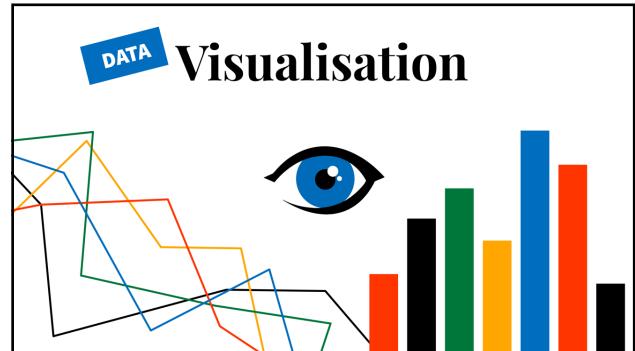
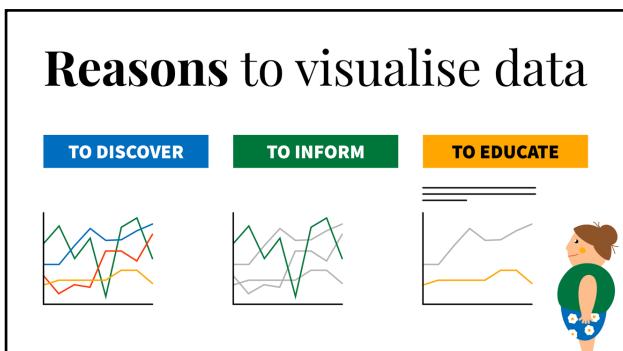


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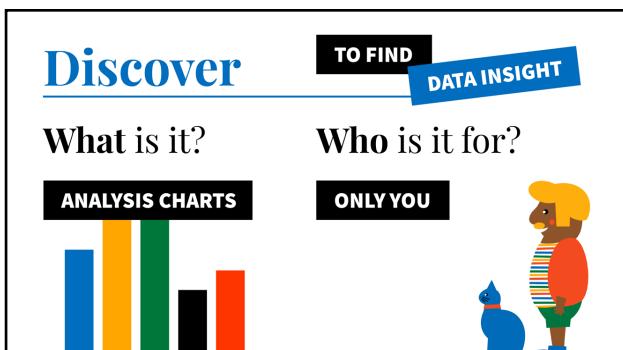
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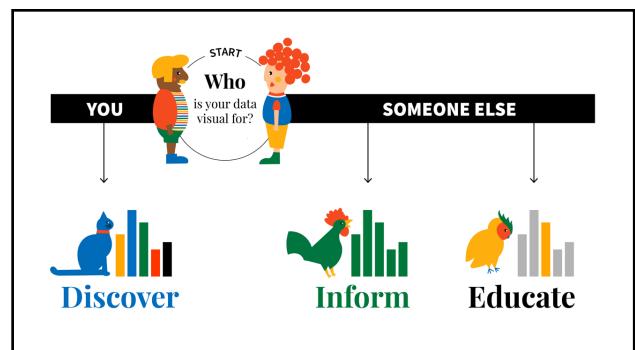
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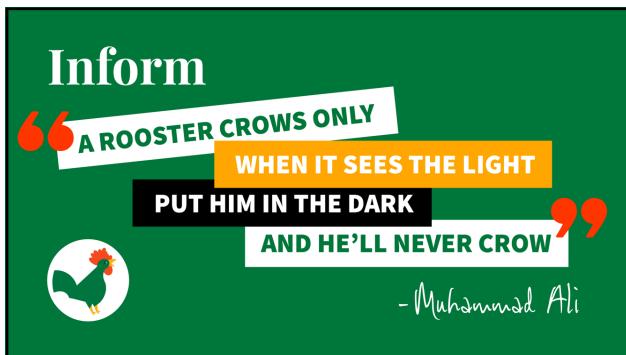
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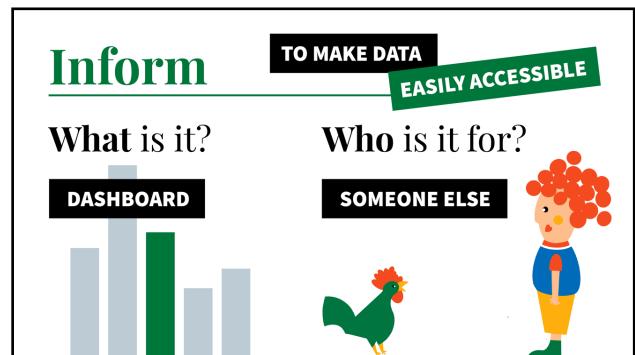
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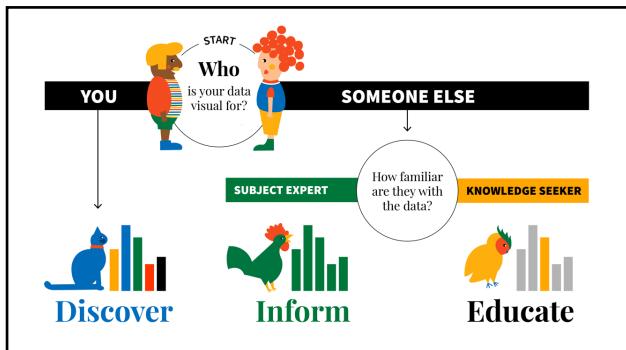
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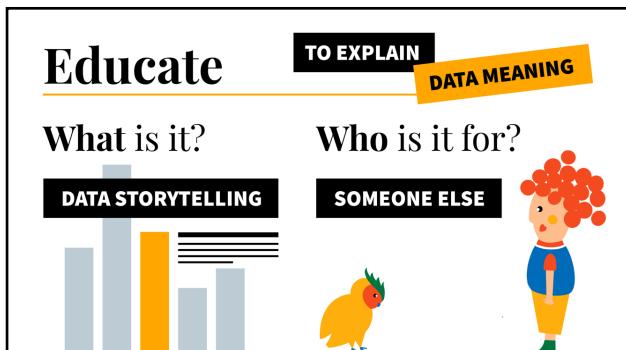
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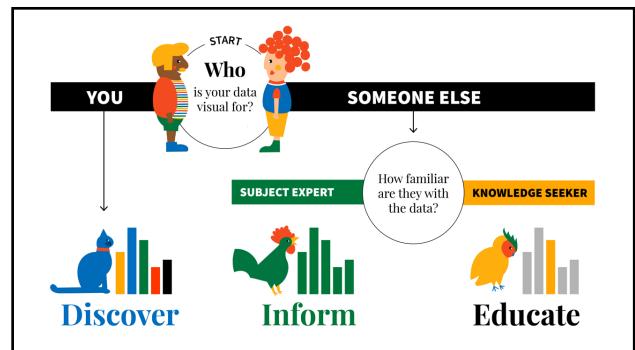
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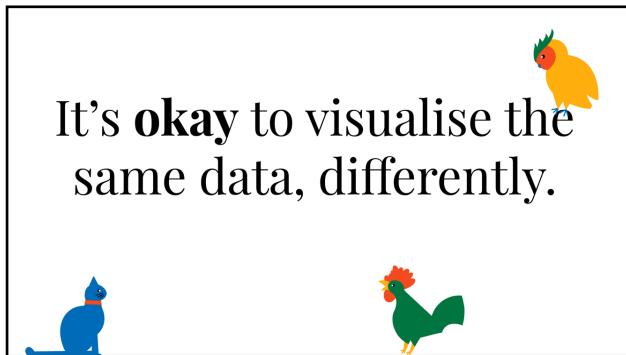
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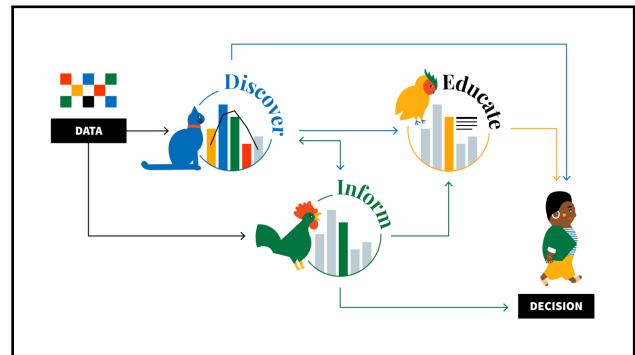
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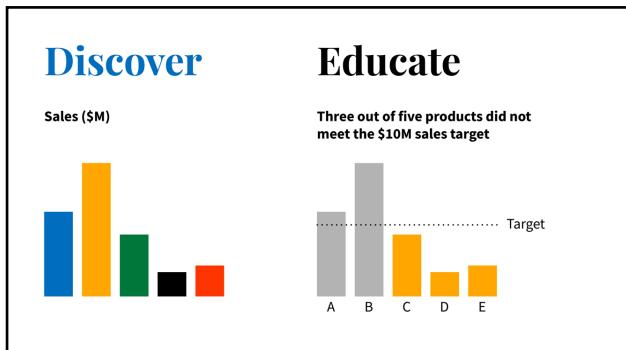
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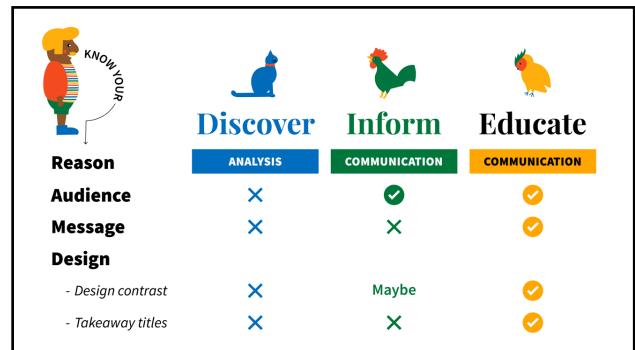
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## STORY METRICS (FINDING A STORY)

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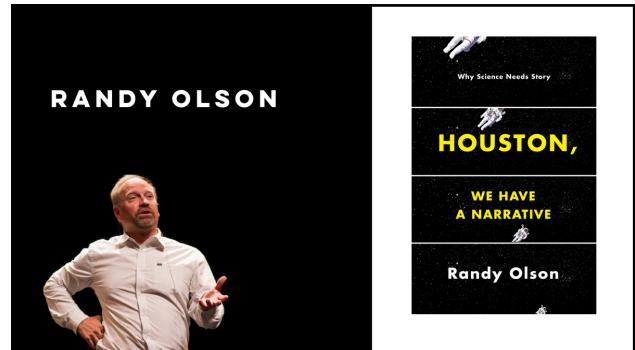
19

CHARACTER	EVENT	EVENT PERIOD	STATE BEFORE	STATE AFTER	IMPACT
GREEN SEA TURTLE	PROPORTION OF MALE HATCHLINGS HAS DECREASED	1980 - TODAY	1 MALE TO EVERY 5 FEMALE HATCHLINGS	1 MALE TO EVERY 100 FEMALE HATCHLINGS	<input type="checkbox"/> Positive impact <input type="checkbox"/> No impact <input checked="" type="checkbox"/> Negative impact
SEASON	REACTION	BACKGROUND			
RISING GLOBAL TEMPERATURES	NEST MANAGEMENT STRATEGIES MORE RESEARCH ON SIMILAR ANIMAL'S RESPONSE TO CLIMATE CHANGE	HOW TEMPERATURE DEPENDENT SEX DETERMINATION (TSD) WORKS			

20



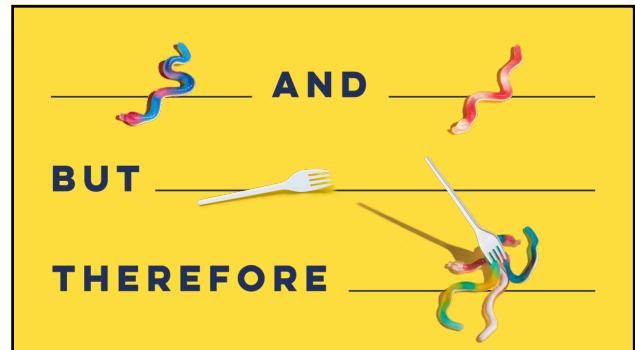
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25

THERE WAS ONCE A GIRL...

AND SHE LIVED WITH HER AUNT AND UNCLE

AND HER LIFE WAS PRETTY BORING

BUT ONE DAY A TORNADO SWEPT THROUGH HER HOME AND CARRIED HER INTO THE LAND OF OZ

THEREFORE SHE HAD TO FIND THE WIZARD IN EMERALD CITY TO HELP HER RETURN HOME.

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AND	BUT	THEREFORE
ALSO	DESPITE	SO
EQUALLY	HOWEVER	THUS
IDENTICALLY	YET	CONSEQUENTLY
UNIQUELY	CONVERSELY	HENCE
LIKE	RATHER	THERUPON
MOREOVER	WHEREAS	ACCORDINGLY
AS WELL AS	ALTHOUGH	AS A RESULT
FURTHERMORE	OTHERWISE	HENCEFORTH
LIKEWISE	INSTEAD	FOR THIS REASON
SIMILARLY	ALBEIT	IN THAT CASE

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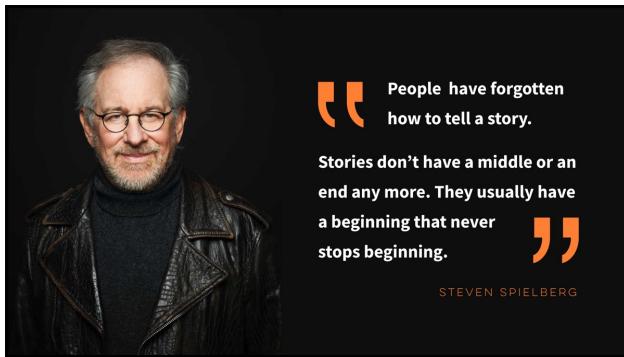
## DATA NARRATIVES

(WRITING A STORY)

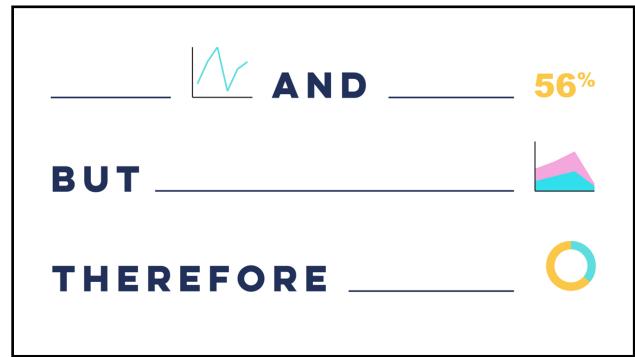
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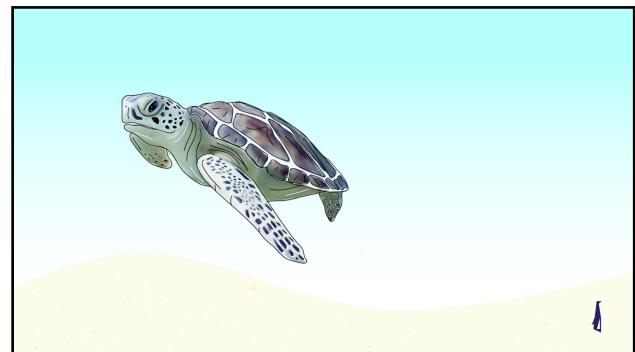
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CHARACTER	EVENT	EVENT PERIOD	STATE BEFORE	STATE AFTER	IMPACT
GREEN SEA TURTLE	PROPORTION OF MALES HATCHING HAS DECREASED	1980 - TODAY	1 MALE TO EVERY 8 FEMALE HATCHLINGS	1 MALE TO EVERY 150 FEMALE HATCHLINGS	<input type="checkbox"/> Positive impact <input type="checkbox"/> No impact <input checked="" type="checkbox"/> Negative impact
REASON		REACTION	BACKGROUND		
Why did the event occur?		What could be done to continue/reverse the impact on the character?	What other information does my audience need to know to understand the character or event?		
RISING GLOBAL TEMPERATURES		NEST MANAGEMENT STRATEGIES MORE RESEARCH ON SIMILAR ANIMAL'S RESPONSE TO CLIMATE CHANGE	HOW TEMPERATURE-DEPENDENT SEX DETERMINATION (TSD) WORKS		

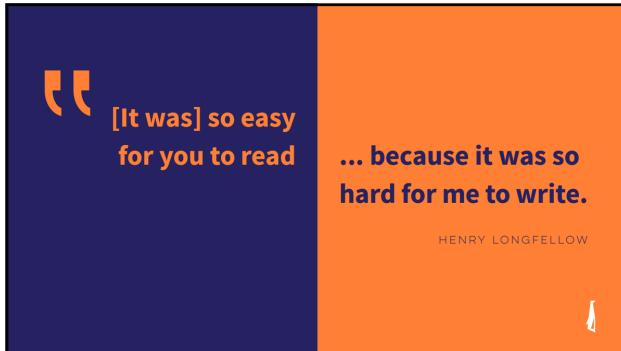
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**THE SEX OF A BABY GREEN TURTLE IS DETERMINED BY THE TEMPERATURE OF THE NEST IT DEVELOPS IN.**

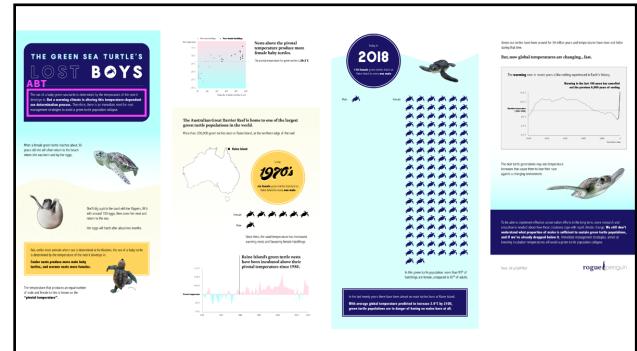
**BUT A WARMING CLIMATE IS ALTERING THIS TEMPERATURE-DEPENDENT SEX DETERMINATION PROCESS.**

**THEREFORE, THERE IS AN IMMEDIATE NEED FOR NEST MANAGEMENT STRATEGIES TO AVOID A GREEN TURTLE POPULATION COLLAPSE.**

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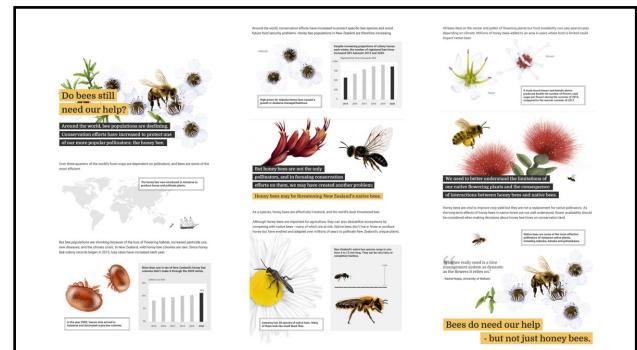
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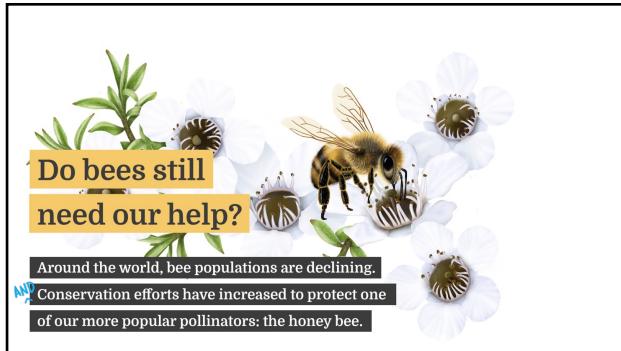
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**THEREFORE**

We need to better understand the limitations of our native flowering plants and the consequence of interactions between honey bees and native bees.

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**Do bees still need our help?**

Estimated 10% of all flower visitors are native bees, and their populations are declining.

**ABT**

**Bees do need our help - but not just honey bees.**

44

In the year 2000, Varroa mite arrived in Aotearoa and decimated many bee colonies.

More than one in ten of New Zealand's honey bee colonies didn't make it through the 2020 winter.

Year	Colony Loss Rate (%)
2015	~8%
2016	~9%
2017	~9%
2018	~9%
2019	~10%
2020	11%

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New Zealand's native bee species range in size from 4 to 12 mm long. They can be very hairy or completely hairless.

Aotearoa has 28 species of native bees. Many of these look like small black flies.

1mm

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**UNDERSTAND DATA THROUGH STORY**

**WHY DO DATA STORYTELLING?**

It's not just numbers, it's stories. What's interesting by name, it's not in others. We can tell stories that are more compelling and connect with people.

But communicating data is not our fault. Stories are not always told well. If we don't know how to tell them, they won't be told. And if they aren't told, the most important stories will never be heard.

Data storytelling communicates data insights.

**Kat Greenbrook (@SheHer)**  
Data Storyteller and Founder of Rogue Penguin  
Talks about #datavizualisation and #datastorytelling

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