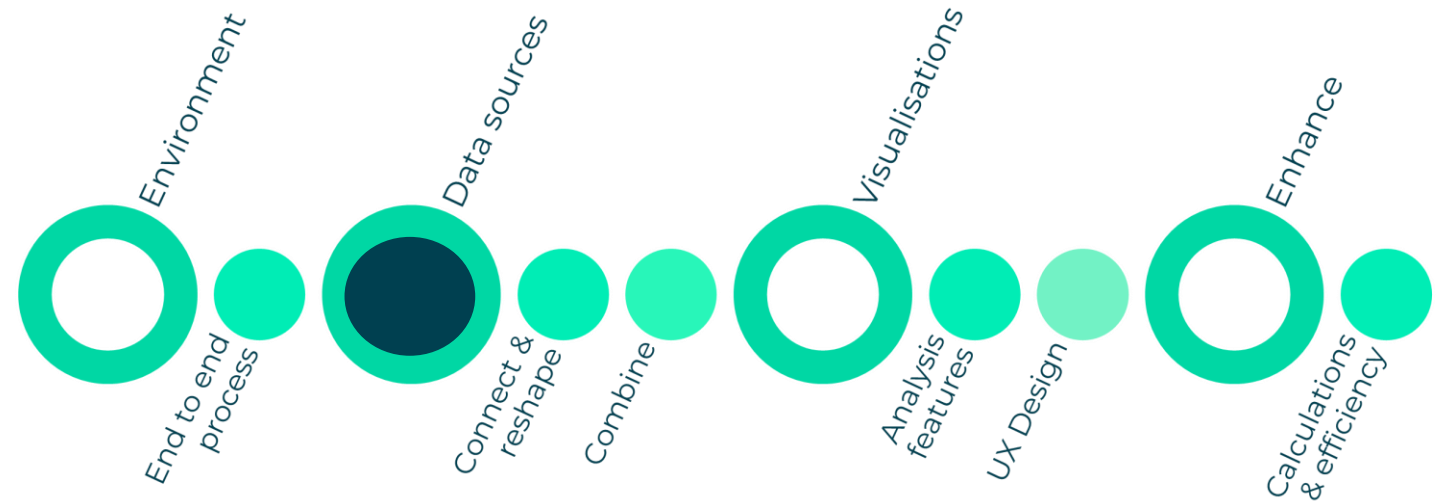
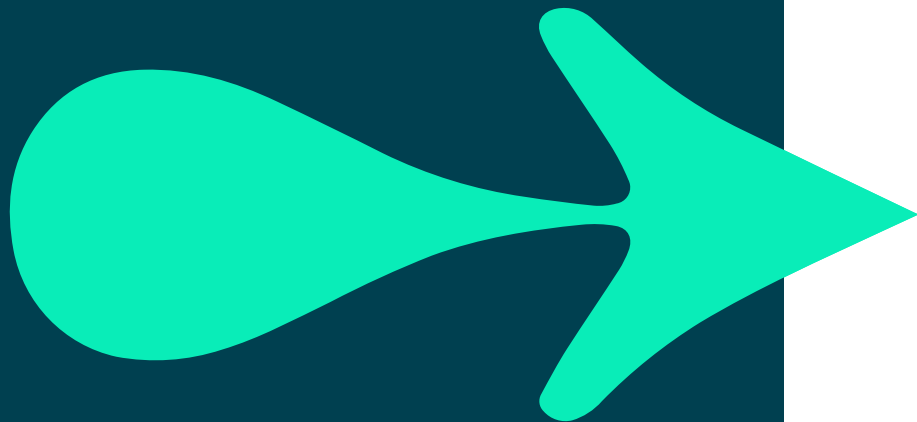
Case study: planning



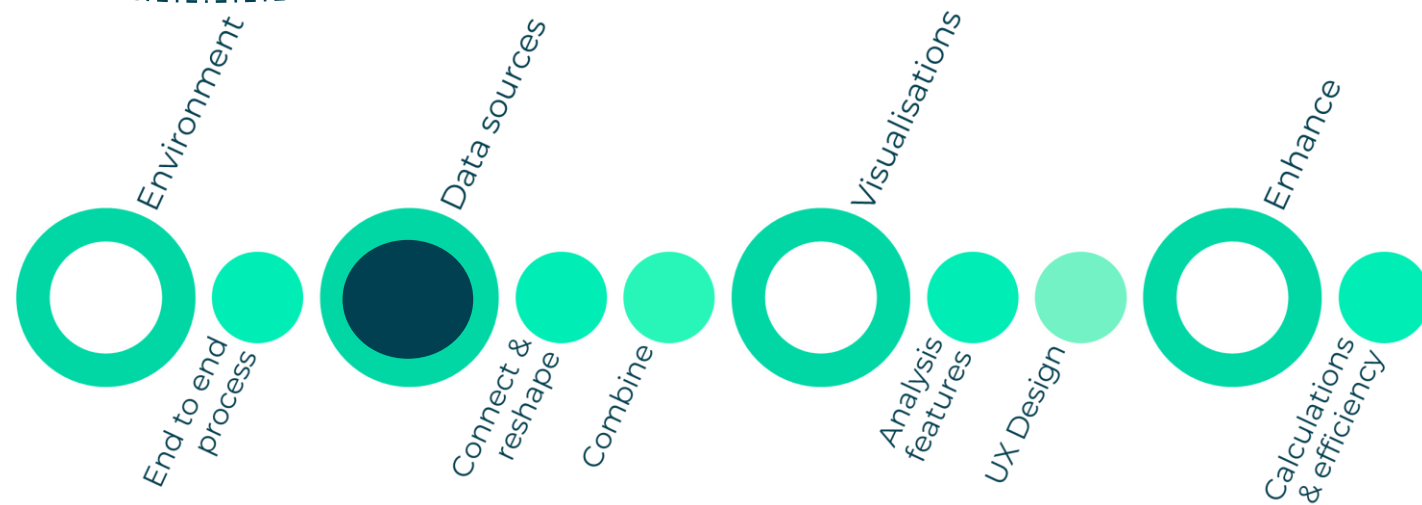
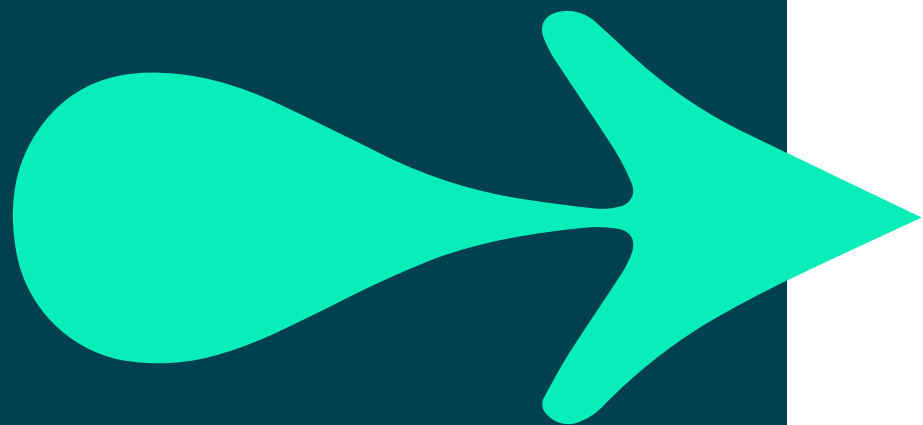
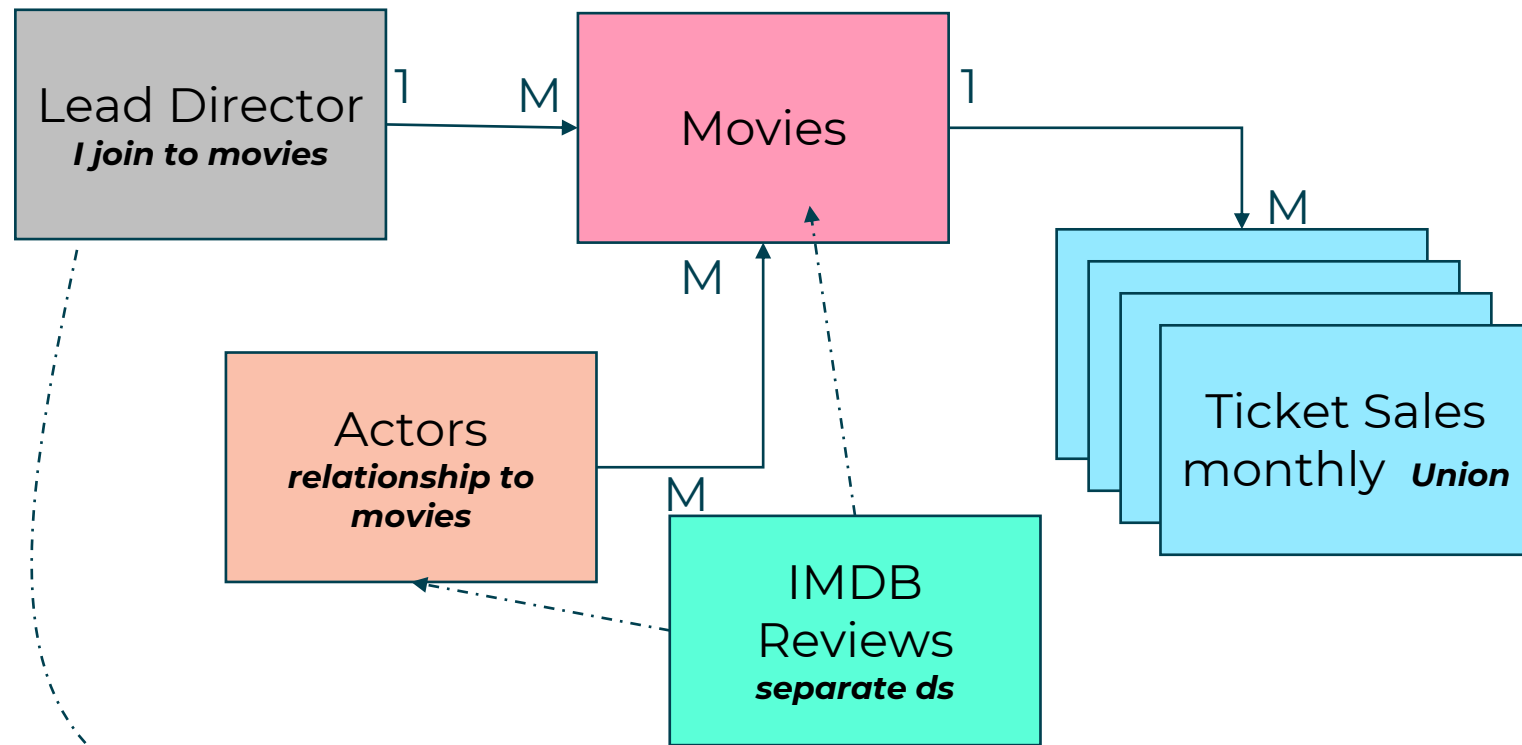
Independent Book Shop


Aim: attract more customers...

What are the best sellers?
Which new titles should we stock?
Which authors are popular now?



Selective data schema





Activity 3.4:


Design and build your model

- Review what you have learnt
- Sketch out a data model for your case study
- Add the bookshop data sources and combine using your chosen approach
- add at least one other data source to your workbook

Summary of what we learnt



1. Methods to combine data sources
2. Limitations & requirements for combining data
3. Designing a data model for a case study



Module 4

Visualising and Interactivity

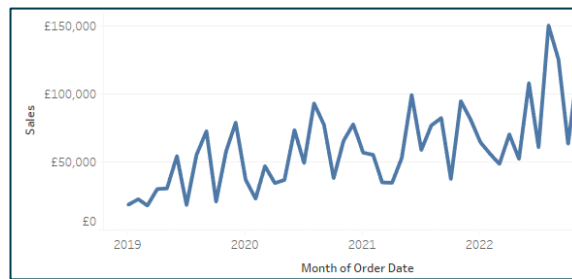
Viz design concepts

Continuous



• Sum
Average
Median
Count
Count (Distinct)
Minimum
Maximum

Discount
Profit
Quantity
Sales
Orders (Count)

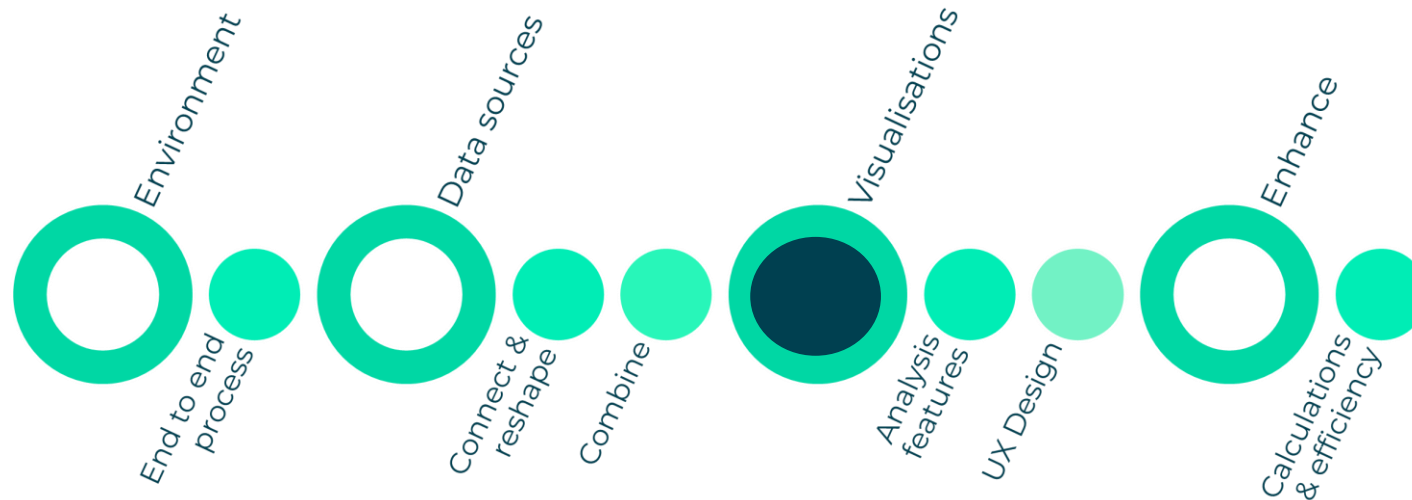
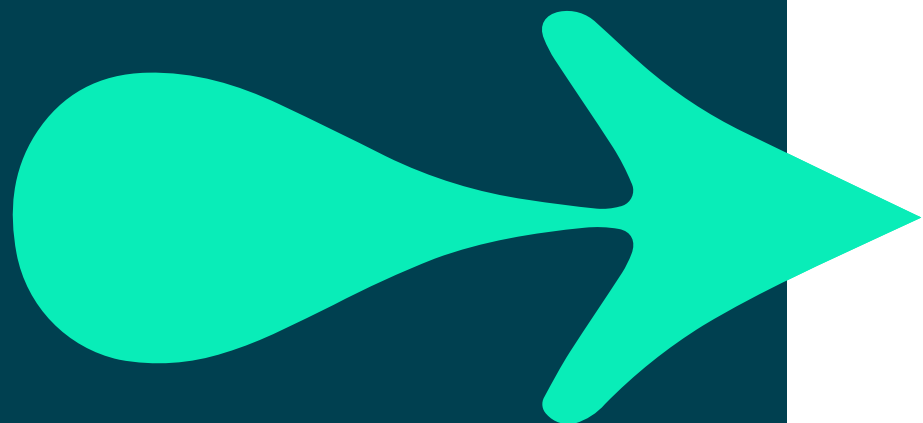
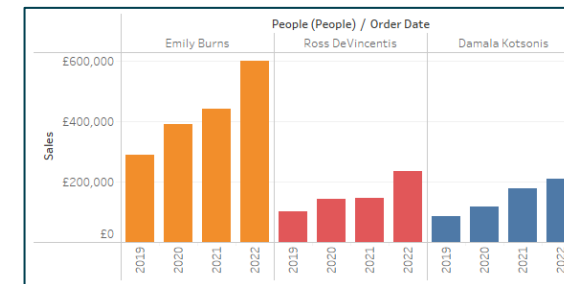


Discrete



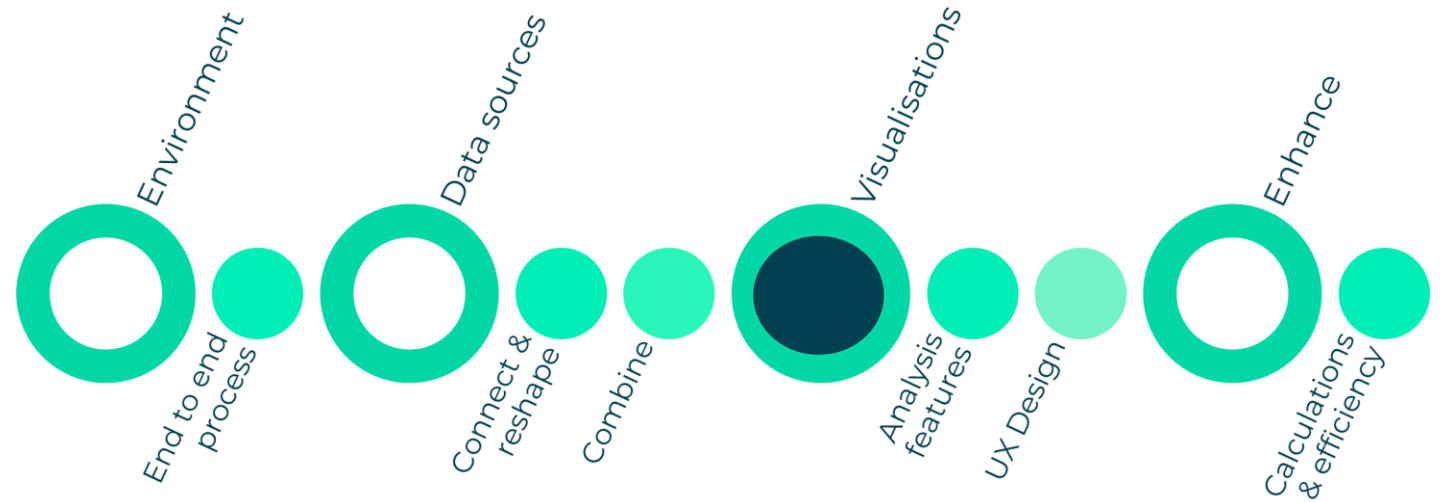
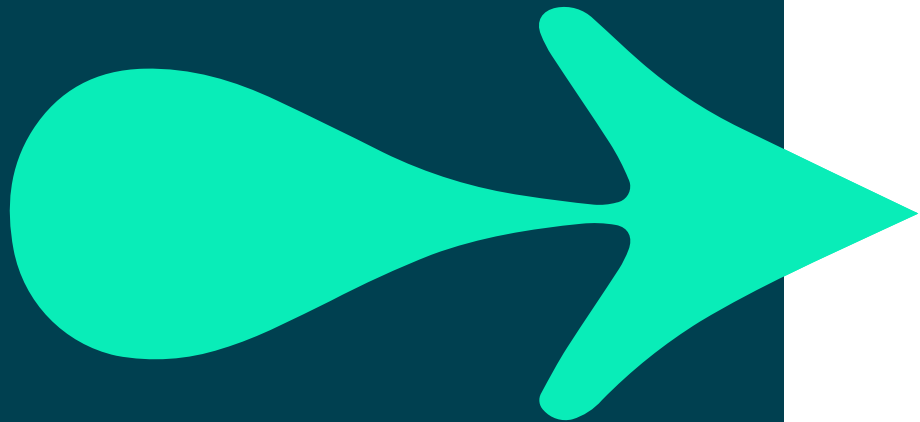
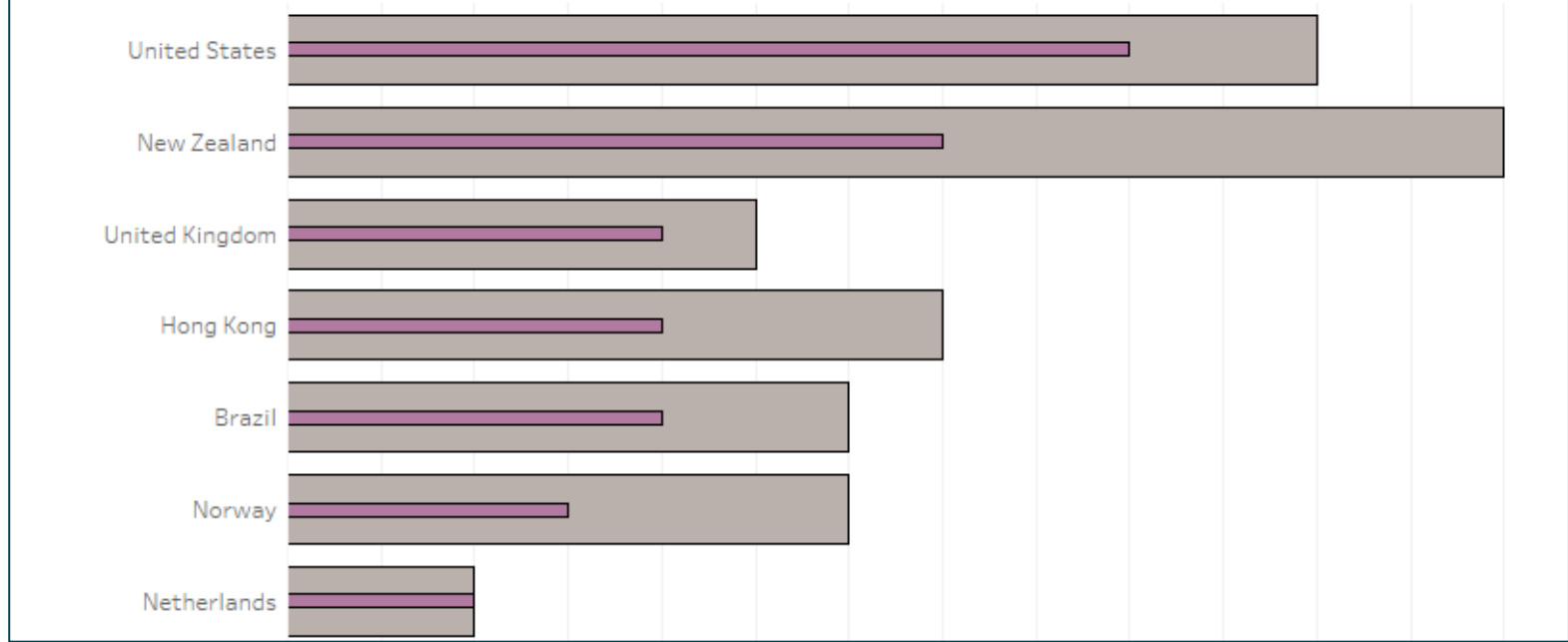
Date
• String
Spatial
Boolean

Abc Delivery Mode
📅 Dispatch Date
> 📍 Location
📅 Order Date
Abc Order ID
> 📦 Product



Bar in bar chart

Plot shows the **number of authors** and **number of books** in stock , broken down by the country of the author

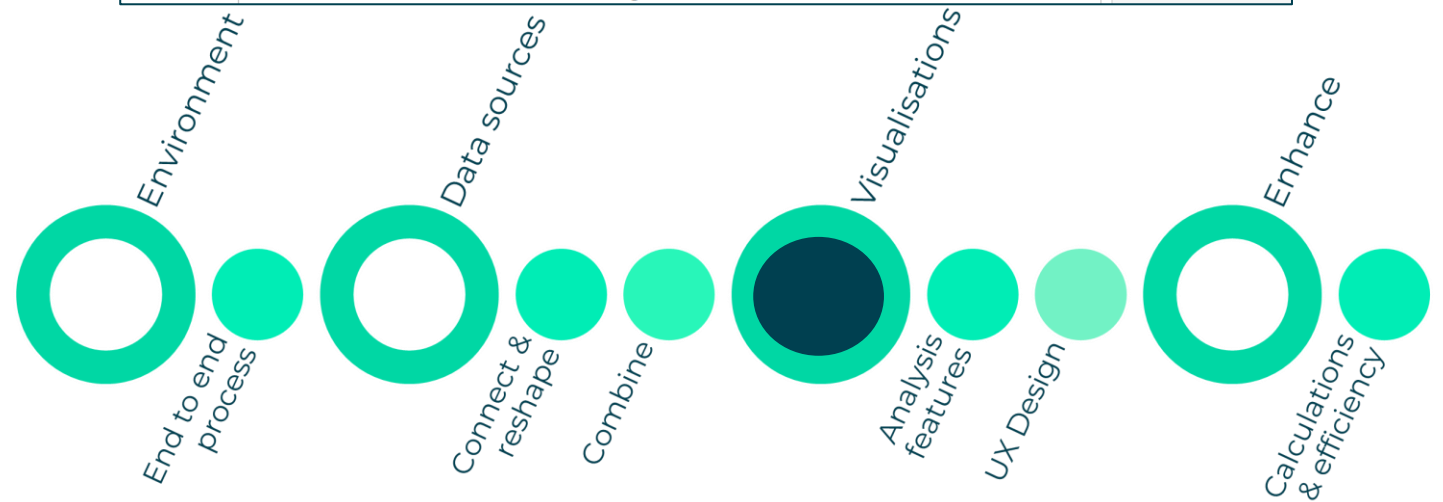
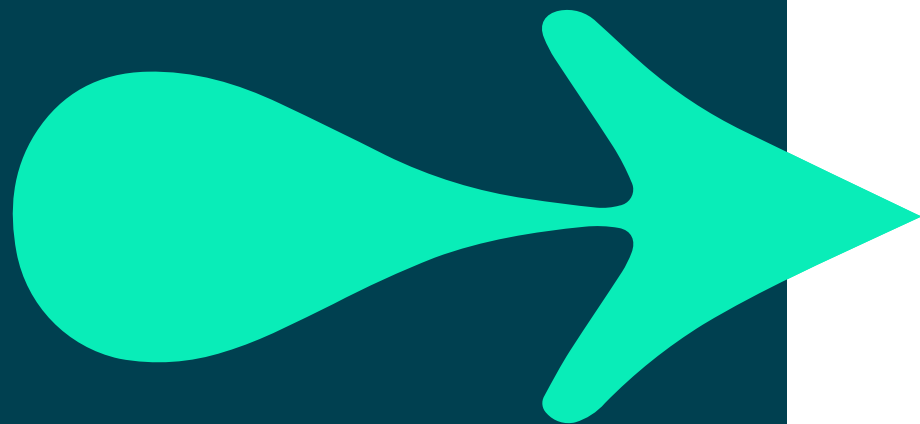
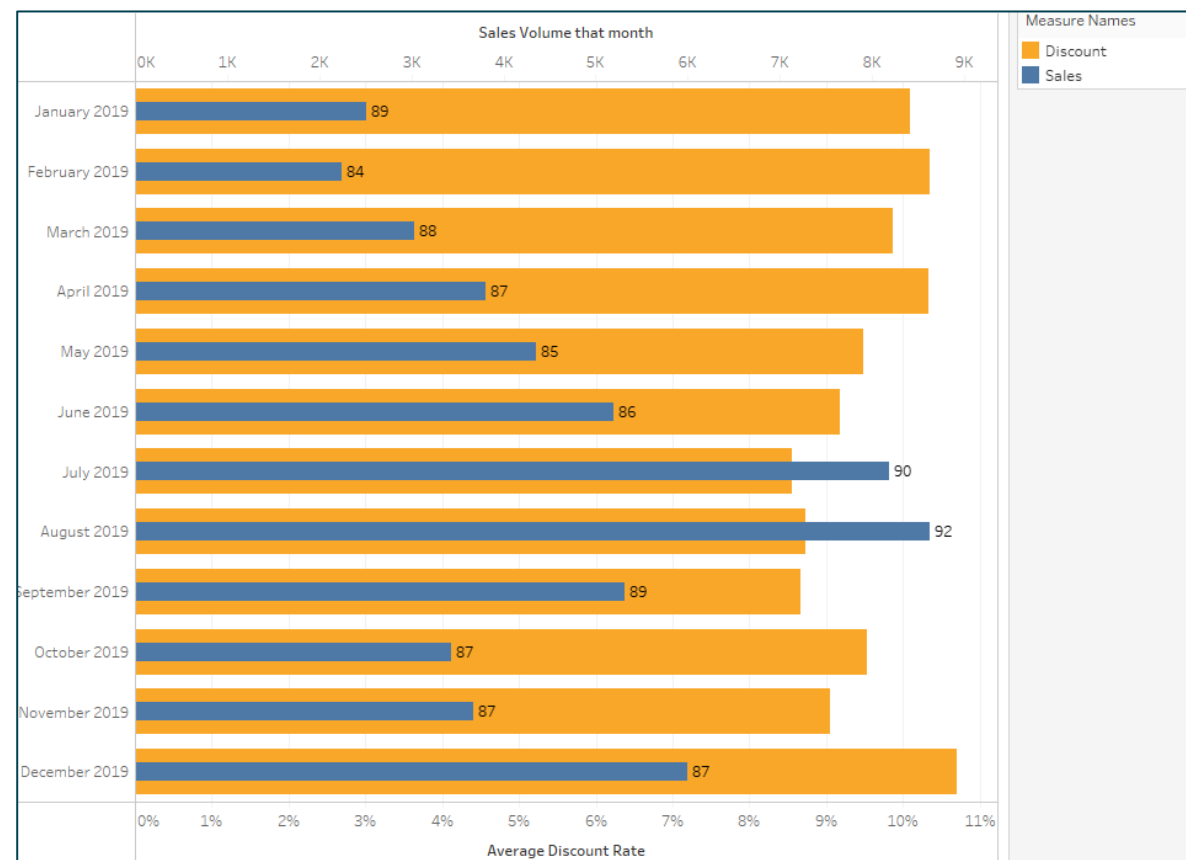




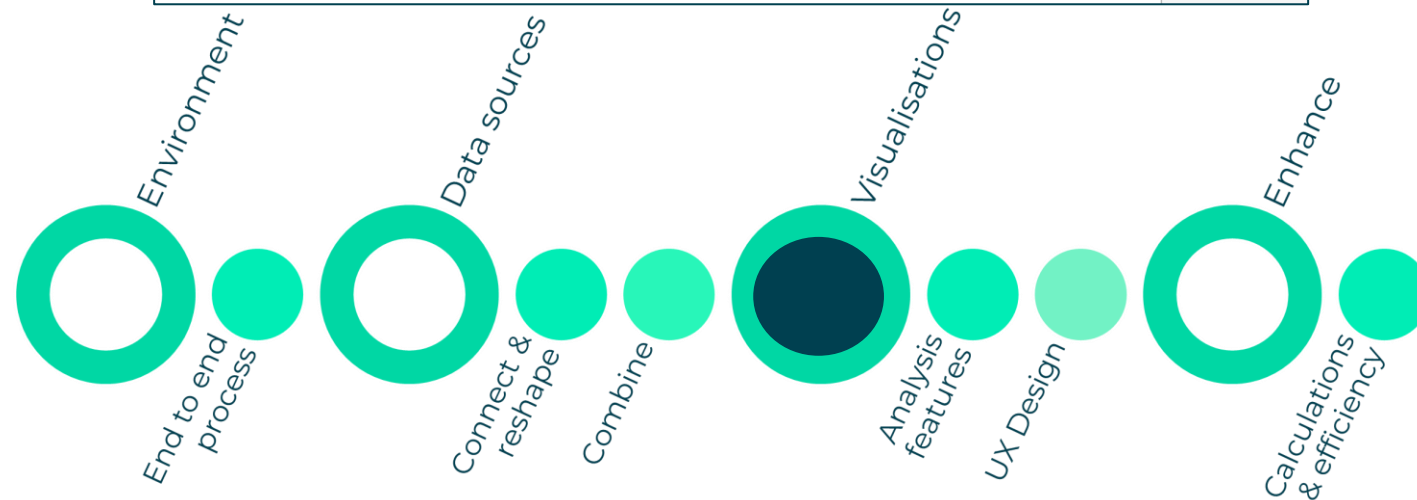
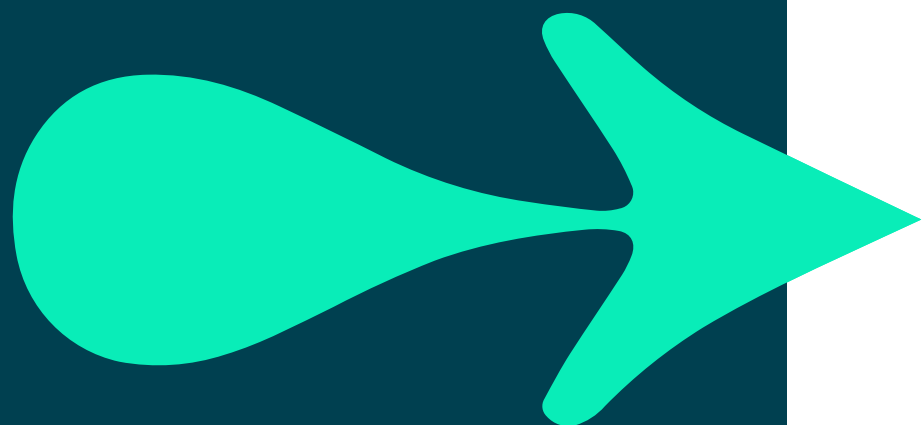
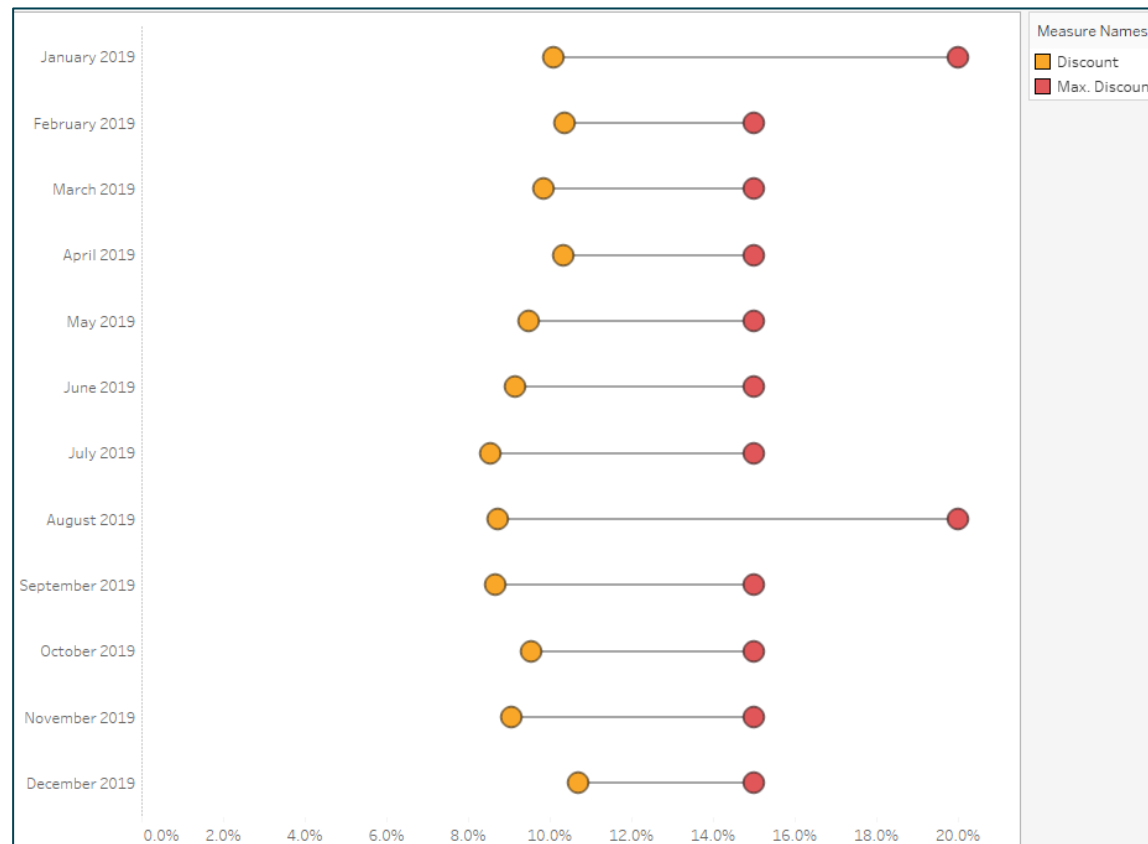
Activity 4.1: sales viz with 3 measures

- Using your books analysis model workbook
- Dual axis viz – volume of sales v discount %, per month
- Add a third measure as reference label – no of unique edition/publications sold in the month
- Edit axis labels, select colours & mark size

Review: multiple measure sales review



Span chart of discount rates



Parameterise filters for flexibility

Edit Parameter [top n authors] ×

Name
top n authors

Properties

Data type
Integer

Display format
15

Current value
15

Value when workbook opens
Current value

Allowable values
☐ All ☐ List ☒ Range

Range of values

☒ Minimum 5

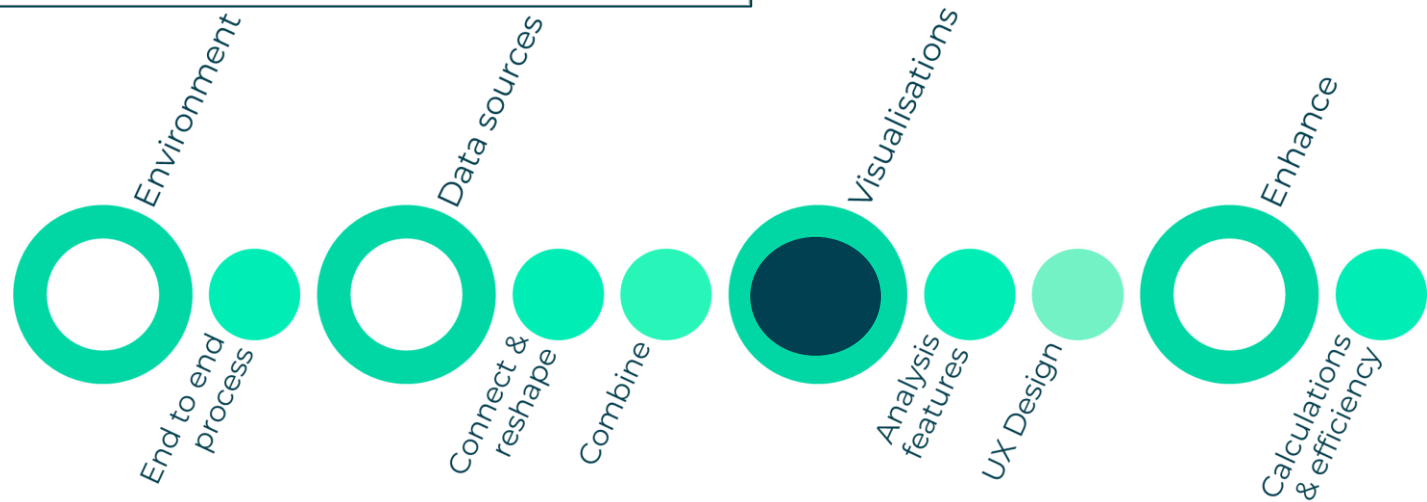
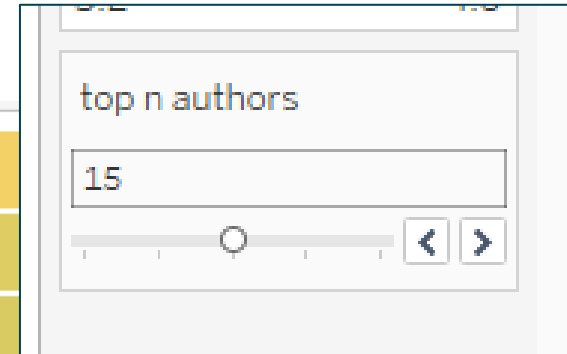
☒ Maximum 25

☒ Step size 5

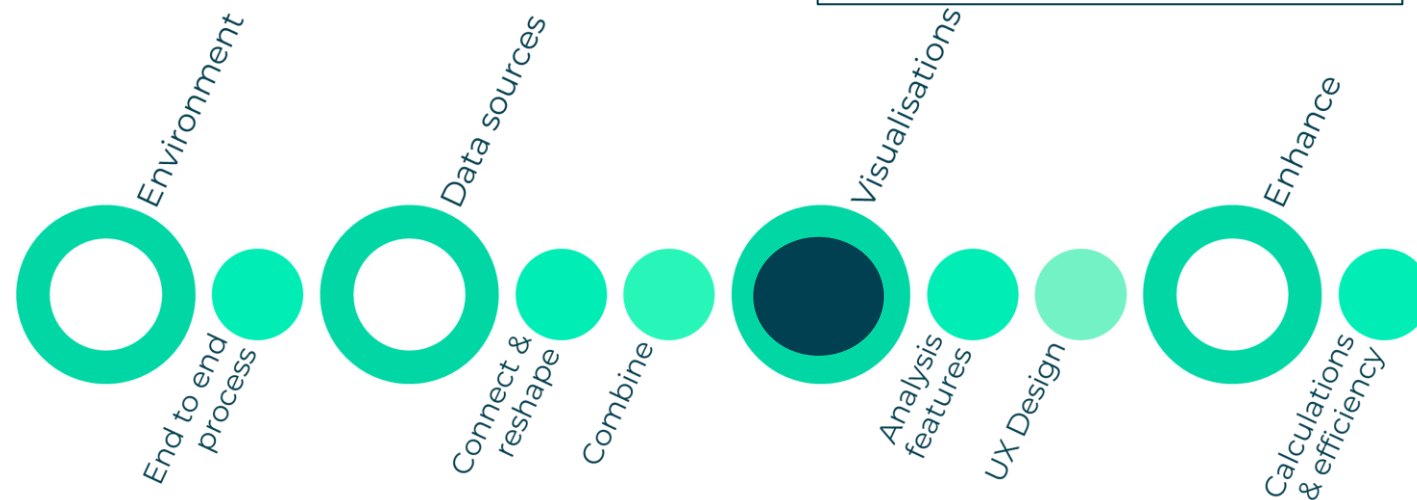
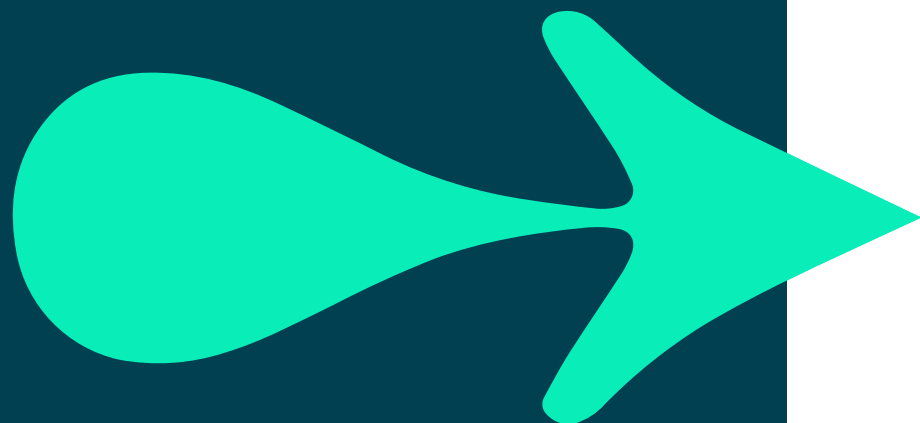
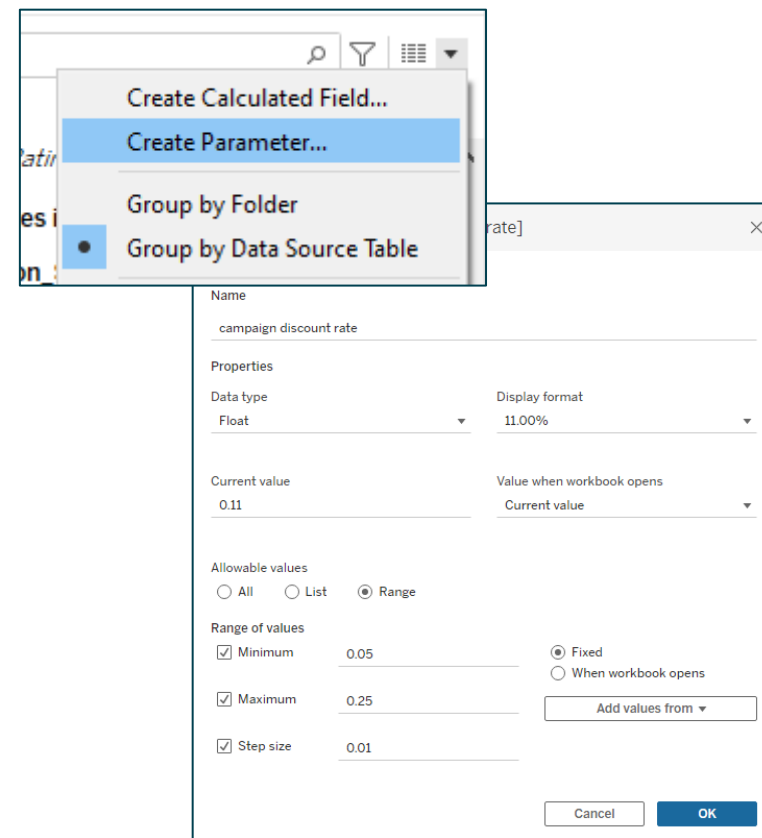
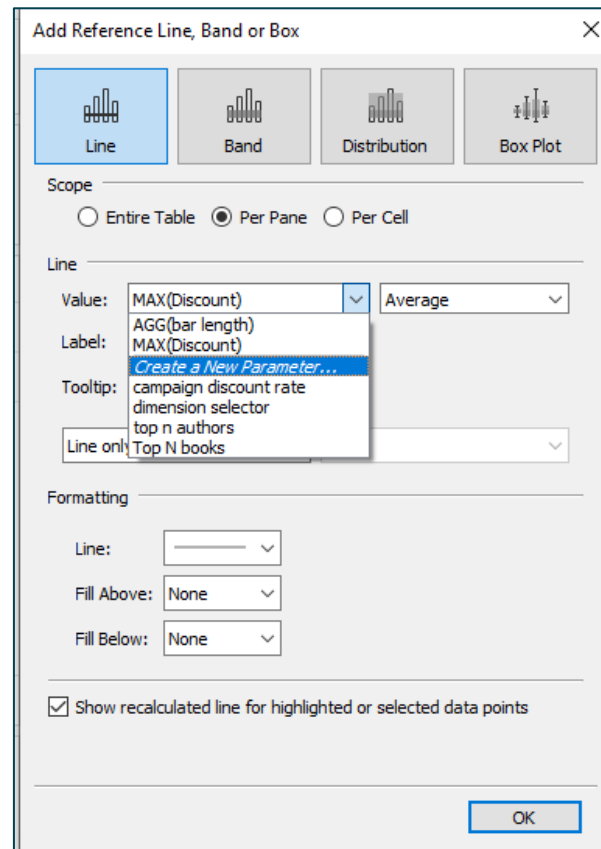
☒ Fixed
☐ When workbook opens

Add values from ▾

Cancel OK



Creating and using parameters



Activity 4.2:

parameters for flexible filtering

- Create base viz –book titles and total sales
- Add a simple filter – top 10 titles by sales
- Modify the filter, replacing 10 by N

Review: top N filter

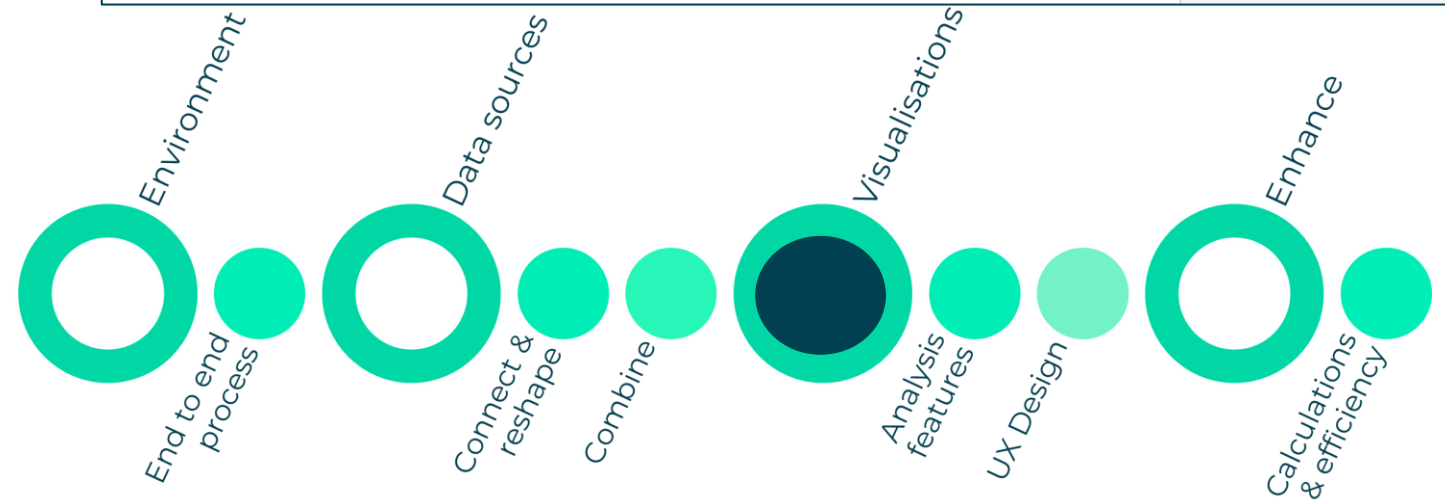
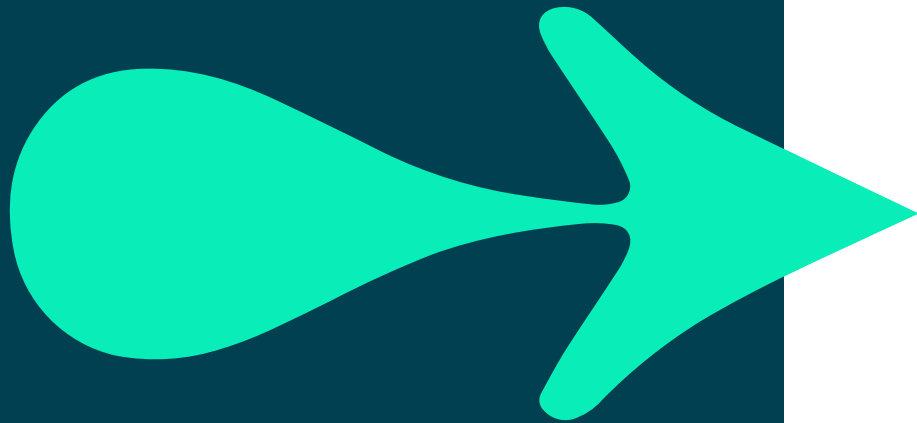
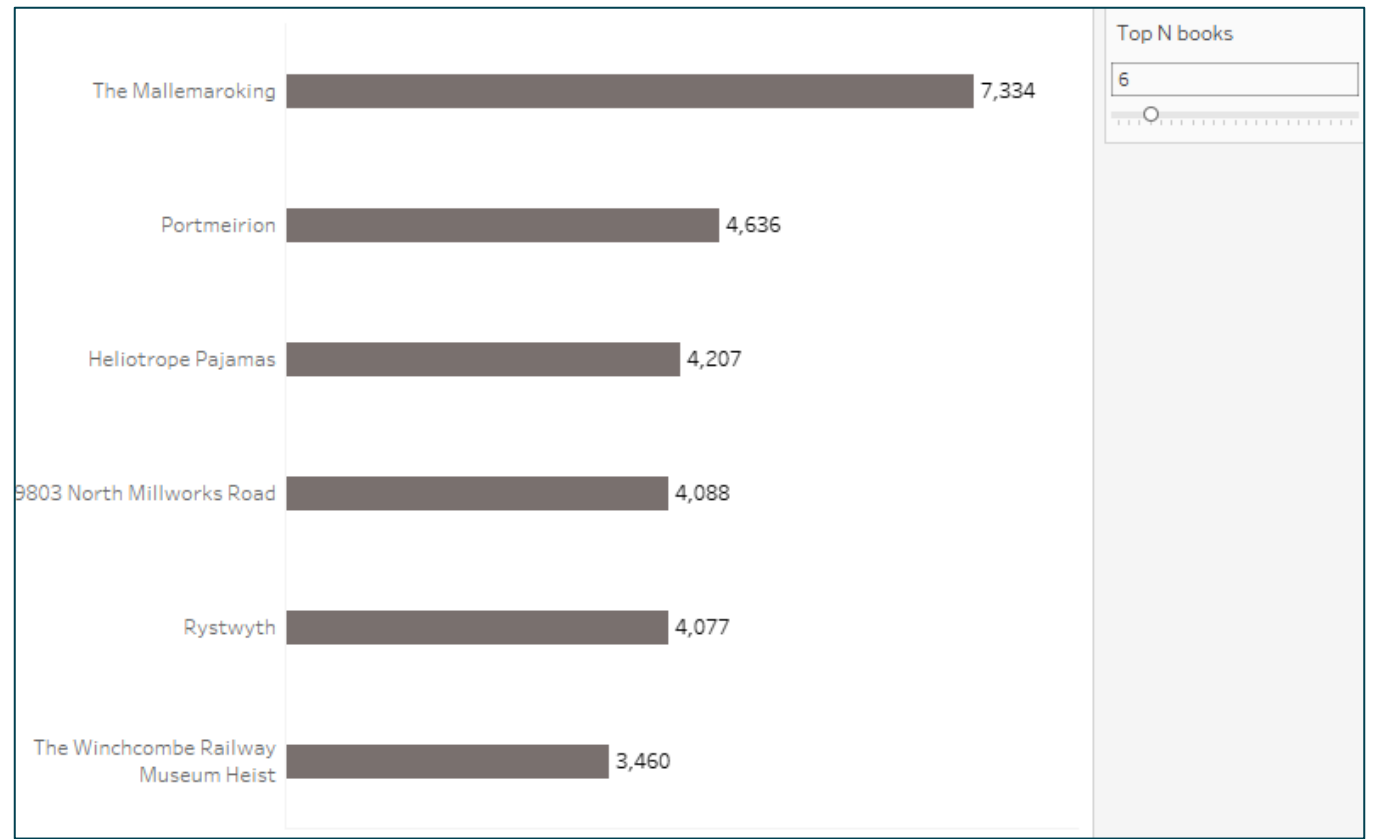


Table calculations

Rows			Publishing House	Author full name	
Publishing House	Author full name		Rank of Actual Sale price along Pane (Down)		
Cedar House Publishers	Malin Wolff		1		
	Ward Haigh		2		
	Bernard Hopf		3		
	Charles Fenimore		4		
	Hillary Barnhardt		5		
	Gloria Green		6		
	Leonard Nabokov		7		
	Clifford Wolitzer		8		
Etaoin Shrdlu Press	Bianca Thompson		1		
	Carolyn Segal		2		
	Arthur McCrumb		3		
	Ursula Karénine		4		
	Burton Malamud		5		
	David Beam		6		

Table Calculation

Rank of Actual Sale price

Calculation Type

Rank

Descending

Competition (1, 2, 2, 4)

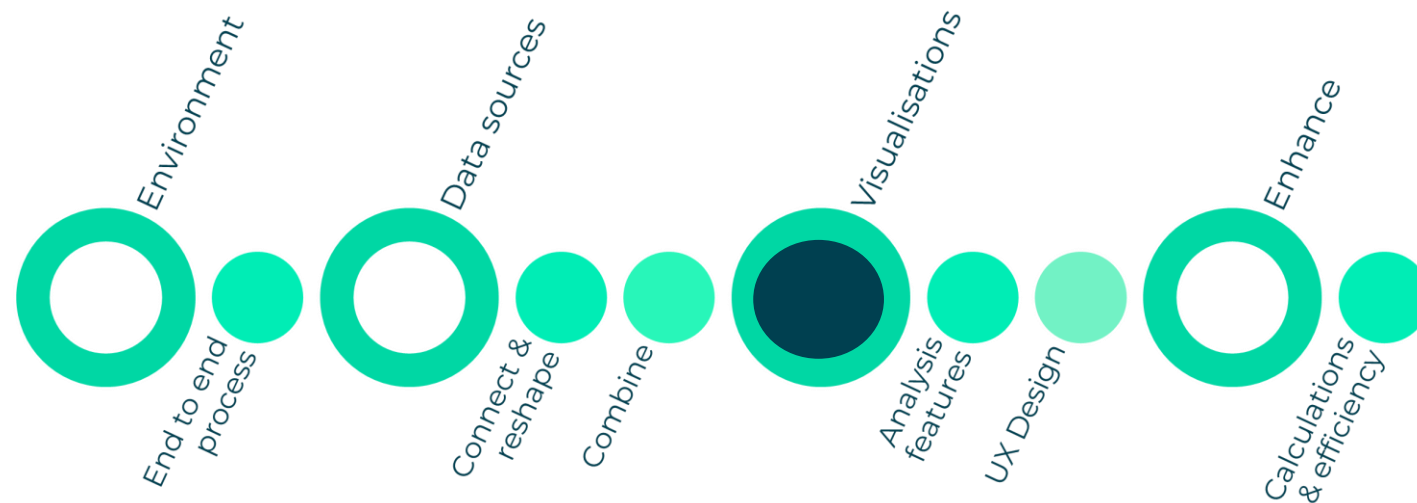
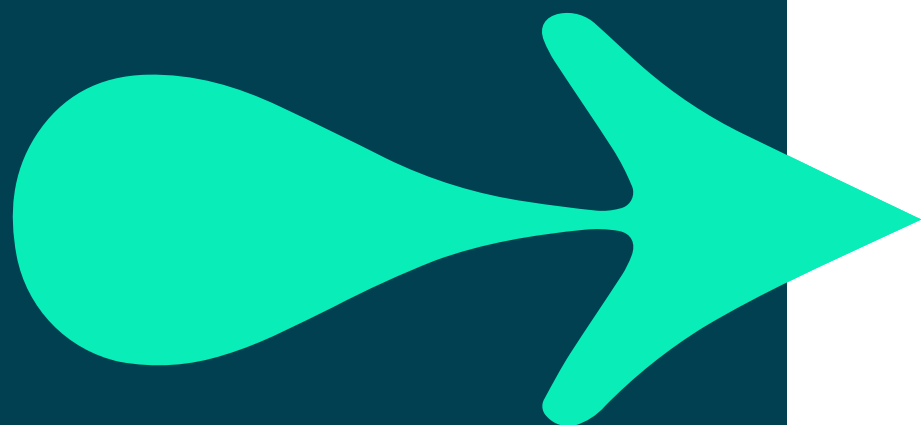
Compute Using

Table (down)

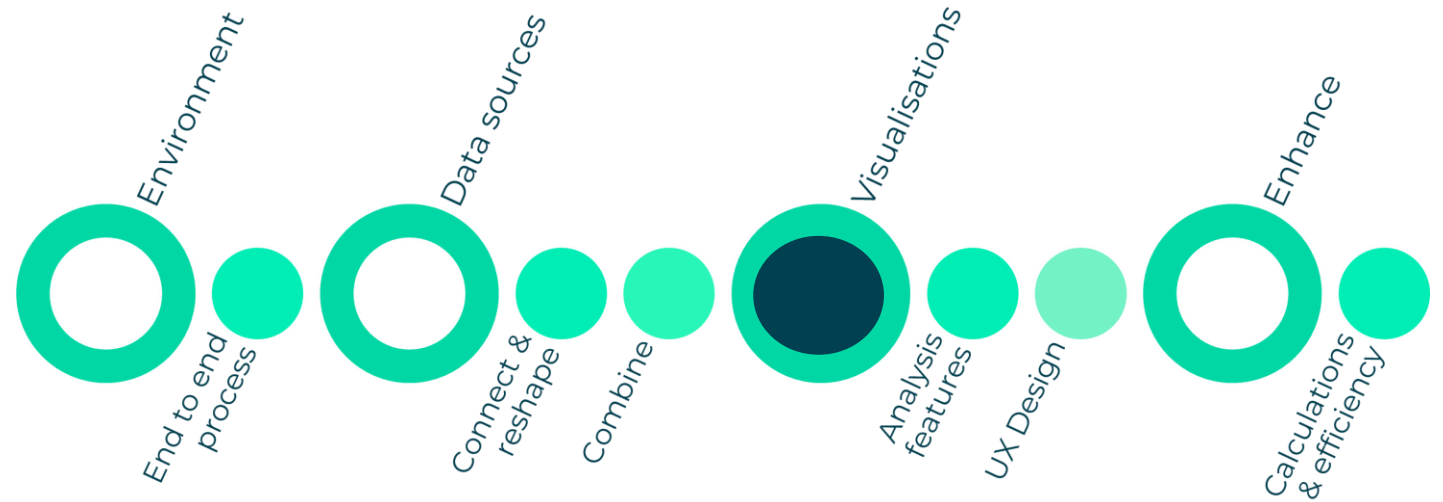
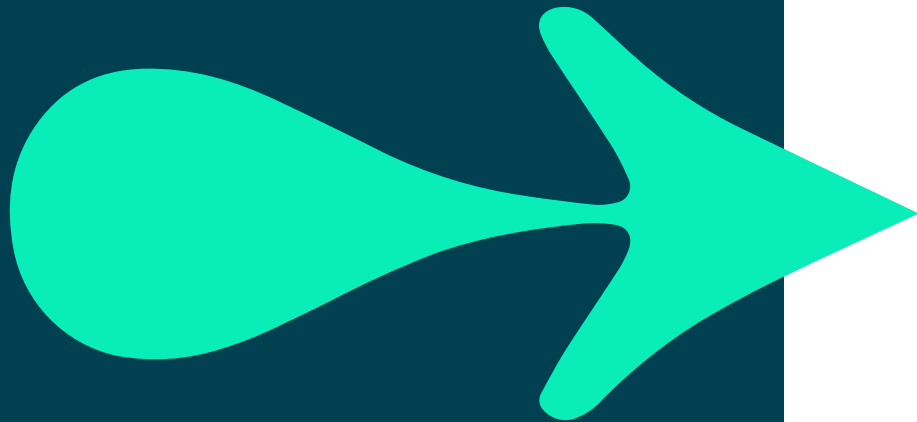
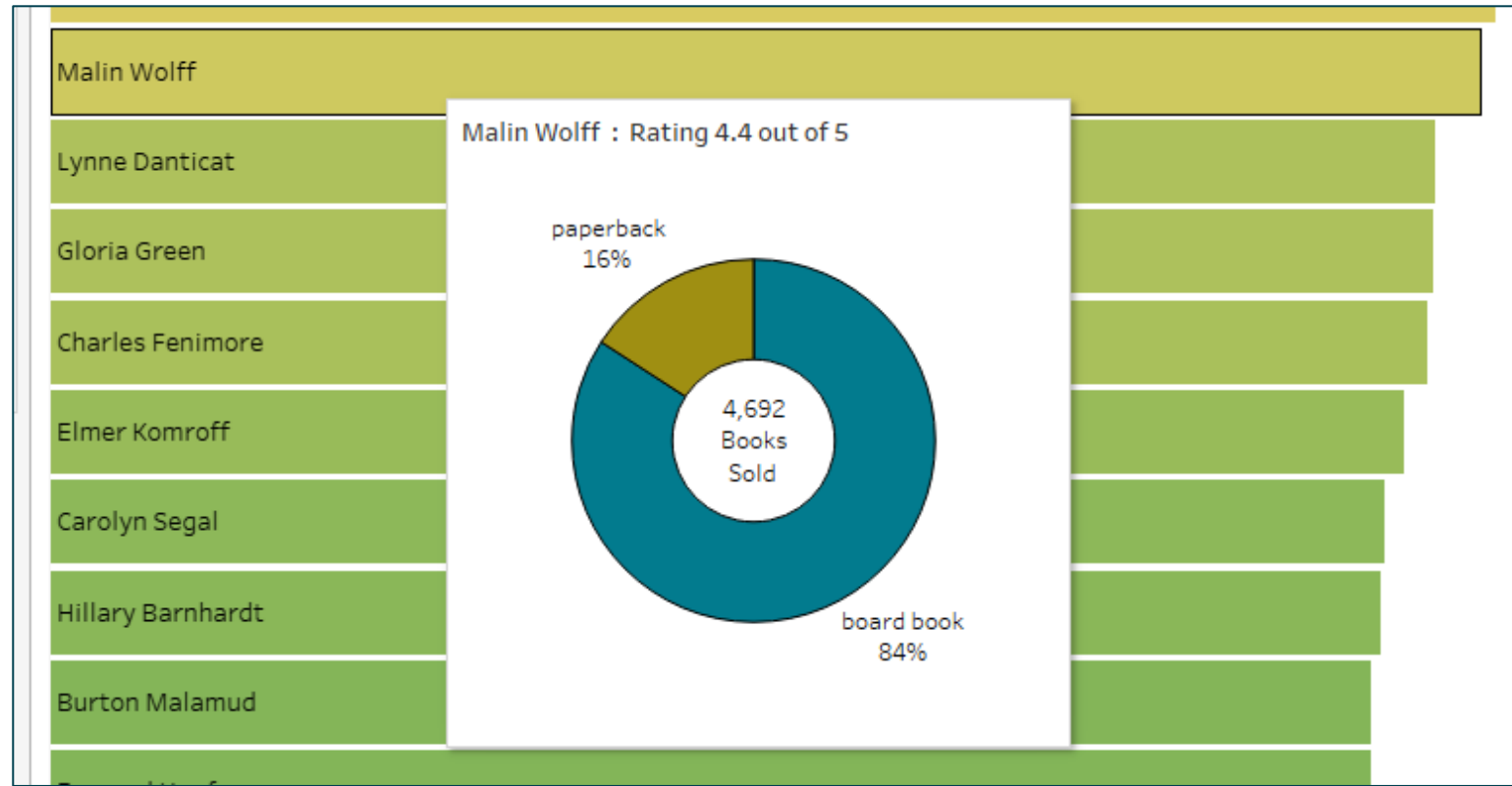
Pane (down)

Pane (across then down)

Pane (down then across)



Viz in tooltip adds insight

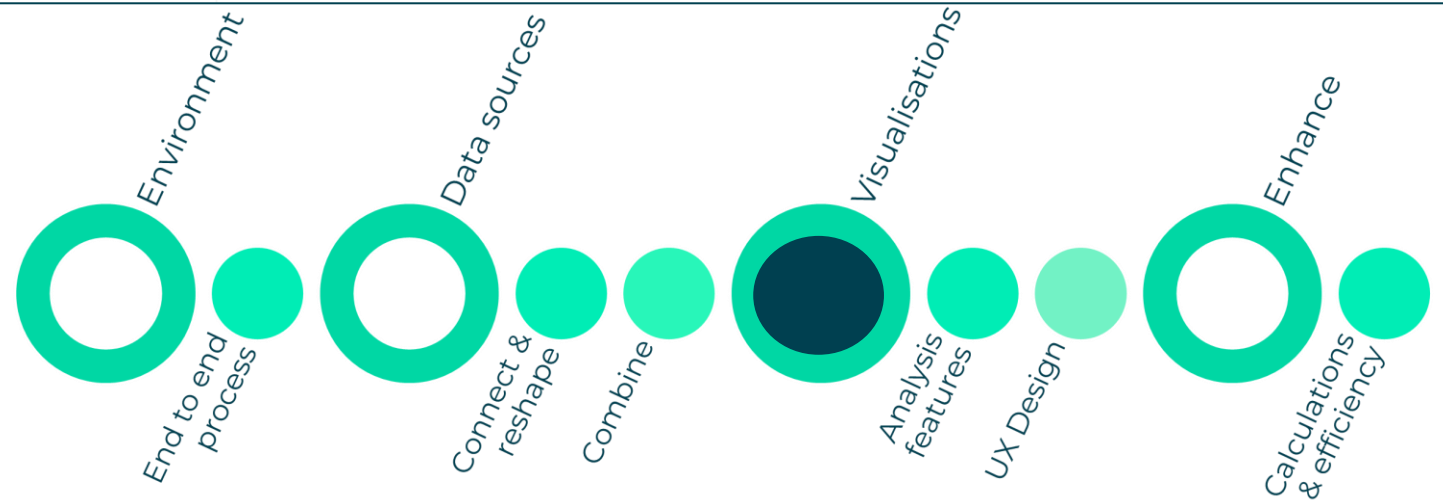
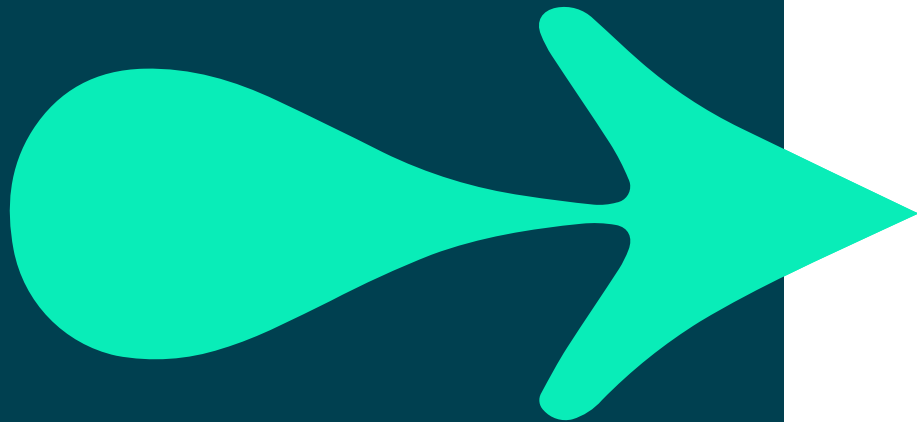
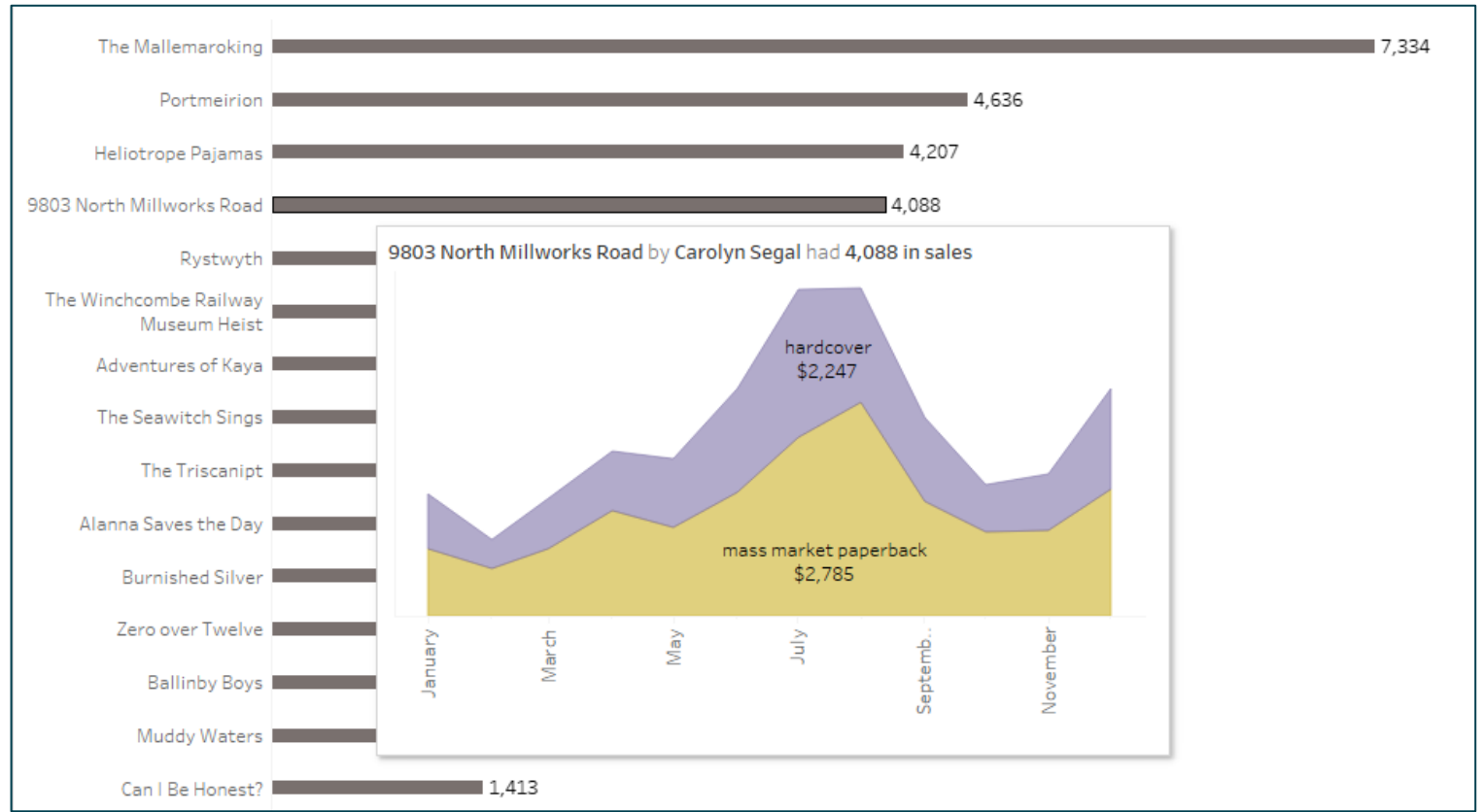


Activity 4.3:

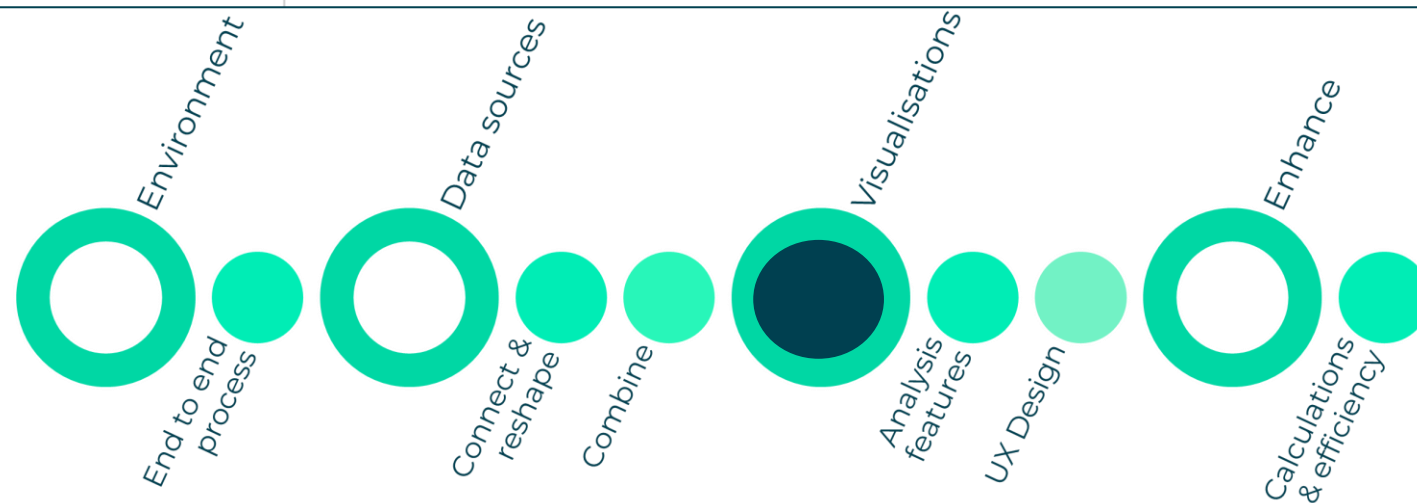
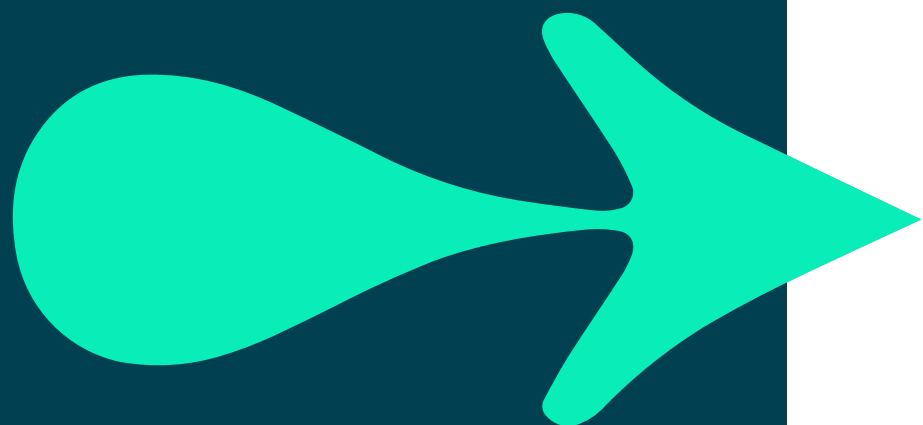
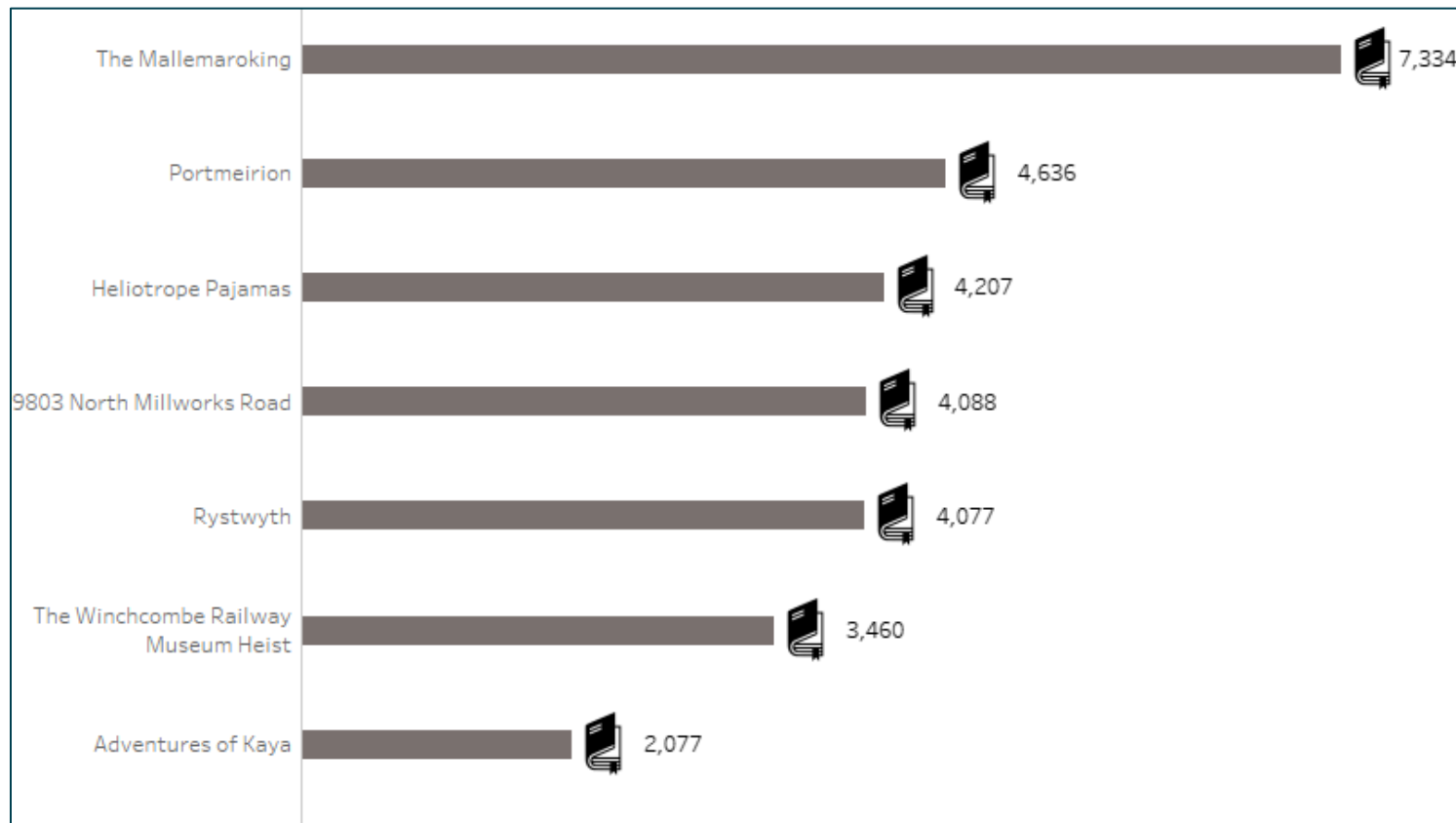
add a tooltip to top N titles

- Use your top N book titles by sales
- Add a copy of the sales measure to the tooltip, as table calculation rank
- Create second viz as revenue over time
- Configure the viz for the tooltip
- Add to base viz and test

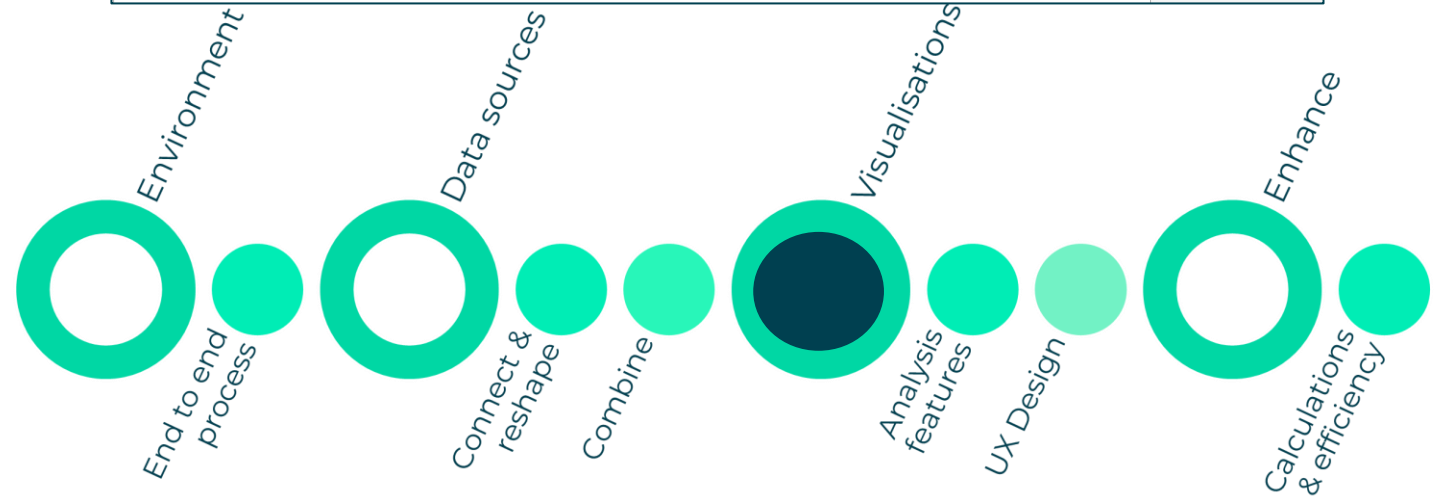
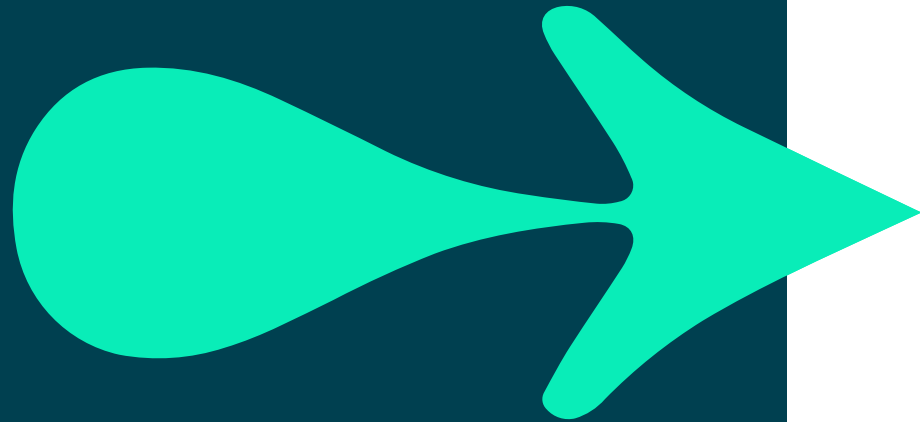
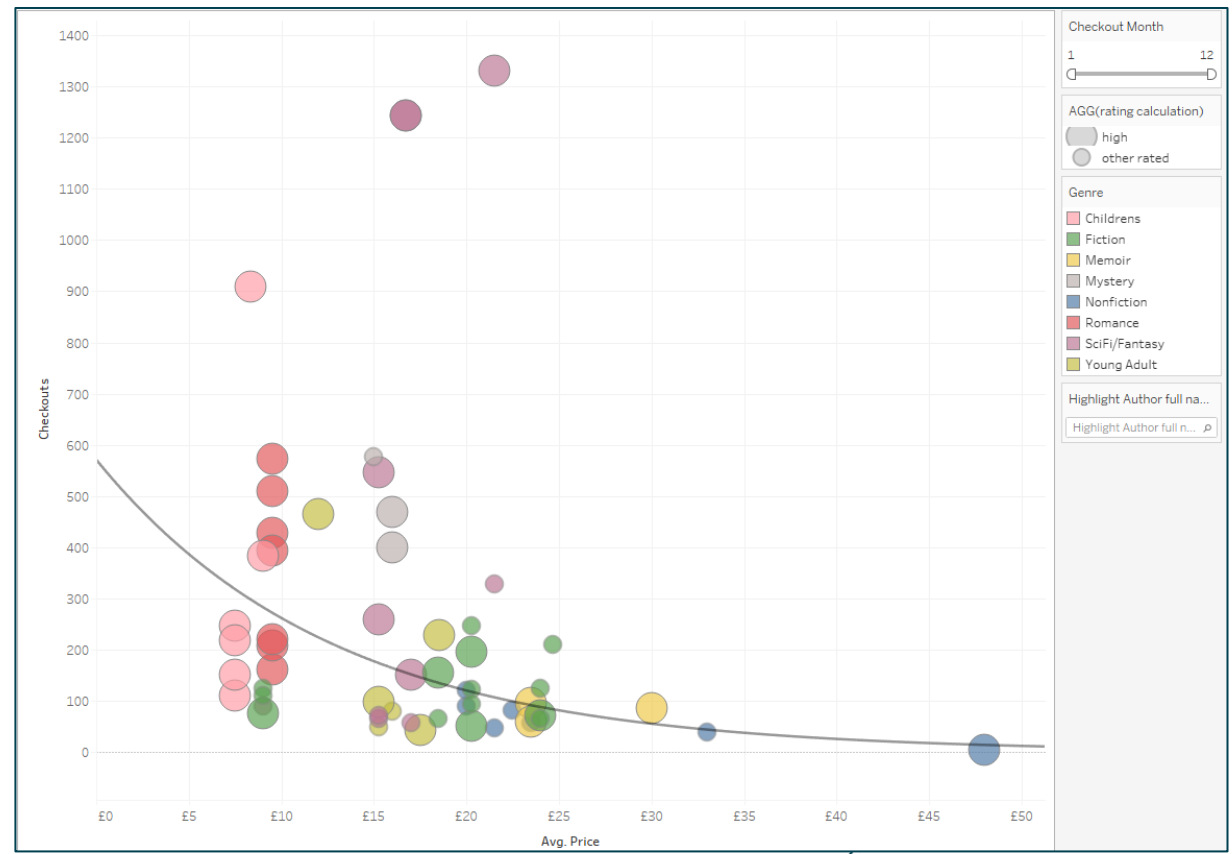
Review: viz in tooltip



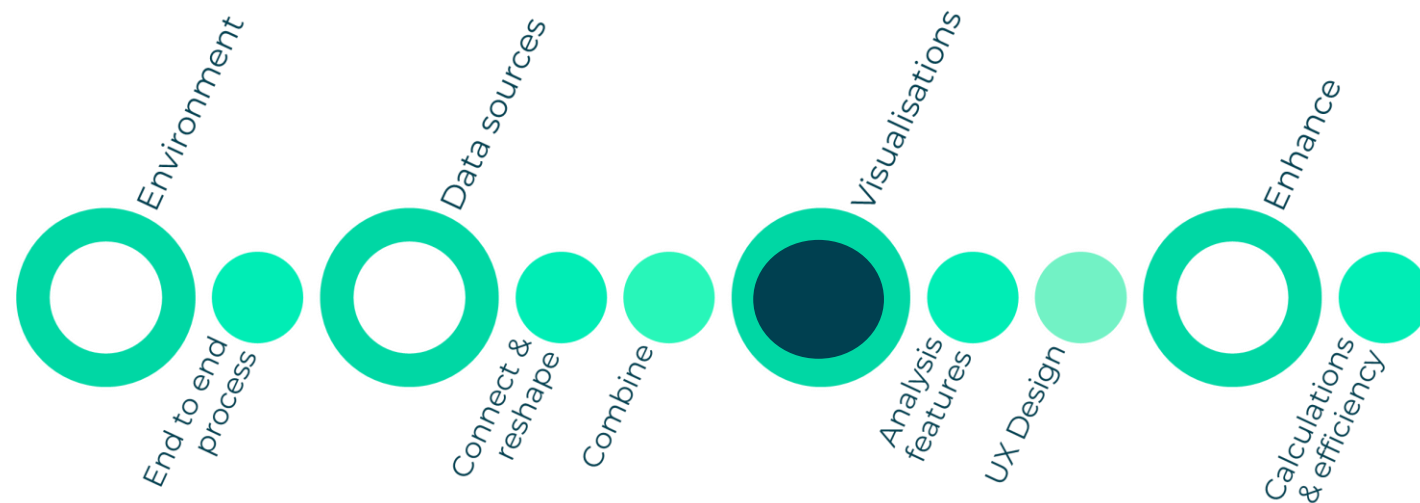
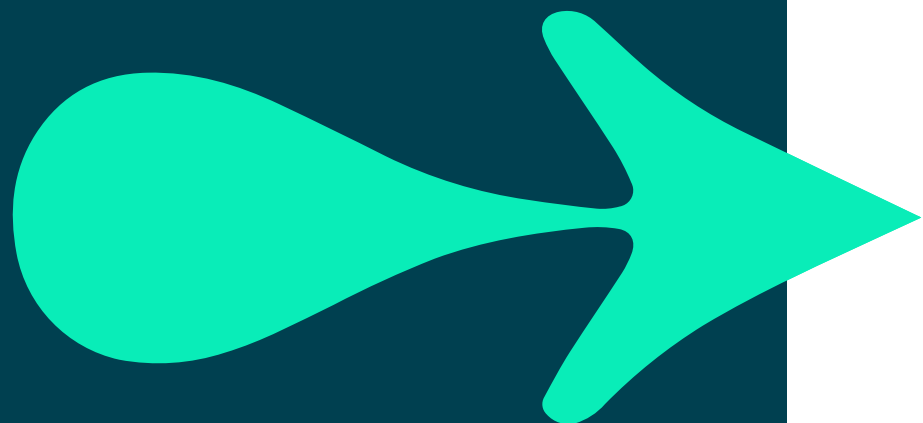
Add a custom book shape



Dive into detail with scatter plots



**Which new
titles do we
want to
stock?**



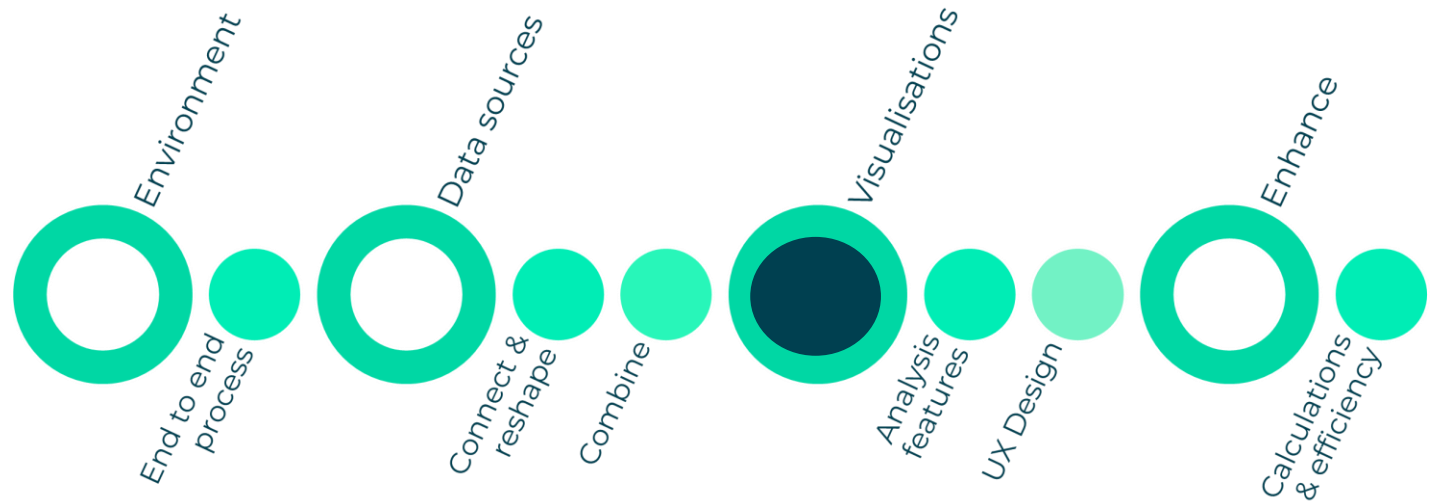
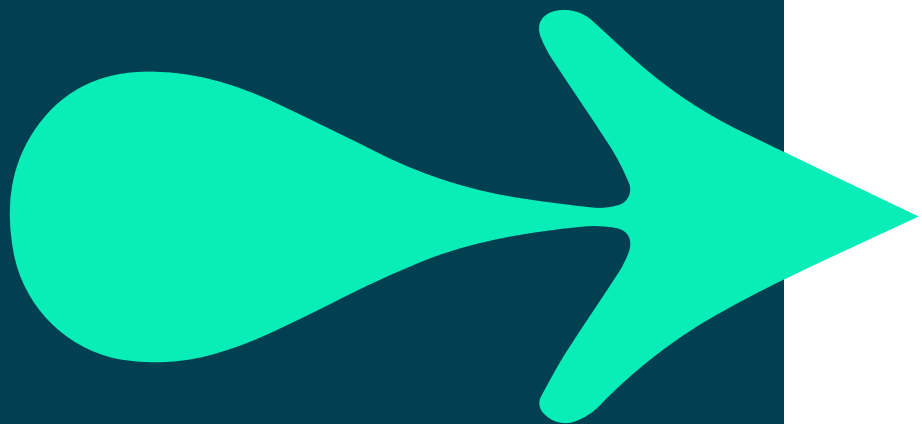
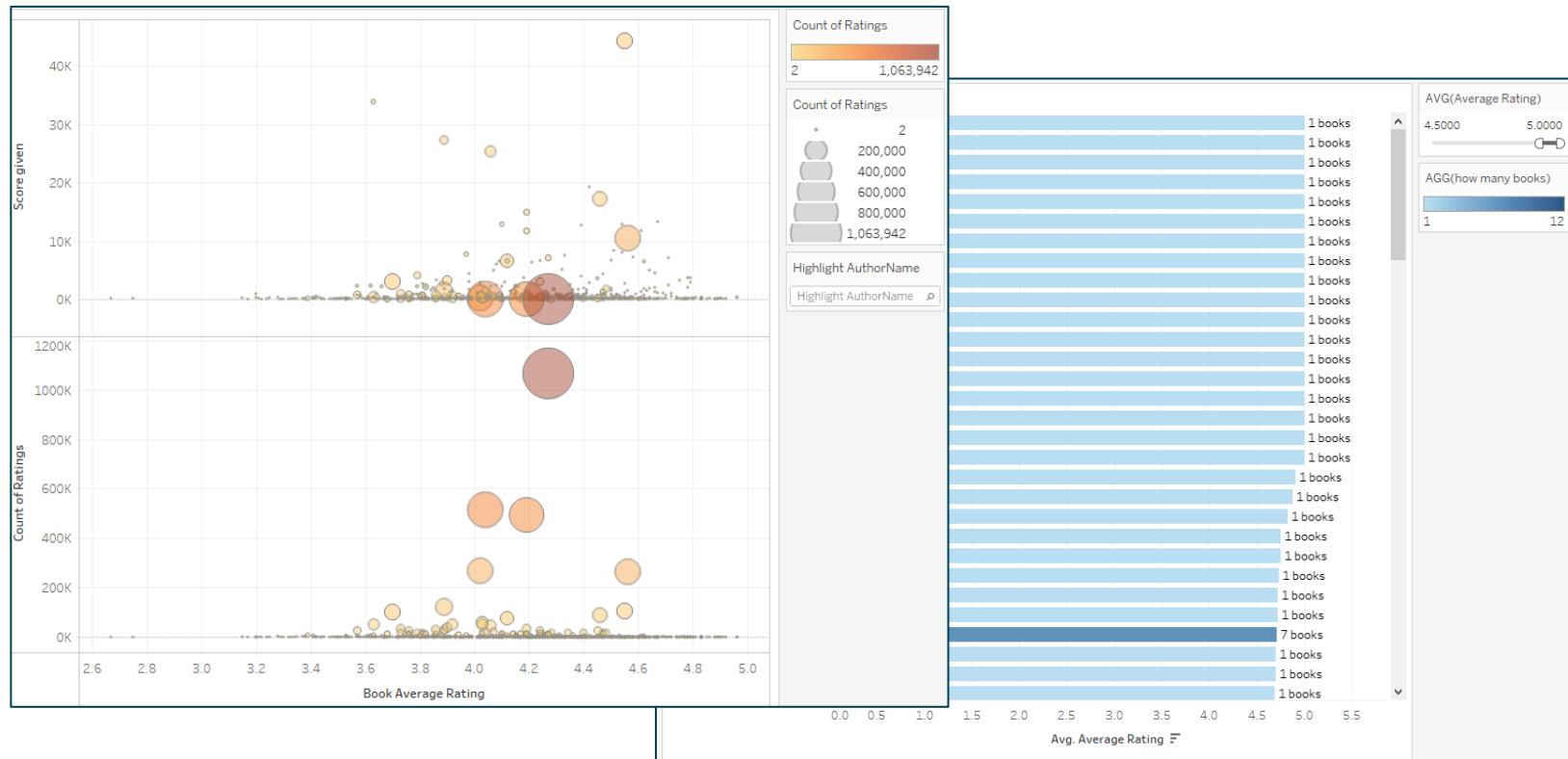


Activity 4.4:

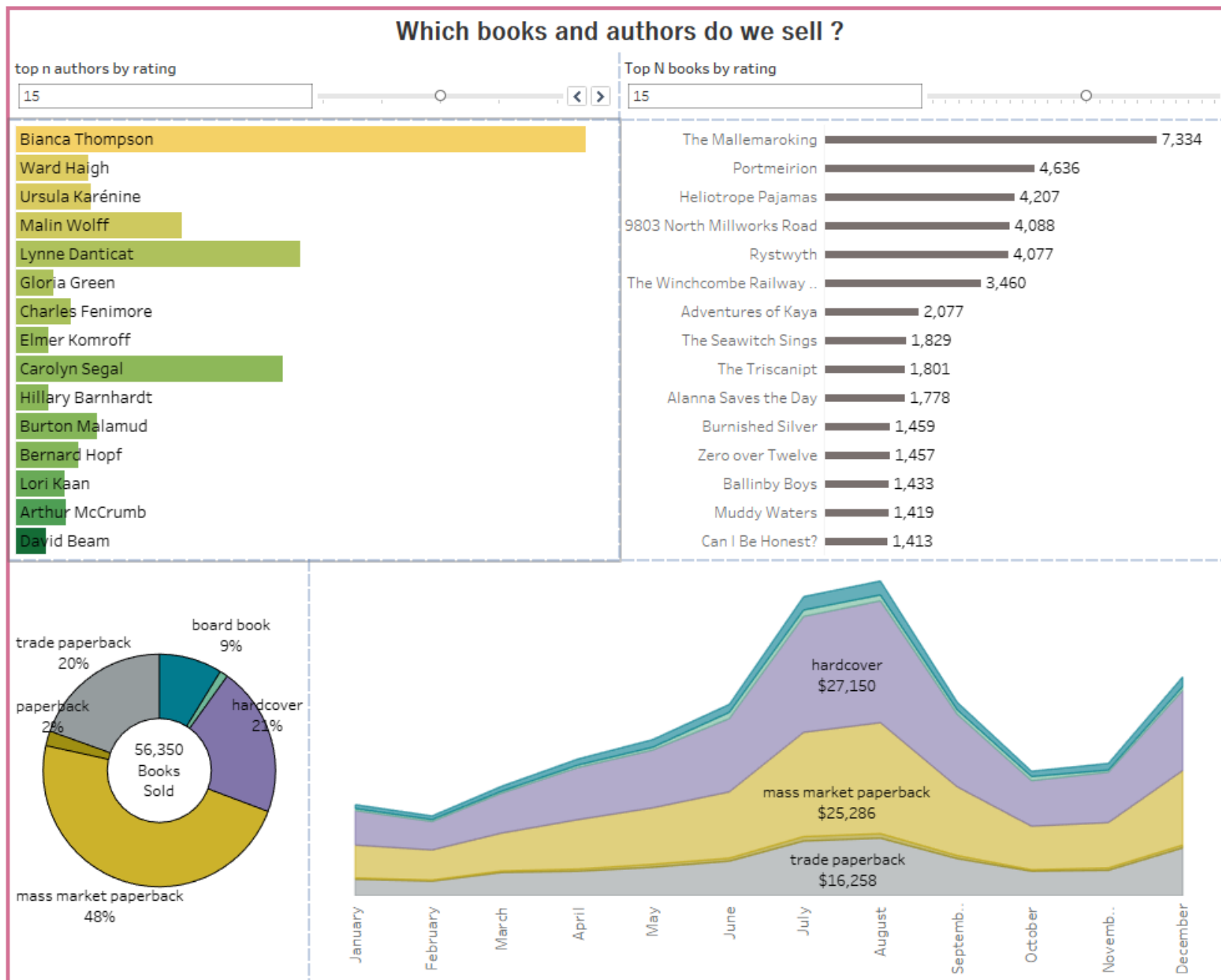
Scatter plot new titles

- Select a data source(s) which contains ratings
- Derive data as needed
- Create a scatter plot showing the ratings and one other measure of interest
- Add useful information to the tooltip
- Add relevant highlighter, filter, pages

Review: new authors and titles



Combine vizzes into dashboard



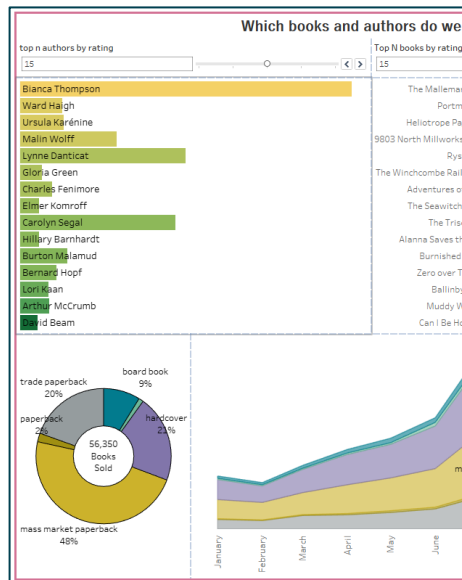


Activity 4.5:

case study dashboard

- Compile book titles dashboard
- Select data containing user reviews
- Combine sources in the dashboard as needed

2 levels of dashboards with drill down



Edit Filter Action

Name

drill down to books by chosen genre : <Genre>

Source Sheets

demo dashboard

Run action on

4.2

revenue - tooltip

tooltip demo

top N authors with sales

Target Sheets

drill down

Clearing the selection will

4.4 Google reviews

books- google

Filter

All fields

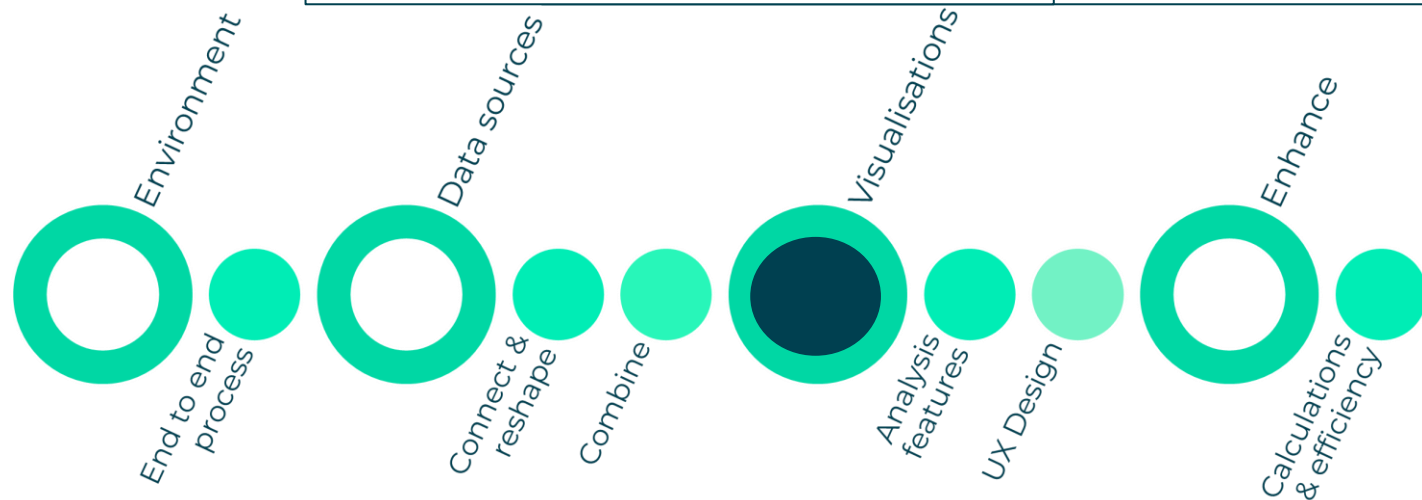
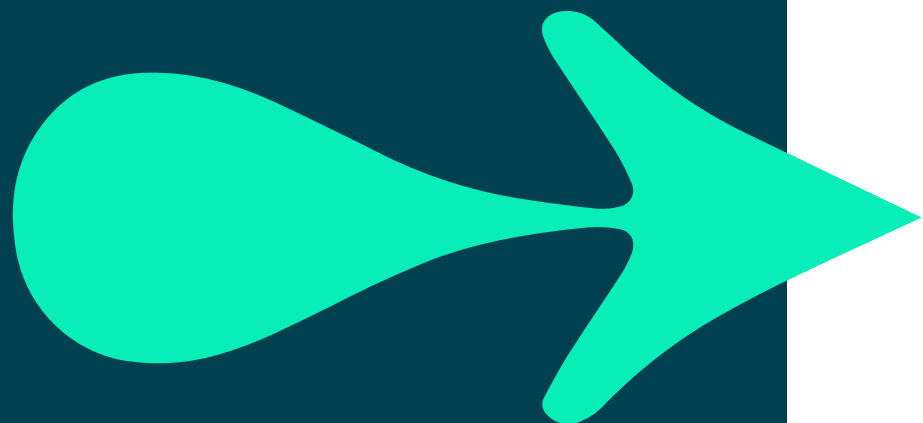
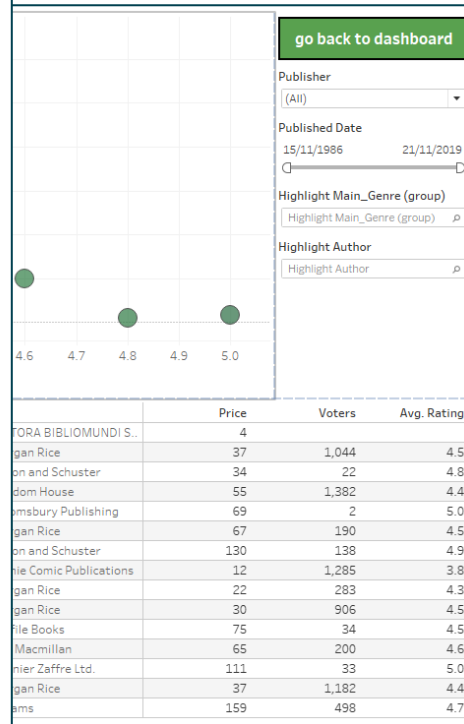
Selected fields

Source Field	Target Data Source	Target Field
Genre	google_books_dataset	Main_Genre (group)
Click to add		

Remove

Cancel

OK






Activity 4.6: drill down dashboard

- Design a dashboard drill down journey which starts from the book titles dashboard
- Drill by any of :
 - Genre
 - Author name
 - Rating

Summary of what we learnt



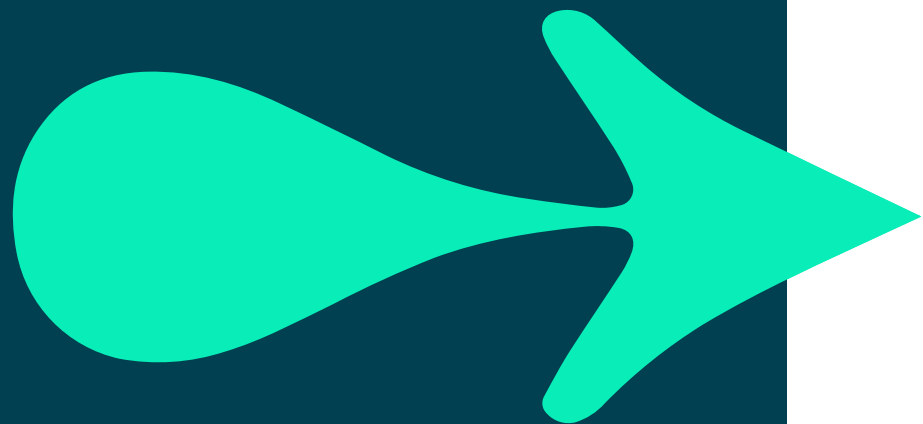
1. Useful viz design concepts
2. Flexible visual selection features
3. Dashboard design elements
4. How to drill down from one dashboard to another

A large, stylized cyan arrow pointing to the right, composed of three horizontal bars of increasing width, set against a dark teal background.

Module 5

Enhancements

Performance of data sources



Connection

☒ Live ☐ Extract

Extract Data

Specify how to store data in the extract:

Data Storage

☒ Logical Tables ☐ Physical Tables

Store data using one table for each logical table. [Learn more](#)

Use this option if you need to use extract filters, aggregation, or other extract settings.

Specify how much data to extract:

Filters (optional)

Filter	Details
--------	---------

[Add...](#) [Edit...](#) [Remove](#)

Aggregation

☐ Aggregate data for visible dimensions

☐ Roll up dates to

Number of Rows

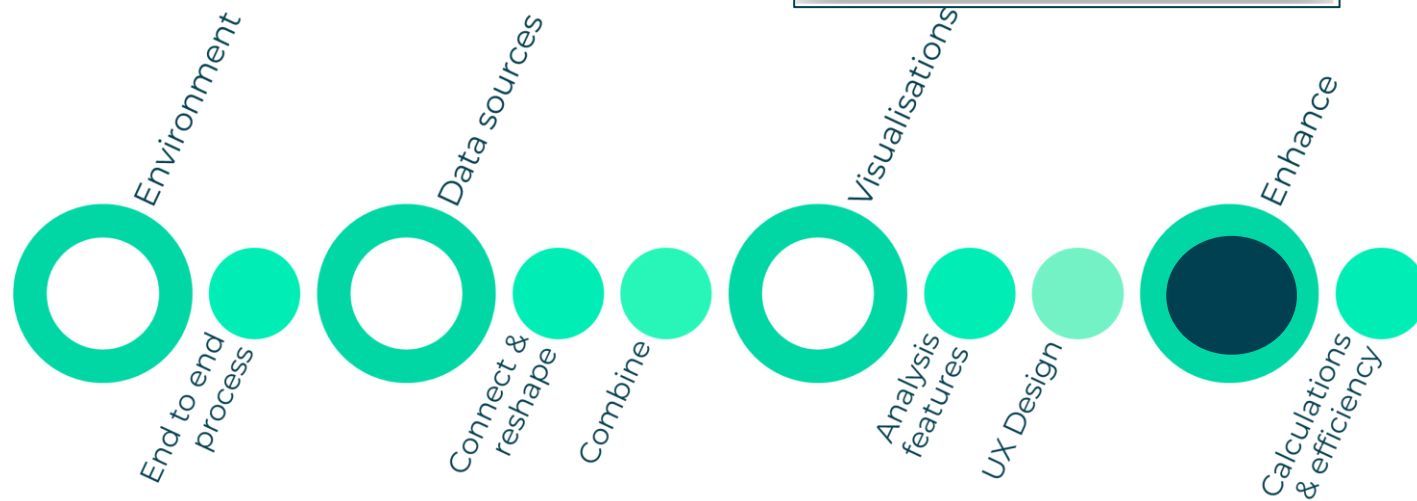
☒ All rows

☐ Incremental refresh

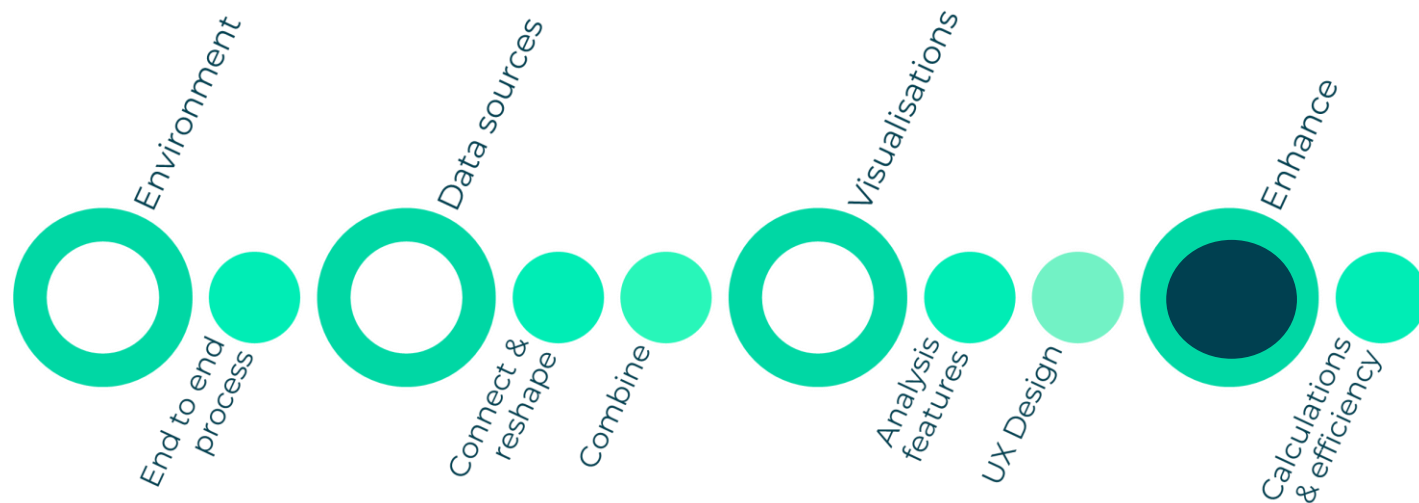
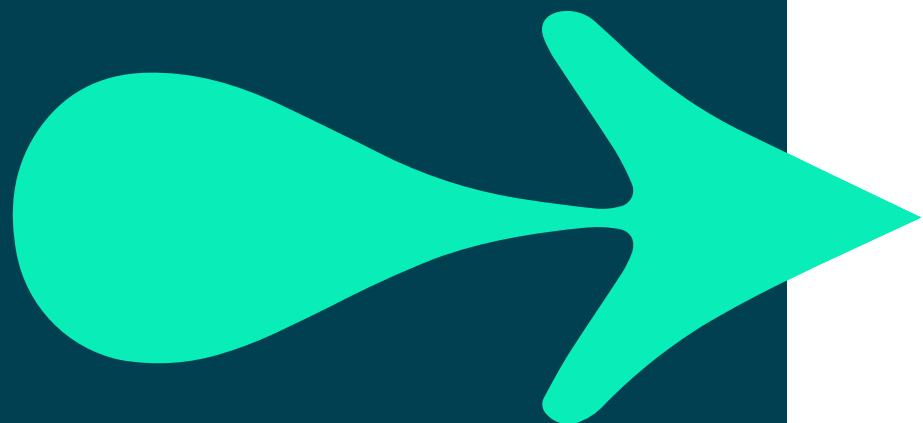
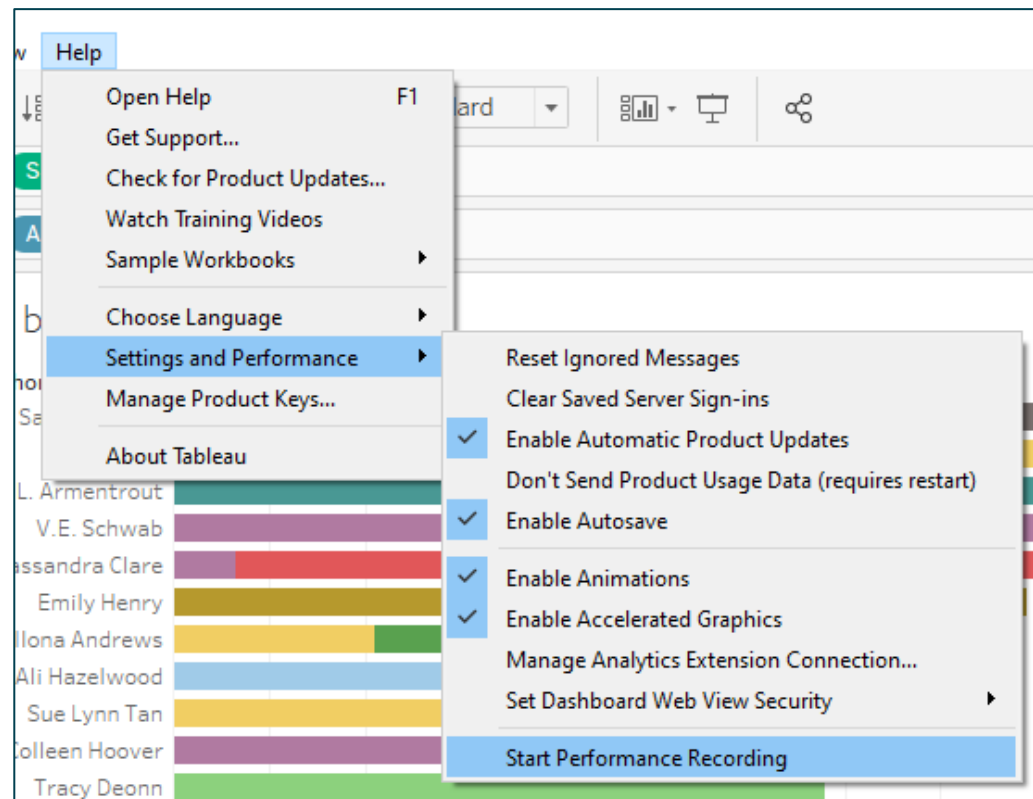
☐ Top: by rows

☐ Sample: by rows

[History...](#) [Hide All Unused Fields](#) [Cancel](#) [OK](#)



Performance recording



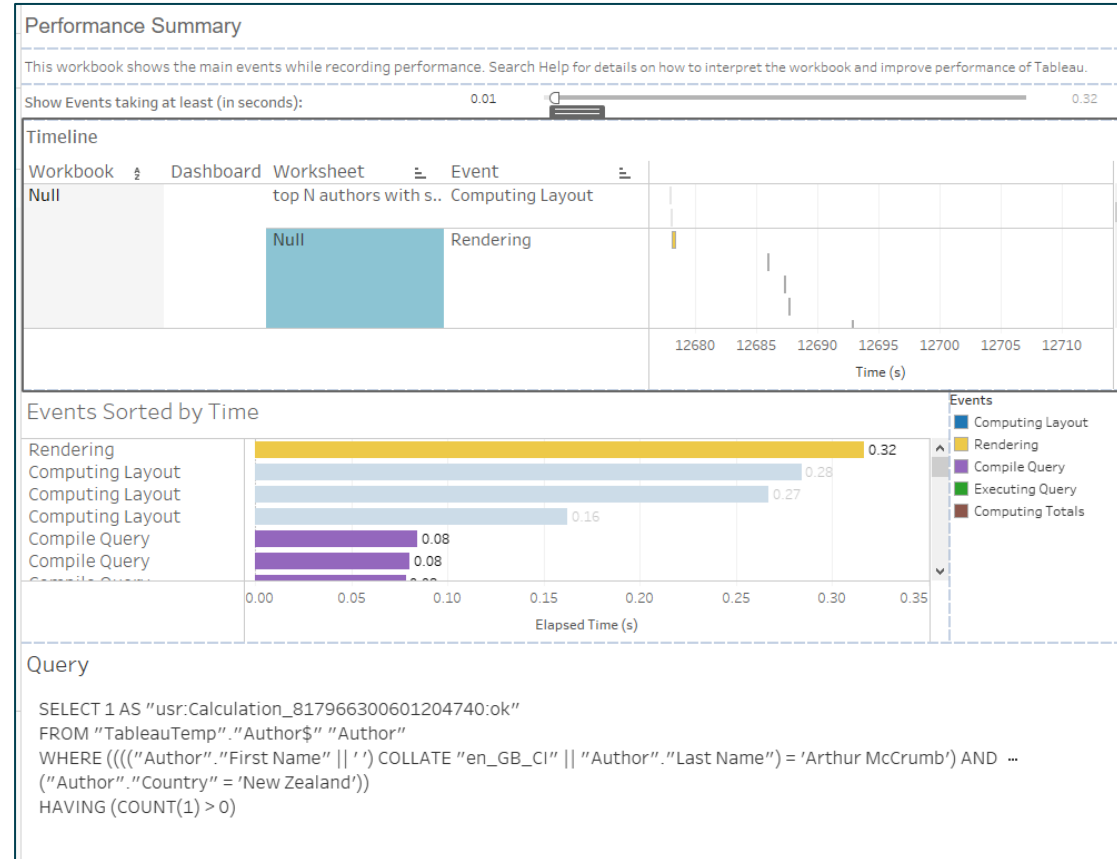
Activity 5.1:

Workbook performance

- Turn on performance recording
- Interact with the dashboard
- Review performance report
- Switch from live to extract
- Hide unused fields and save as new .twbx

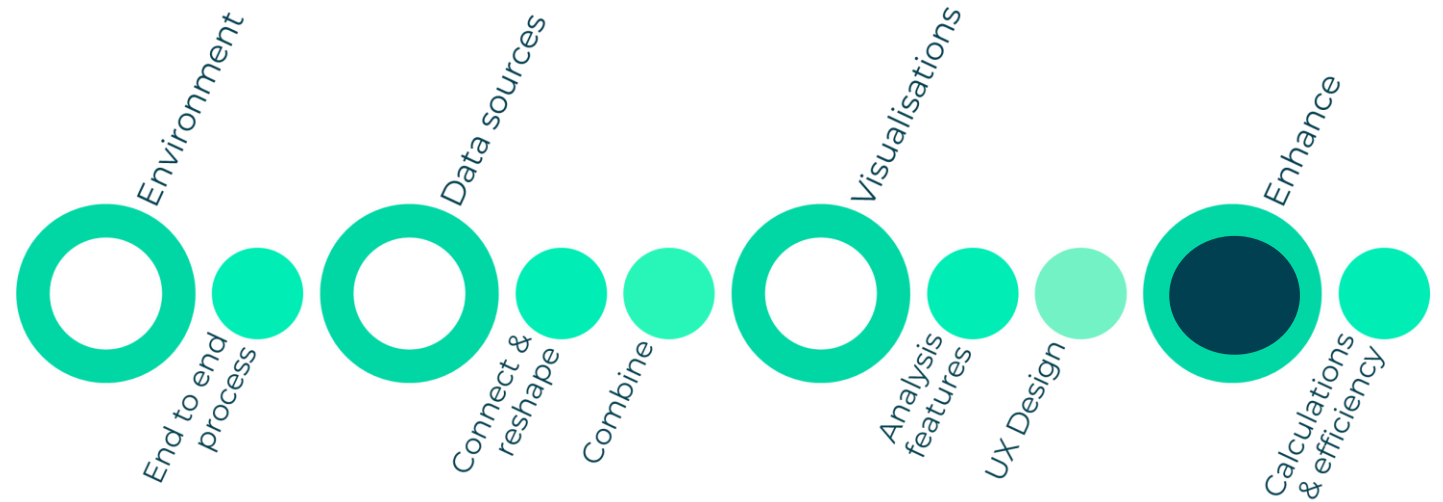
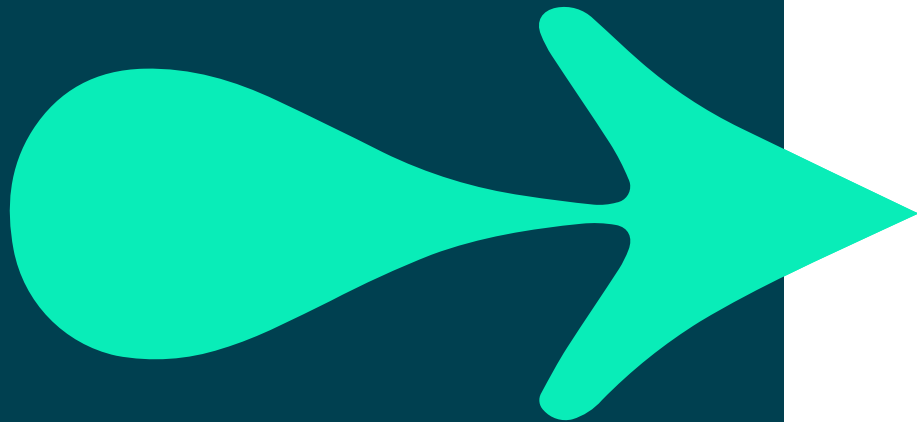


Performance findings and actions



Efficient workbook tips

1. No excess calculated fields not in use
2. Default should be extract, not live
3. Data source filters to reduce data volume
4. Hide unused fields
5. Roll up to needed granularity level
6. Review calculation logic for efficiency
7. Clean up vizzes – less complexity
8. Only relevant value filters / sets



Workbook optimiser

Optimise Workbook

Check Best Practices

9/17 Passed

Select an item to see the best practices guidelines and information on resolving issues.

>

⚠

2

Take action

Updating these items to follow best practices won't impact workbook functionality.

>

⚠

6

Needs review

Updating these items to follow best practices may require a trade-off in the workbook.


>

✓

9

Passed

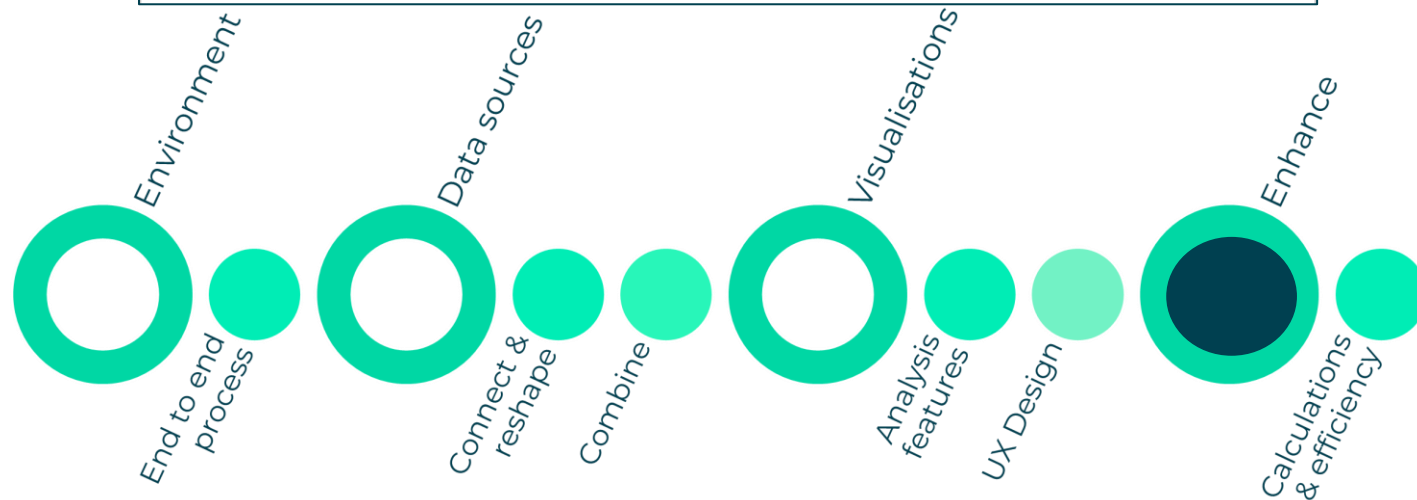
Passed items follow best practice guidelines.

 Rerun Optimiser

Last run at 13:05

Publish

Close



Activity 5.2:

optimise workbook

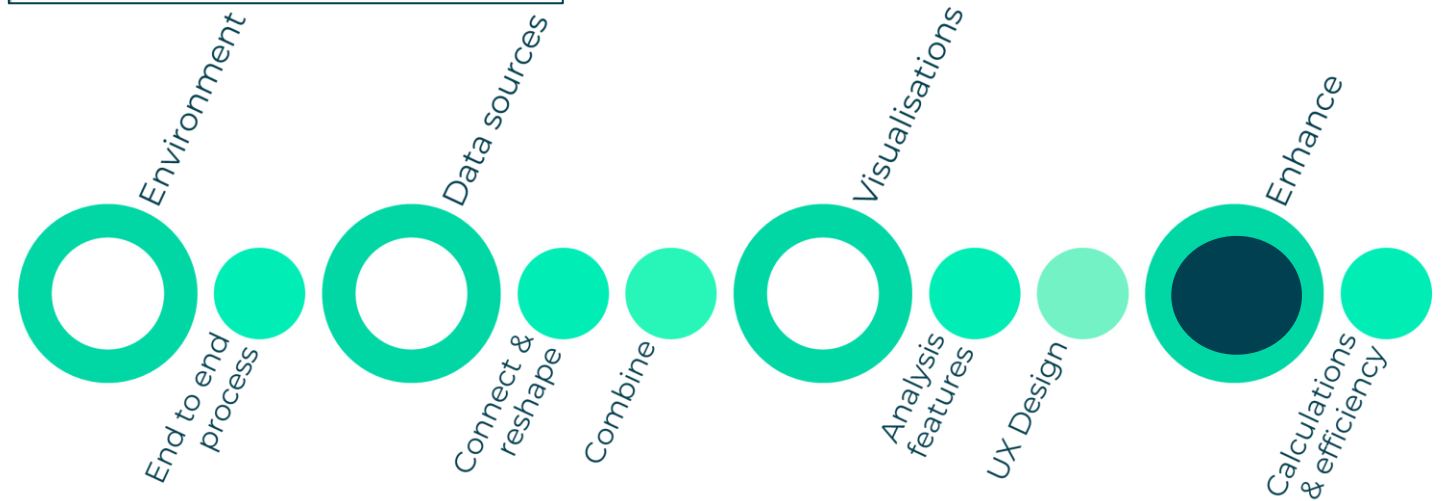
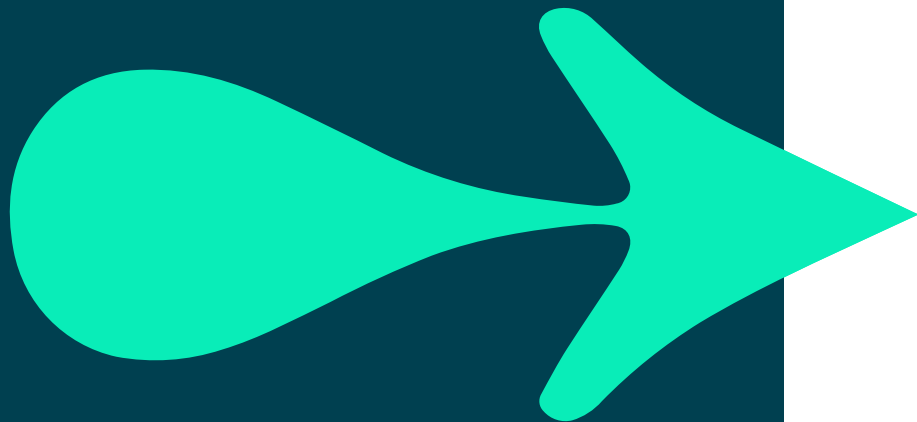
- From the server menu, run optimiser
- Review optimiser results
- Take any actions identified by this feature



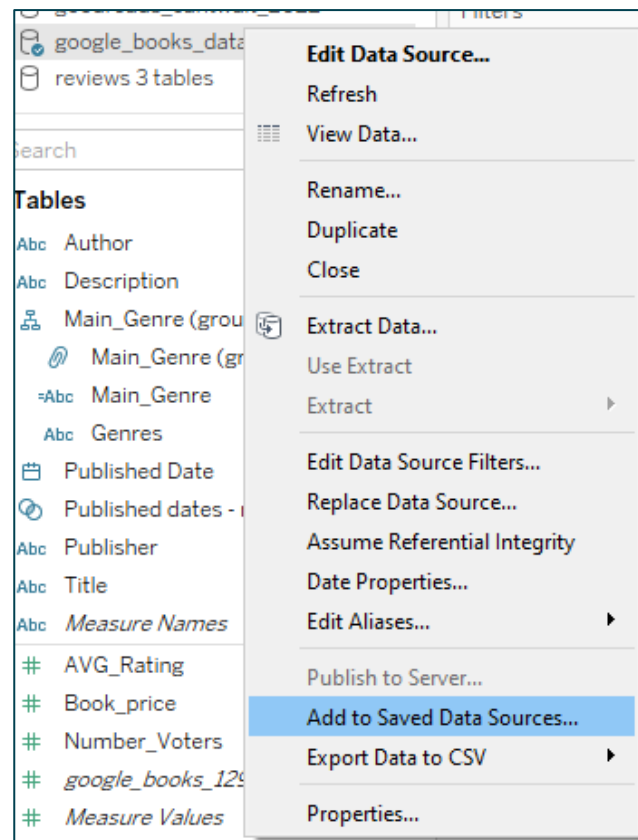
End user customisation

Tables	
Abc	Author
Abc	Description
▼	Main_Genre (group), Main_Genre
🔗	Main_Genre (group)
-Abc	Main_Genre
Abc	Genres
📅	Published Date
🔗	Published dates - not nulls
Abc	Publisher
Abc	Title
Abc	Measure Names
<hr/>	
#	AVG_Rating
#	Book_price
#	Number_Voters
#	google_books_1299.csv (Count)
#	Measure Values

1. Hierarchy
2. Group
3. Set
4. Rename fields
5. Default Properties
6. hide/ remove unused

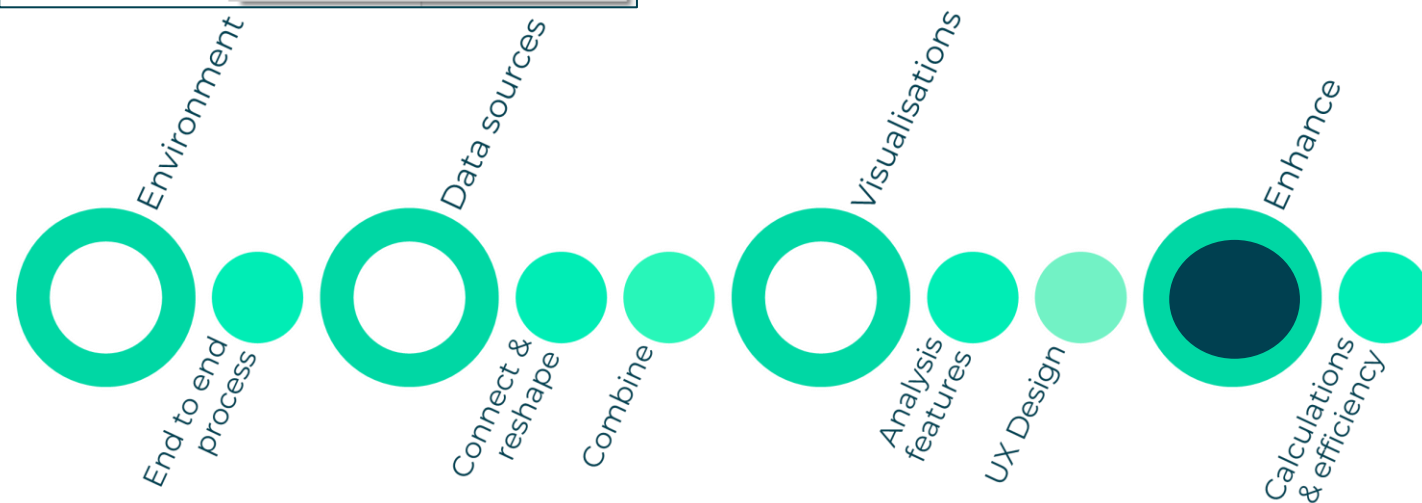
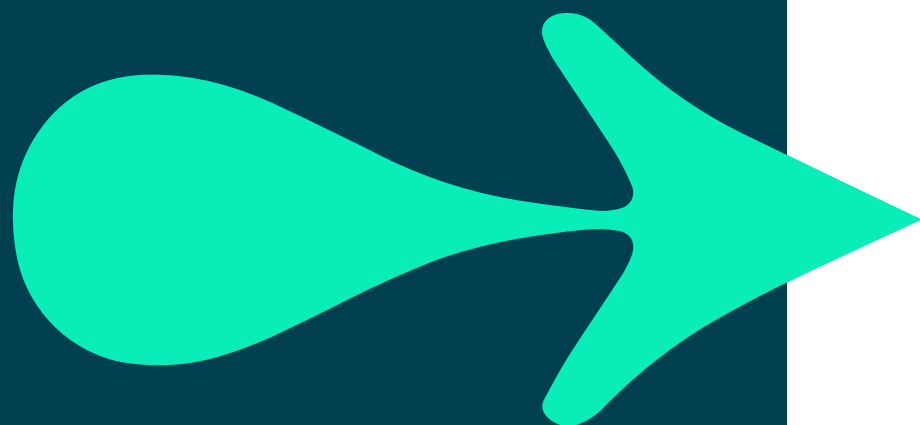


Save as reusable data source



Saved Data Sources

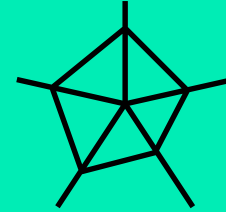
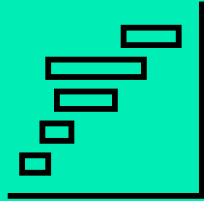
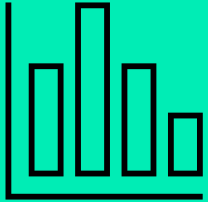
google_books_dataset
Sample - EU Superstore
Sample - Superstore
World Indicators



Summary of what we learnt



1. Performance monitoring
2. What is an extract?
3. Workbook optimisation
4. Tips for calculations
5. End user data source tailoring



**What will be your next
steps?**



THANK YOU

Hope you enjoyed this learning journey.

