Data Literacy

Are you
Ground
or
Air Crew?

Thank you!

b3

CEGAL

REBTECH

DATAmasterminds

Measure Killer

Snabbfoting

TIMEXTENDER

Telia
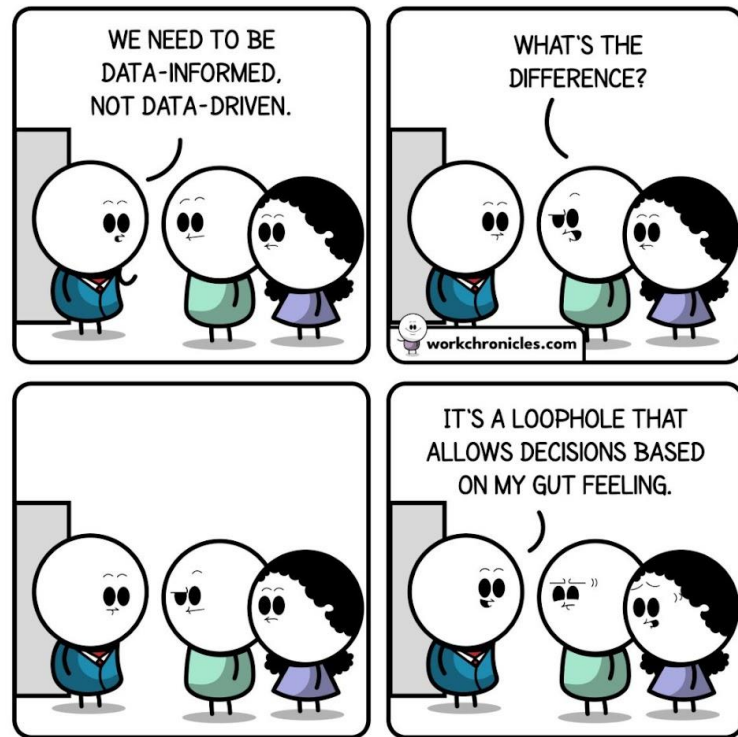
Data Literacy

▶ Is it data?

▶ Is it knowledge?

▶ Is it technology?

▶ Is it functional?

What do you think?

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PorcuBI
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Data Analytics & Visualization

Machines

Humans

Artificial
Intelligence

Computer
Vision

Interaction

Dashboarding
& Reporting

Data storage,
Warehouse &
Virtualization

Hybrid
Cloud

AR/VR

Data sources

**Data collection,
preparation and
enrichment**

**Intelligent
processing**

**Visualization
and interaction**

Information
systems

Documents

Devices &
sensors

Integration

Internet
of Things

Machine
learning

Workflow
automation &
Blockchain

Cognitive
services

ERP
Add-ons

Role based
apps &
applications

Feedback (data updates & commands)

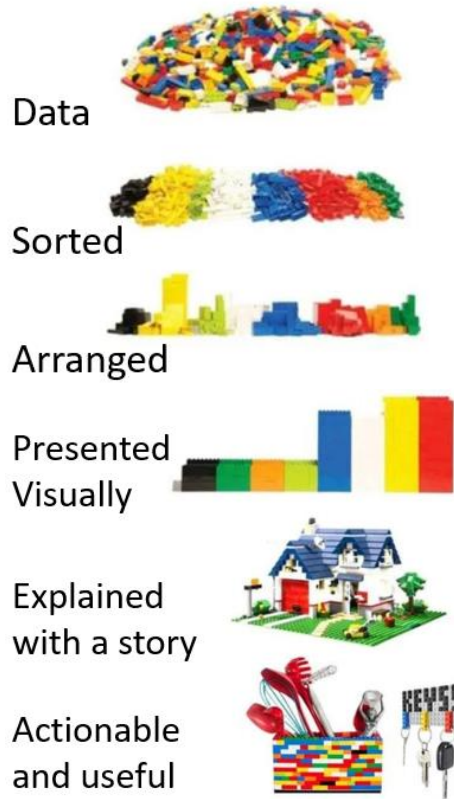# Where to start?

▶ Are you using data to tell a story?

▶ Are you telling a story using data?

Team Tech or team Functional?

Data

Sorted

Arranged

Presented Visually

Explained with a story

Actionable and useful

Data literacy

▶ What is it?

▶ Why is it important?

▶ No one size fits all.

▶ The framework.

▶ Dream big, start small!

The Definition

Gartner:

"...the ability to read, write and communicate data in context, including an understanding of data sources and constructs, analytical methods and techniques applied — and the ability to describe the use case, application, and resulting value."

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Importance of data literacy

Companies realize they can achieve more with data

Supported by:

▶ More advanced tools

▶ Increase in "modern" workforce (less gut feeling)

But:

▶ Data initiatives lead to less real change

▶ Risk of 'anarchy'

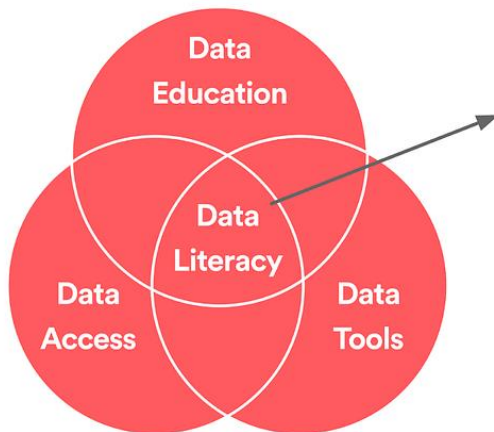▶ Employees lack the enthusiasm to change the way of working

How do we make this work?

How to make it work?

An example: Airbnb

Data education is the key to raising the bar of data literacy at Airbnb

- **Inform decisions** - Ensure decisions are grounded in data

- **Sharper context** - Users asking the questions

- **Self-service** - Reduce feedback loop in answering questions

Customization is key

▶ Content needs to be specific and customized to the needs of your company, your employees and their work.

▶ Use your own data, own tools, and own use cases/problems.

▶ What you learn is what you need! Everything you learn is part of your actual work by tackling real problems and answering real questions.

▶ Measure success (dashboards, user access..)

3 Levels of Skills

Level 1 – Base

▶ Consuming data

▶ Working with data is not a daily task

▶ Manager thinks data is important but does not take actions (currently) based on data

3 Levels of Skills

Level 2 – Advanced

▶ Working with data

▶ Employees who want to create their own dashboards

▶ Combining and analyzing data
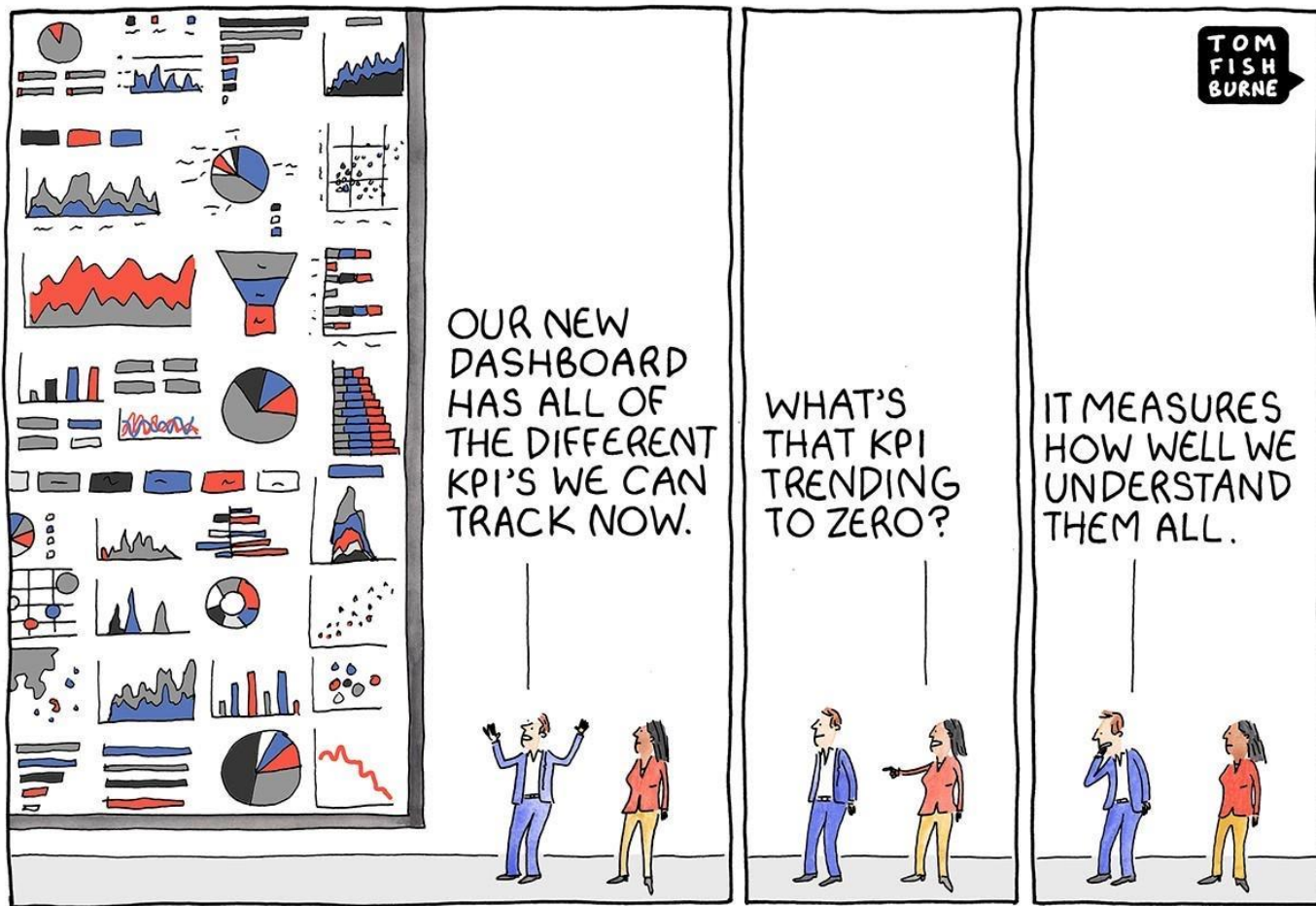
3 Levels of Skills

Level 3 - Expert

▶ Employees who want to start making their own predictions based on data .

▶ Understand availability and possibility of different available techniques.

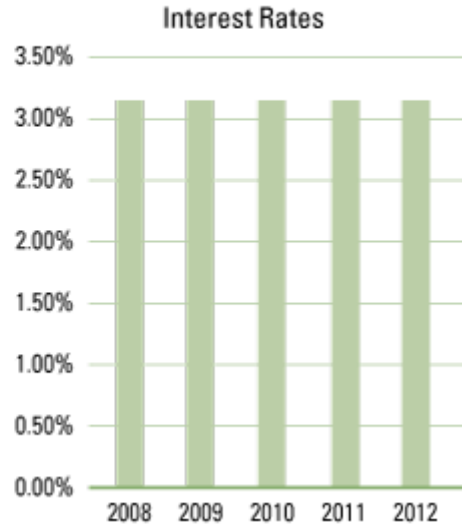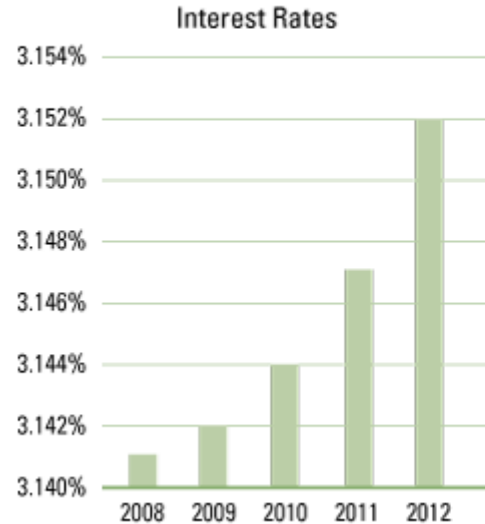# Level 1: Consuming data

Correlation vs causality. h/t Doug

Put the da

How to int
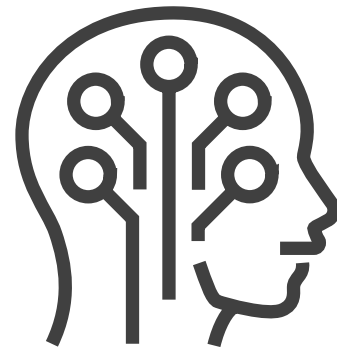
How can I

How does

Ethics and

Data presentation

Same Data, Different Y-Axis

Level 3: Data Scientists and Programmers

▶ Which technique is best to use for which problem?

▶ Implementation of data science models

▶ Machine learning

▶ R, python, Alteryx

▶ Time series analysis and prediction

▶ Advanced statistics

Knowledge and Skills

- Functional (what data do I have)
- Technical (how do I get it out)
- Presentation (how do I tell the story)
- Synergy!

Starting point – Architecture Design Session

▶ Define what end users want and need.

▶ Define the data sources, current data platform(s) and pain points.

▶ Define knowledge level inside the organisation.

All good and well, but

… If my employees want all the things with data, it increases the pressure on the BI department. They are overwhelmed as it is right now!

… can my data platform handle all the extra users?

The magical 2nd step

Think big but start small!

- ▶ With 1 department, for instance HR
- ▶ With 1 domain where the data is verified, for instance salaries
- ▶ With 1 layer, for instance management
- ▶ With 1 skill, for instance story telling
- ▶ With 1 level, for instance data scientists

Key takeaway

▶ If you want to work data driven make sure you:

- Make data literacy part of the data strategy!

- Make sure everyone get's the time they need.

- Training is a must and not a "nice to have".

- Responsibility is key (and tracking progress).

- Track progress, celebrate successes, and show interest.

Questions?

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