

# Dashboard Design Workshop

<https://dashboarddesignpatterns.github.io>

March 15-25, 2022



Visual+  
Interactive  
Data

design  
informatics



THE UNIVERSITY  
of EDINBURGH



University  
of Glasgow

THE UNIVERSITY OF  
WARWICK



UNIVERSITY OF  
OXFORD

# Organizers



Benjamin  
Bach



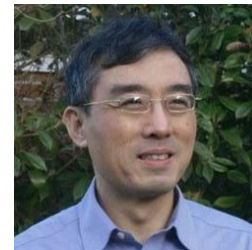
Euan  
Freeman



Alfie  
Abdul-Rahman



Cagatay  
Turkey



Min  
Chen



Visual+  
Interactive  
Data

design  
informatics



THE UNIVERSITY  
of EDINBURGH



University  
of Glasgow

THE UNIVERSITY OF  
WARWICK

KING'S  
College  
LONDON



UNIVERSITY OF  
OXFORD

# Goals

**Learn** about design guidelines for dashboard design.

**Design your own dashboard(s)** in the form of visual mockups and sketches.

Understand **design decisions** and tradeoffs.

Make **deliberate design** decisions and reflect on these choices.

**Discuss** your designs with peers and learn from others.

## **Not goals**

An introduction to Tableau, Power BI, or similar tools.

A workshop on programming visualizations, e.g., using d3.js or other libraries.

An opportunity to obtain a certificate in dashboard design.

# Follow-ups

**March 15 (2-3h) Kickoff:** This session will

- Introduce the workshop and organizers.

- Introduce the the dashboard design patterns.

- Run two activities to help you kickstart your dashboard design process.

- Introduce the means used for asynchronous discussion.

March 15-21: ***Asynchronous work***

**March 21 at 10am (1h) check-in:**

March 21-25: ***Asynchronous work***

**March 25 at 3pm (1h) Debrief:**

# Asynchronous Tools

**Website:** <https://dashboarddesignpatterns.github.io/>

**Slack channel:**

[https://join.slack.com/t/slack-4wm6695/shared\\_invite/zt-14x7ju7f5-lkAXD47iBTVZUBNCS4CI~g](https://join.slack.com/t/slack-4wm6695/shared_invite/zt-14x7ju7f5-lkAXD47iBTVZUBNCS4CI~g)

**Public online forum:**

<https://github.com/dashboarddesignpatterns/dashboarddesignpatterns.github.io/discussions>

**Figma:** [https://www.figma.com/team\\_invite/redeem/e8rhxSVkhIM1LOgf2rWDs0](https://www.figma.com/team_invite/redeem/e8rhxSVkhIM1LOgf2rWDs0)

In-person drop-sessions staffed by some of the organizers:

- March 17 (Thu), **1-2pm**: Drop-in session
- March 18 (Fri), **1-2pm**: Drop-in session
- March 21 (Mon) **10-11am**: Drop-in session
- March 23 (Wed), **1-2pm**: Drop-in session

**Today:**

***Create first draft***

**Who are you?**



# Today's outline

1/ Dashboard Design

2/ Design Guidelines

3/ Design Tradeoffs

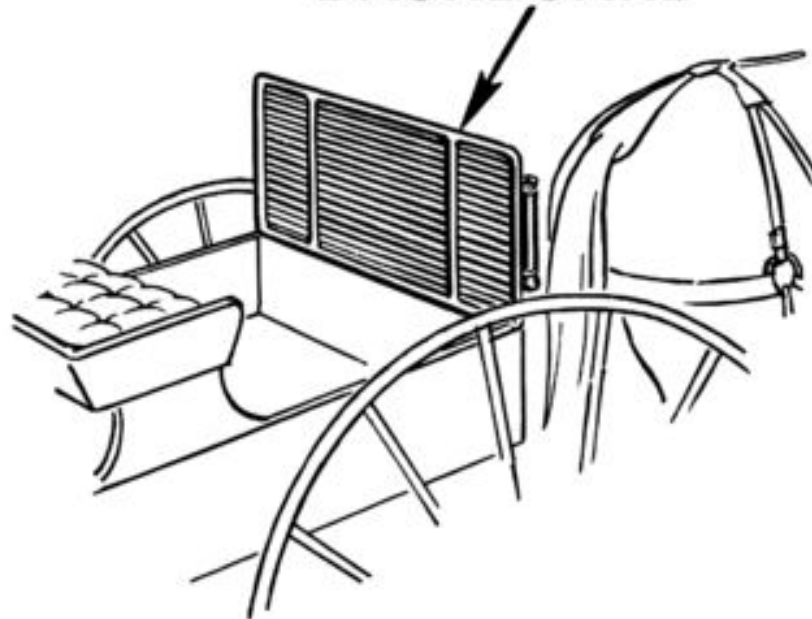
4/ Design Patterns

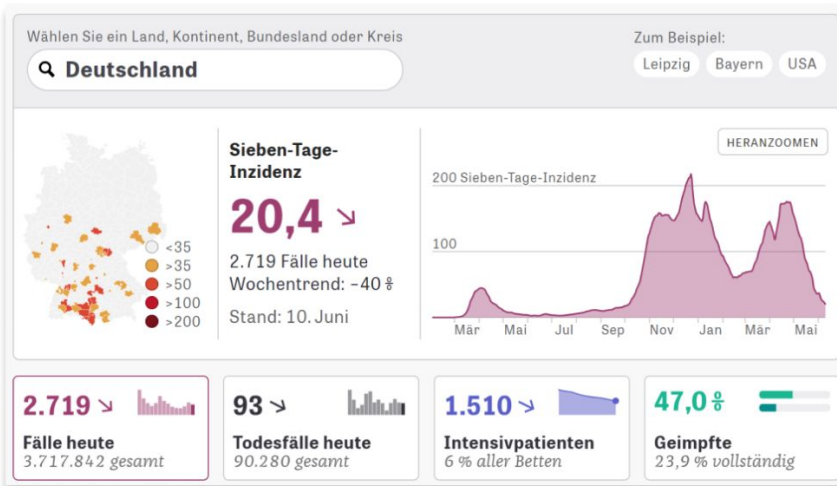
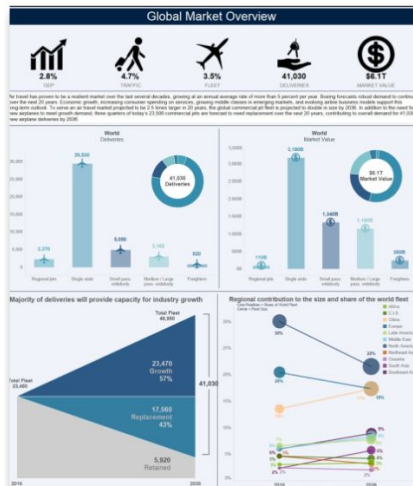
5/ Activity 1: What am I designing for?

6/ Activity 2: How am I creating a design?

# **1/ Dashboard Design**

**DASHBOARD**

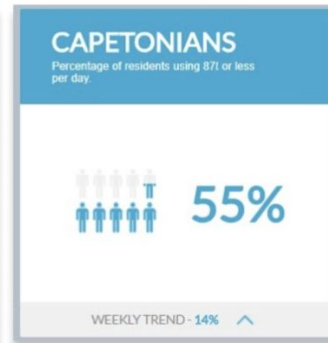
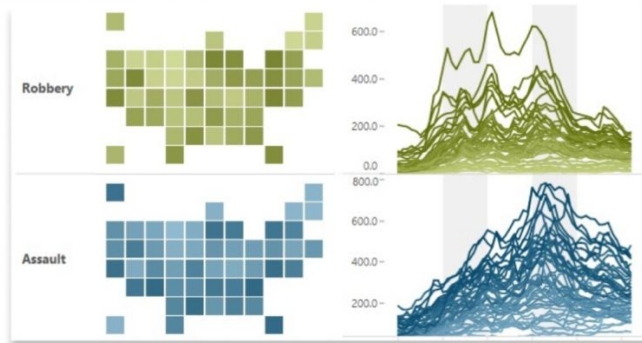
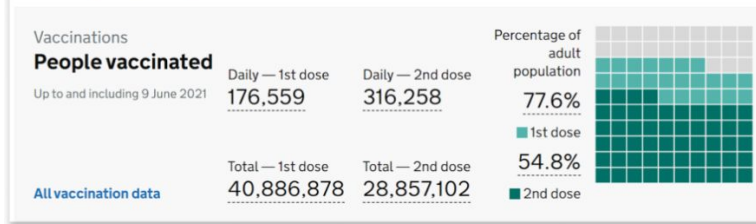




## UK summary

The official UK government website for data and insights on coronavirus (COVID-19).

See the [simple summary](#) for the UK.



## UK Summary

The official UK government website for data and insights on corona

See the [simple summary](#) for the UK.

# Curated Dashboard

### Vaccinations

#### People vaccinated

Up to and including 10 March 2022

Daily – first dose  
**4,765**

Total – first dose  
**52,692,089**

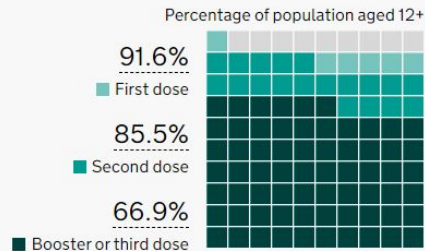
[All vaccinations data](#)

Daily – second dose  
**14,282**

Total – second dose  
**49,164,620**

Daily – booster or third dose  
**20,616**

Total – booster or third dose  
**38,458,430**



### Cases

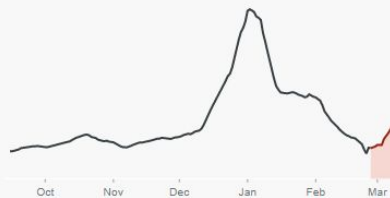
#### People tested positive

Latest data provided on 11 March 2022

Last 7 days

**399,820** ↑ 143,956 (56.3%)

► Rate per 100,000 people: **458.7**



[All cases data](#)

### Deaths

#### Deaths within 28 days of positive test

Latest data provided on 11 March 2022

Last 7 days

**730** ↑ 20 (2.8%)

► Rate per 100,000 people: **0.9**



[All deaths data](#)

### Healthcare

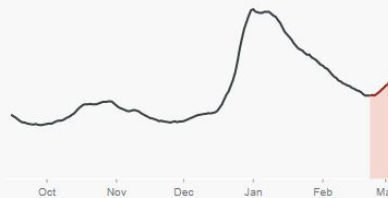
#### Patients admitted

Latest data provided on 7 March 2022

Last 7 days

**9,475** ↑ 1,369 (16.9%)

► Rate per 100,000 people: **0.9**



[All healthcare data](#)

### Testing

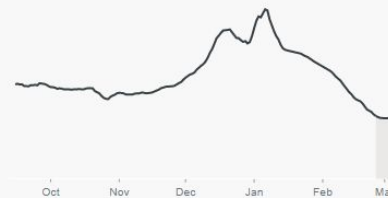
#### Virus tests conducted

Latest data provided on 10 March 2022

Last 7 days

**4,553,814** ↑ 199,269 (4.6%)

► Rate per 100,000 people: **0.9**



[All testing data](#)

# Embedded Mini Dashboard





# Repository Dashboard



National Data

Last updated: 16th June

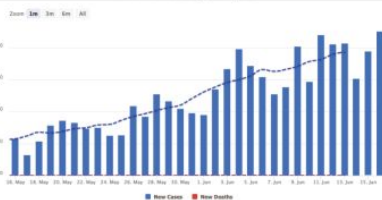
Cases  
249,644  
+1,129

Deaths  
7,684  
+1

In Hospital  
133  
-4

In ICU  
15  
-2

New Cases and Deaths by Date Reported



June 16th at a Glance

Vaccinations

Today, 43,435 new vaccinations were reported, which is an increase from yesterday's figure of 37,140. This was made up of 20,278 first doses, and 23,177 second doses.

Testing

We are currently administering an average of 44,139 new vaccinations per day. This is a decrease from from this time last week, when we were doing 49,088 a day.

Cases

In total, 85.4% of the entire Scottish population has had their first dose, and 45.6% have had both doses. In the past 7 days alone, 5.7% of Scotland has received a dose!

Hospital/ICU

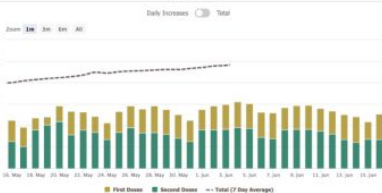
Deaths

Testing by Day



According to the WHO, we want the positivity rate to be under 2% to keep the virus under control. Any figure above this will be shown in red, and any below in green.

Vaccinations



Daily Increases by Council Area



Percentage in Scotland who...



Total Tests Conducted

6,767,664  
+35,638

Percentage of Tests Positive



Individual People Tested

2,127,130  
+6,300

Vaccinated with First Dose

3,551,739  
+20,278

Horizontally, around 2.5 billion vaccine doses have now been administered

Vaccinated with Second Dose

2,493,358  
+23,177

That is 48.4% of Scotland, and 56.1% of all Scottish Adults

incomplete, therefore a 3 day lag has been applied to this data.

Neighbourhood population estimates remain at NRS mid-2019 until the 2022 estimates become available for this level of geography.

The Scotland level view is coloured according to the rate of confirmed positive cases per 100,000 population in each Local Authority area. You can also view maps showing confirmed cases in neighbourhoods within each Local Authority.

To see cases in your neighbourhood, choose your Local Authority area from the drop down list below.

Select Local Authority: Use the slider to change 7 day range (based on specimen date)  
Scotland 16 August 2021

7 day positive cases in Scotland based on people tested between 24 August 2021 and 30 August 2021

7 day positive cases	7 day positive rate per 100,000 population	7 day test positivity rate
40,935	748.9	13.4%

Clicking on the area you are interested in on the map below will display a box with 7 day figures and population count for that neighbourhood.

7 day positive rate per 100,000 population



Local Authorities in Scotland

- North Lanarkshire
- Inverclyde
- East Dunbartonshire
- West Dunbartonshire
- East Renfrewshire
- Renfrewshire
- South Lanarkshire
- Glasgow City
- North Ayrshire
- Midlothian
- City of Edinburgh
- Argyll and Bute
- Clackmannanshire
- Dundee City
- Falkirk
- West Lothian
- South Ayrshire
- East Ayrshire
- Stirling
- East Lothian
- Dumfries & Galloway
- Fife
- Highland
- Scottish Borders
- Angus
- Aberdeenshire

How are neighbourhood areas defined?

These maps use local neighbourhood areas defined by the Scottish Government. Their geographical size varies because they are based on the number of people who live in the area. Most neighbourhood areas contain between 2,500 and 5,000 residents, but some now have a slightly lower or higher number than this because their population has changed since these area boundaries were last reviewed.

How do I find the name of my neighbourhood?

To list the name of your neighbourhood (Intermediate Zone), you can search by place or postcode at <https://datahub.scot.nhs.uk/data/search>

What determines the colours on the map?

We have used population rates to colour these maps to show the number of cases in the context of the number of people living in that area. Areas with the same number of cases can be a different colour (a different population rate) because they have different population sizes. The rates associated with each colour are displayed on a scale above the map.

How accurately do these maps show infection rates?

Public Health teams across Scotland are constantly monitoring a range of different types of information to manage the pandemic. These maps show only confirmed cases, not suspected or asymptomatic cases, so they can only ever give an indication of the true rate of infection in each area. The data underlying the maps is refreshed daily, so you may notice small changes as records are updated and amended.

Why are some areas coloured white and labelled 'N/A'?

Where a local neighbourhood has fewer than 3 positive cases, the actual number of cases and population rate has not been shown. This is to help protect patient confidentiality and to reduce instances where very small numbers of cases drive high rates. Where a Local Authority has fewer than 5 positive cases in the selected 7 day period, a more detailed map is not available to protect patient confidentiality.

How do these maps relate to the levels set by Scottish Government?

The Scottish Government makes decisions about restrictions based on a set of indicators. Test positivity rate, positive case population rate, projected case rates, projected hospital and intensive care unit demand. Decisions are made at Local Authority level. You can read more about the indicators and thresholds used at <https://www.scot.nhs.uk/scottishgovernment/19-scottish-government-framework>

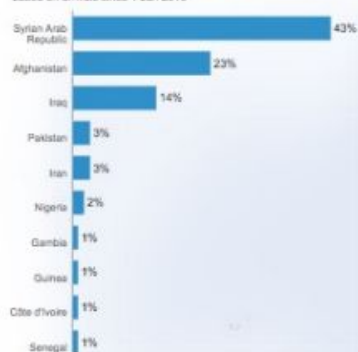
View the Notes pages for more information on the data in this dashboard



Increasing numbers of refugees and migrants take their chances aboard unseaworthy boats and dinghies in a desperate bid to reach Europe. The vast majority of those attempting this dangerous crossing are in need of international protection, fleeing war, violence and persecution in their country of origin. Every year these movements continue to exact a devastating toll on human life.

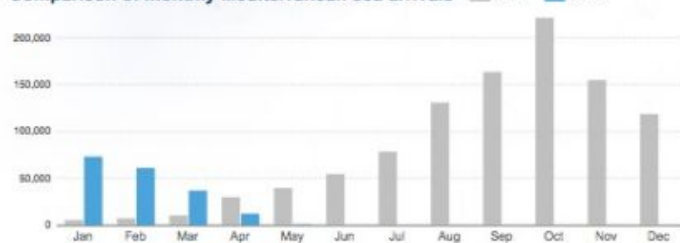
### Top-10 nationalities of Mediterranean sea arrivals

Top-10 nationalities represent **92%** of the sea arrivals based on arrivals since 1 Jan 2016



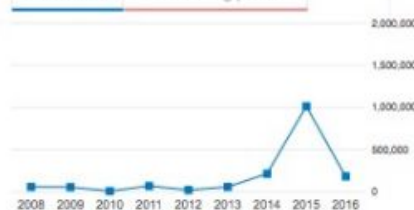
### Comparison of monthly Mediterranean sea arrivals

■ 2015 ■ 2016



### Evolution - Mediterranean Sea

Sea arrivals Dead/missing persons



**184,162** arrivals by sea in 2016

1,015,078 arrivals by sea in 2015

**1,261** dead/missing in 2016

**82%** of arrivals come from the world's top 10 refugee-producing countries



### Demographics based on arrivals since 1 Jan 2016



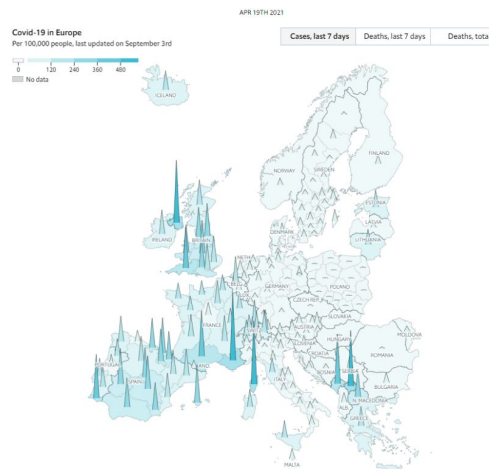
\*Series (AND KOSOVO): SRES/124 (1995) [Download excel data](#)

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations

[Click here to view sources and disclaimer](#)



# Magazine Dashboard

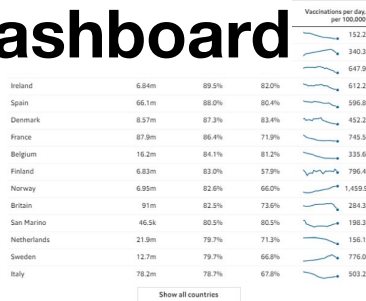


IN SPRING 2020 much of Europe was shut down to slow the spread of covid-19. Ten months on the continent is once again trying desperately to restrain the pandemic. By July 27th the first wave had resulted in the loss of 180,000 lives across Europe's 39 countries and territories (see the map above). After some respite during the summer months a second wave—now largely driven by a more infectious variant first spotted in Britain in December—has caused a further 350,000 deaths.

## The latest on the coronavirus

- The future of meetings (Sept 2nd)
- How the pandemic became stagflationary (Sept 2nd)
- Vaccine inequality will cost money as well as lives (Aug 30th)
- Australia is ending its zero-covid strategy (Aug 28th)
- To follow The Economist's coverage of the pandemic, visit our coronavirus [hub](#)

Europeans and their governments will be hoping that vaccines, developed in record time, as well as lockdowns will help to reduce infections. More than 30 countries have active inoculation programmes, which make use of three main vaccines, developed by Pfizer/BioNTech, Moderna, and AstraZeneca/Oxford University. So far 14m shots have been administered. Britain, which on December 8th was the first country in the world to begin vaccinations, has now given jabs to more than one person in 20.



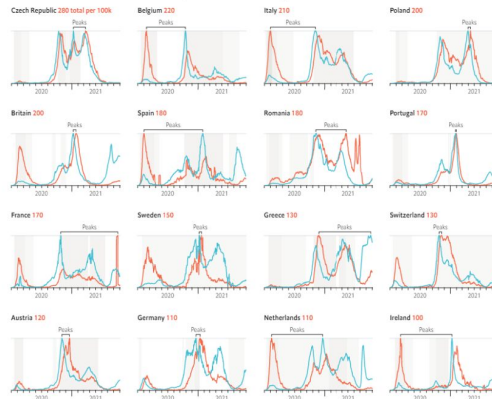
Although vaccination programmes offer hope that life can return to normal, they remain nascent. In the meantime, to assess how European countries are coping with suppressing the virus, The Economist has assembled data on covid-19 cases and deaths for 39 countries, and for 173 sub-national areas for which data are available. We present the total number of deaths per 100,000 in the population. We also break down the infection and death rates for the past seven days to give a better sense of where the virus is most active.

A different way of visualising these data is shown below, in time series for deaths and infections in 16 countries. To facilitate country-by-country comparisons, we have smoothed both variables using a seven-day moving average and indexed them so that each curve peaks at 100. Just three of the countries in our selection—Ireland, Spain and Sweden—have so far recorded fewer deaths during the second wave than the first. Largely because testing regimes have improved, all 16 have recorded far higher infection peaks than in the spring.

## New covid-19 cases and deaths per 100,000 people

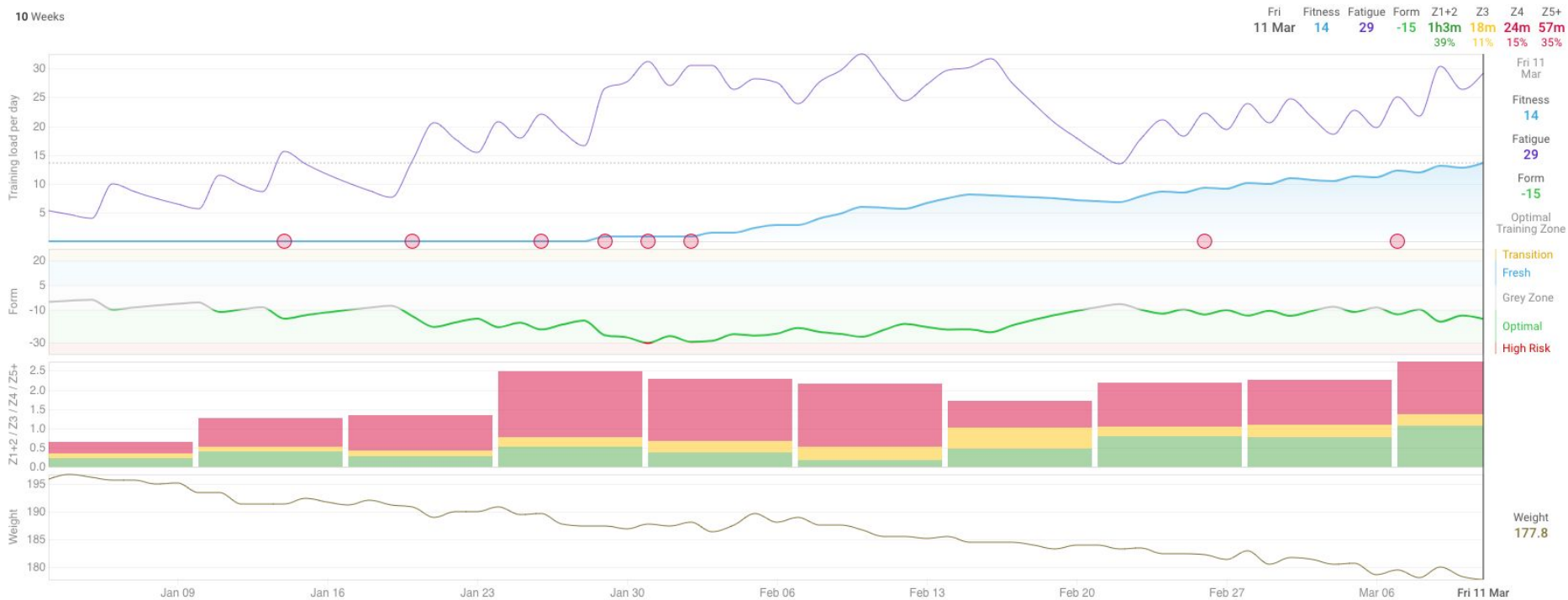
Scaled to peak, seven-day moving average, last updated on September 3rd 06:06 UTC

Confirmed cases Confirmed deaths Nationwide stay-at-home order, darker = more stringent



# Analytic Dashboard

## 10 Weeks



The blue line shows fitness. This is a 42 day exponentially weighted moving average of your training load. The purple line shows fatigue. This is a 7 day exponentially weighted moving average of your training load above the blue line. Your form is your fitness less fatigue. When your form is in the optimal training zone you are gaining fitness. When your form is fresh and you are fit then you are ready to race. Avoid staying in 1 weeks in your training to recover from fatigue and to be at your best for goal events. References: [Monitoring your training load](#) by Science2Sport and [Managing Training Using TSB](#) by Joe Friel



Fri 11 Mar 2022	09:24 AM	Avg HR	Intensity	Pace	Load	Weight
5.78 km	29m02s	175	99%	5:01/km	48	80.648
Morning Run ~ 2x 8m4s 178bpm 3m53s 182bpm						

# Dashboard Types



Static



Analytical



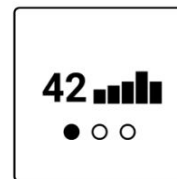
Magazine



Infographic



Mini



Slideshow



Repository

<https://dashboarddesignpatterns.github.io/processguidelines.html>

*“A visual display of the most important information needed to achieve one or more objectives; consolidated and arranged on a single screen so the information can be monitored at a glance.”*

Stephen Few, 2006

Few, S., 2006. *Information dashboard design: The effective visual communication of data* (Vol. 2). Sebastopol, CA: O'Reilly.

*“A dashboard seeks to add as a translator, not simply a mirror, setting the forms and parameters for how data are communicated.”*

Rob Kitchin et al., 2015

Kitchin, R., Lauriault, T.P. and McArdle, G., 2015. Knowing and governing cities through urban indicators, city benchmarking and real-time dashboards. *Regional Studies, Regional Science*, 2(1), pp.6-28.

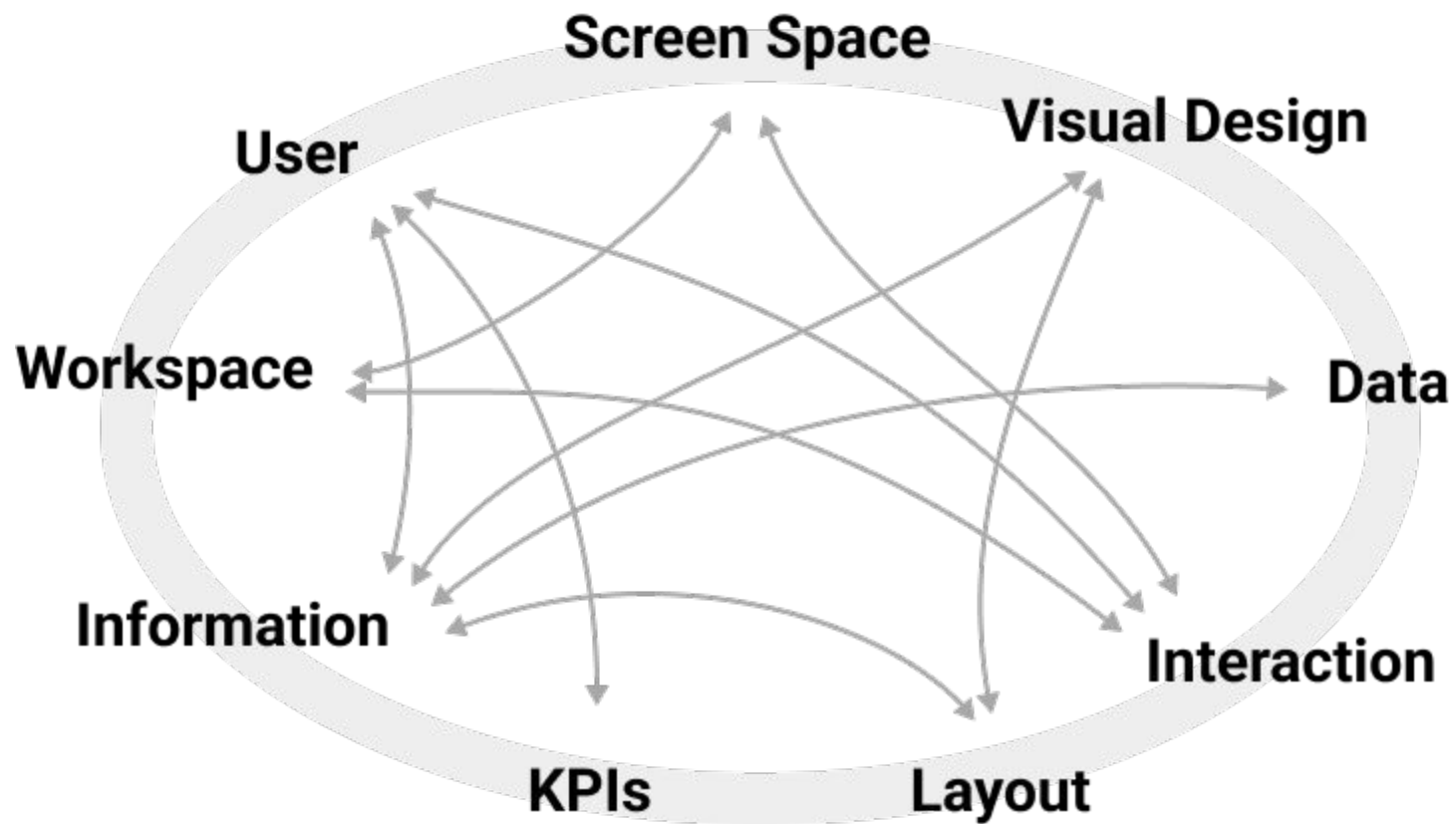
## **2/ Design Guidelines**

# Design Guidelines

1. Don't overwhelm viewers
2. Avoid visual clutter
3. Avoid poor visual design
4. Carefully chose KPIs
5. Align with existing workflows
6. Don't add too much data
7. Provide for consistency
8. Provide for interaction affordances
9. Manage complexity
10. Organize charts symmetrically
11. Group charts by attribute
12. Order charts by time
13. Balance data + space
14. Increase information
15. Avoid redundancy of information
16. Show information, rather than data
17. Design is an iterative process
18. Context is very important
19. State your meta data
20. Use color carefully

**etc...**

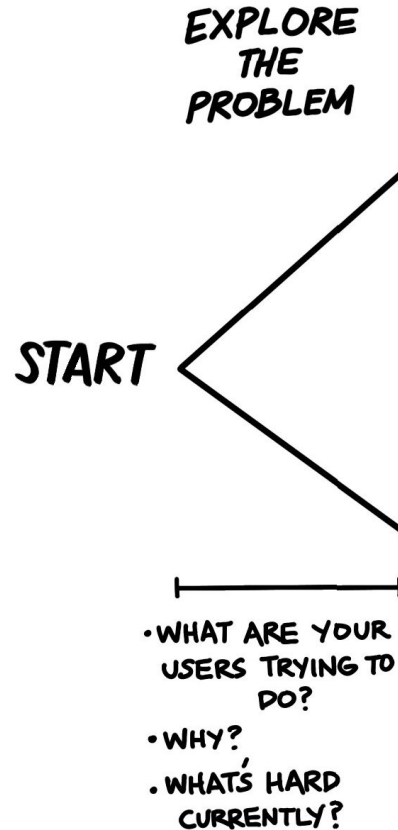
Great,  
thats easy!

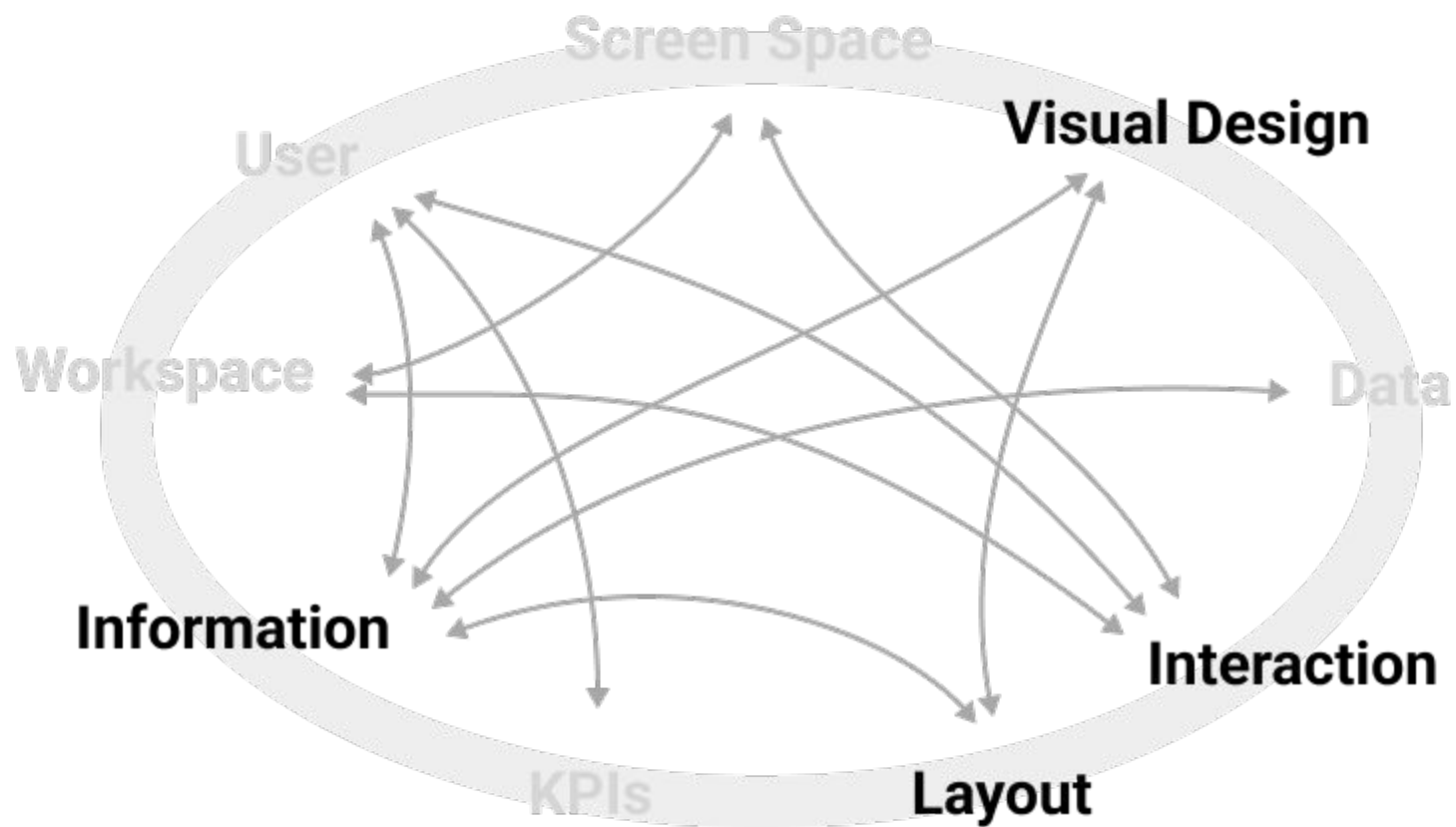




## **3/ Design Tradeoffs**

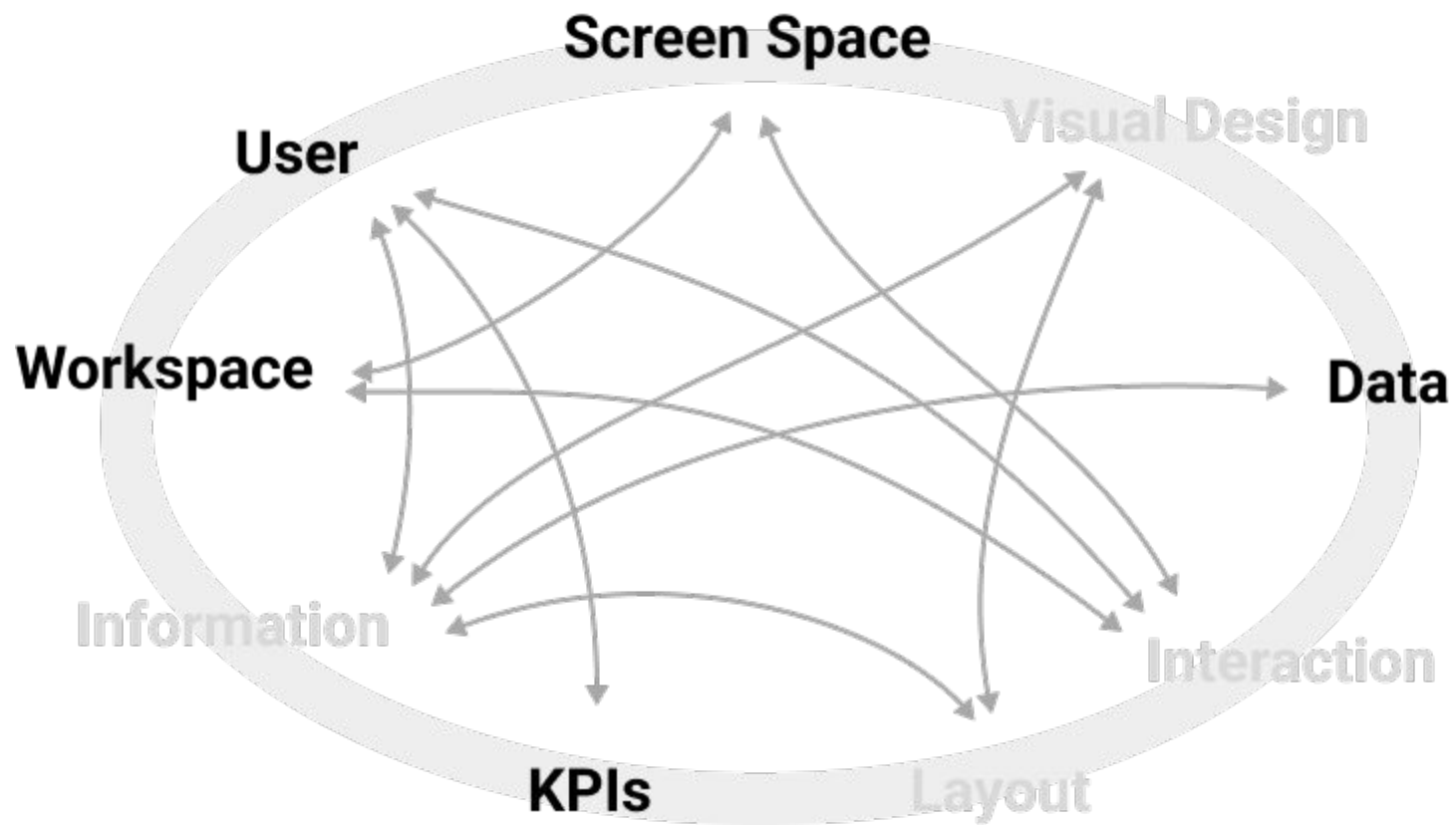
# Design Process: the double diamond





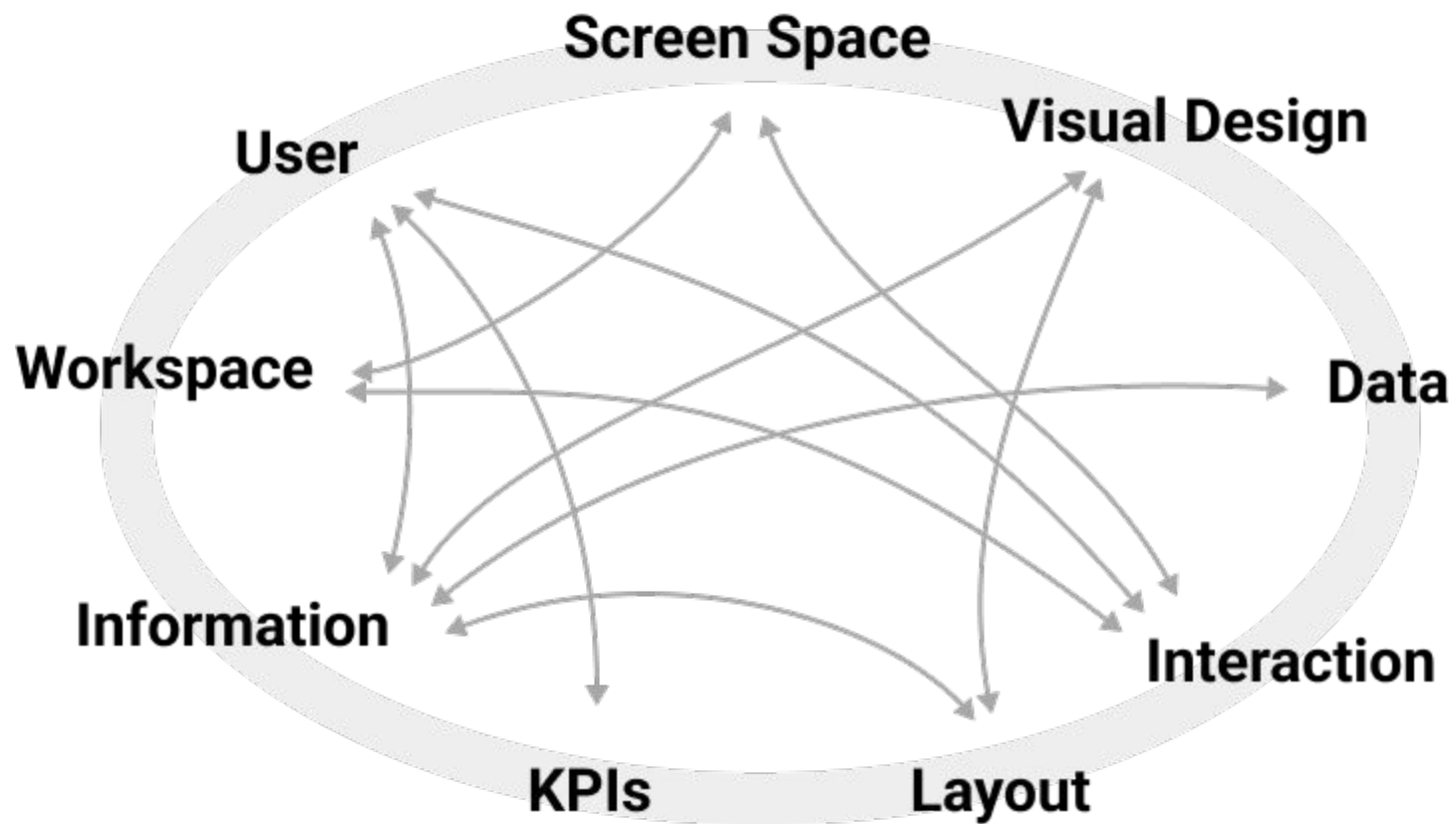
## **Activity 1:**

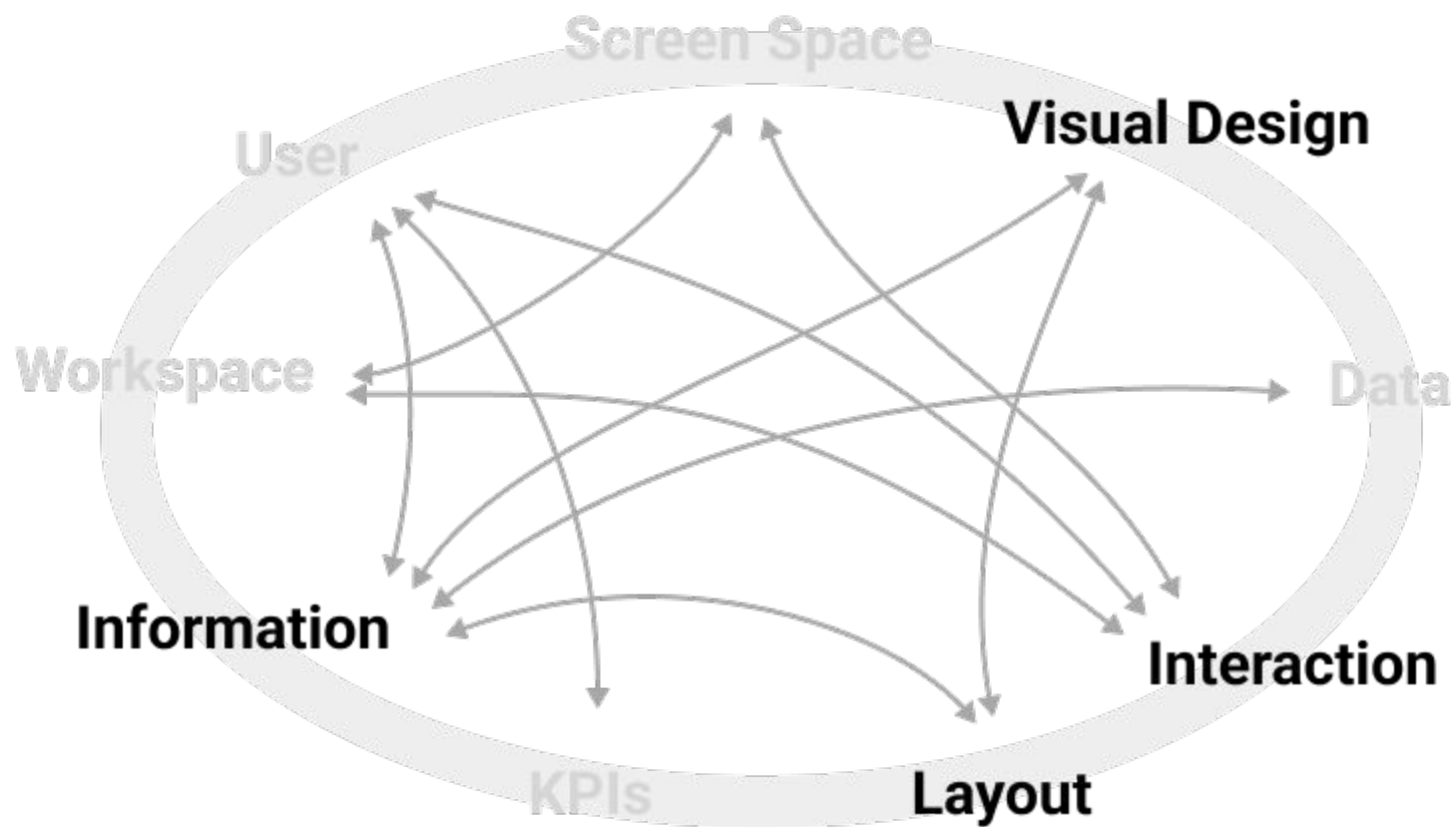
***“What am I designing for?”***



## **Parameters** (that you may not control)

1. Who is your audience?
2. What is the context & devices they engage with the dashboard?
3. What are the tasks they perform / decisions they make?
4. What information do they need to fulfill these tasks / make these decisions?







**Visual  
Representation**

**Number  
of Pages**

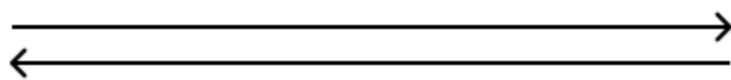
**Data  
Abstraction**

**Interactivity**

**Visual  
Representation**

*decrease*

*increase*



*decrease*

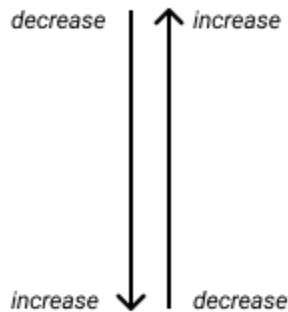
*increase*

**Number  
of Pages**

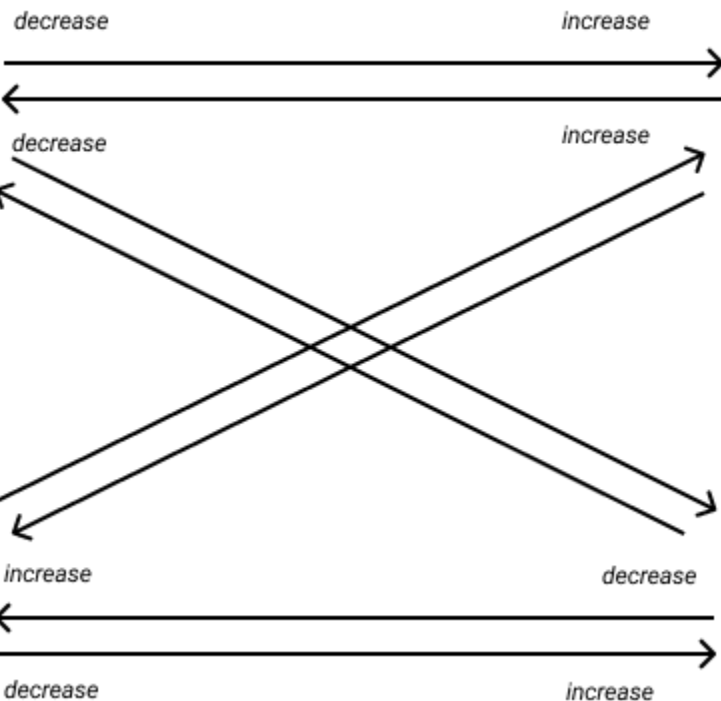
**Data  
Abstraction**

**Interactivity**

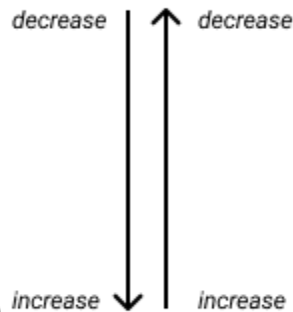
**Visual  
Representation**



**Data  
Abstraction**



**Number  
of Pages**



**Interactivity**

## **3/ Design Patterns**





Reusable solutions for dashboard design

<https://dashboarddesignpatterns.github.io/patterns.html>

# Dashboard Design Patterns

## Data Information



Detailed Dataset



Aggregated Data



Thresholds & Filters



Derived Data



Individual Values

## Structure



Single Page



Parallel



Hierarchic



Open



Semantic

## Screen space



Screenfit



Overflow



Detail on demand



Parameter-ization



Multiple pages

## Visual Encoding



List



Table



Detailed Visualization



Miniature Chart



Progress Bars Gauges



Indicators



Trend arrow(s)



Pictogram

42

Numbers

## Page Layout



Open



Table



Stratified



Grouped



Schematic

## Interaction



Exploration



Navigation



Personalization



Filter & Focus

## Meta data



Single Page



Disclaimer



Data Description



Update Information



Annotations

# Content Patterns

### Data Information



Detailed Dataset



Aggregated Data



Thresholds & Filters



Derived Data



Individual Values

### Visual Encoding



List



Table



Detailed Visualization



Miniature Chart



Progress Bars Gauges



Indicators



Trend arrow(s)



Pictogram



Numbers

### Structure



Single Page



Parallel



Hierarchic



Open



Semantic

### Page Layout



Open



Table



Stratified



Grouped



Schematic

### Screen space




Screenfit



Overflow



Detail on demand



Parameter-ization



Multiple pages

### Interaction



Exploration



Navigation




Personal-ization




Filter & Focus


### Meta data




Single Page




Disclaimer



Data Description



Update Information



Annotations



# Composition Patterns

## Data Information



Detailed Dataset



Aggregated Data



Thresholds & Filters



Derived Data



Individual Values

## Visual Encoding



List



Table



Detailed Visualization



Miniature Chart



Progress Bars Gauges



Indicators



Trend arrow(s)



Pictogram

42

Numbers

## Structure



Single Page



Parallel



Hierarchic



Open



Semantic

## Page Layout



Open



Table



Stratified



Grouped



Schematic

## Screen space



Screenfit



Overflow



Detail on demand



Parameter-ization



Multiple pages

## Interaction



Exploration



Navigation



Personal-ization



Filter & Focus

## Meta data



Single Page



Disclaimer



Data Description



Update Information



Annotations

## **Activity 2:**

***“How am I creating a design?”***

# Process Suggestion

## 1/ Data & information



# **1/ Data Information**

# Data Information



Detailed  
Dataset



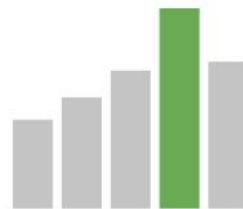
Aggregated  
Data



Thresholds  
& Filters



Derived  
Data



Individual  
Values

**More Data**



**Less Data**

# UK Summary

The official UK government website for data and insights on coronavirus (COVID-19).

See the [simple summary](#) for the UK.

## Vaccinations

### People vaccinated

Up to and including 10 March 2022

Daily – first dose  
**4,765**



Daily – second dose  
**14,282**

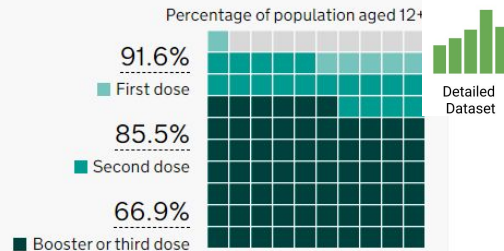
Total – first dose  
**52,692,089**

Total – second dose  
**49,164,620**

Daily – booster or third dose  
**20,616**

Total – booster or third dose  
**38,458,430**

[All vaccinations data](#)



## Cases

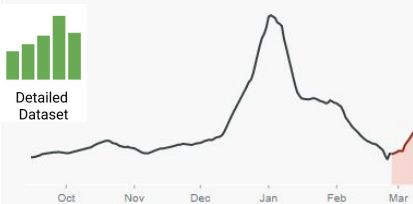
### People tested positive

Latest data provided on 11 March 2022

Last 7 days

**399,820** ↑ 143,956 (56.3%)

► Rate per 100,000 people: **458.7**



[All cases data](#)

## Deaths

### Deaths within 28 days of positive test

Latest data provided on 11 March 2022

Last 7 days

**730** ↑ 20 (2.8%)

► Rate per 100,000 people: **0.9**



[All deaths data](#)

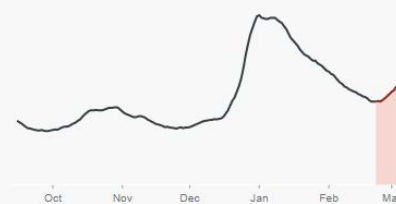
## Healthcare

### Patients admitted

Latest data provided on 7 March 2022

Last 7 days

**9,475** ↑ 1,369 (16.9%)



[All healthcare data](#)

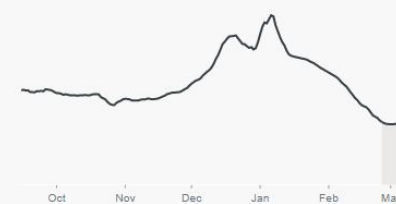
## Testing

### Virus tests conducted

Latest data provided on 10 March 2022

Last 7 days

**4,553,814** ↑ 199,269 (4.6%)



[All testing data](#)

# Data Information



Detailed  
Dataset



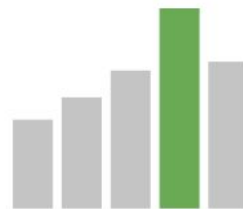
Aggregated  
Data



Thresholds  
& Filters



Derived  
Data



Individual  
Values

**More Data**



**Less Data**

## **2/ Structure**



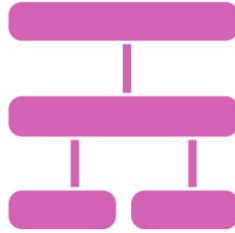
# Structure Patterns



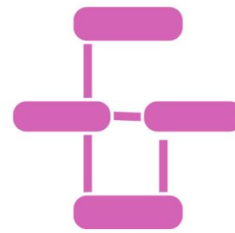
Single Page



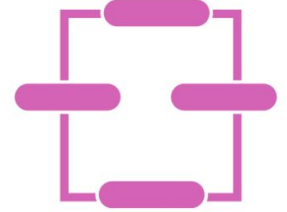
Parallel



Hierarchic



Open



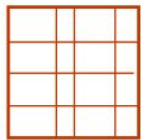
Semantic

## **3/ Visual Encoding**

# Visual Representation



List



Table



Detailed  
Visualization



Miniature  
Chart



Progress Bars  
Gauges



Indicators



Trend  
arrow(s)



Pictogram

42

Numbers

**More Detail**



**Less Detail**

# Visual Representation: Data Visualization



List



Table

Cases by States Jul 15, 2021

State	TOTAL	DEATHS
Selangor	281,670 <sup>↑ 4211</sup>	1,983
Kuala Lumpur	87,711 <sup>↑ 1095</sup>	662
Johor	74,436 <sup>↑ 399</sup>	637
Sabah	72,042 <sup>↑ 252</sup>	559
Sarawak	68,599 <sup>↑ 352</sup>	431
Negeri Sembilan	51,851 <sup>↑ 628</sup>	466
P. Pinang	36,376 <sup>↑ 240</sup>	129
Kelantan	35,991 <sup>↑ 80</sup>	240
Perak	28,903 <sup>↑ 245</sup>	140
Kedah	28,202 <sup>↑ 364</sup>	240
Malaka	21,009 <sup>↑ 247</sup>	196
Pahang	15,848 <sup>↑ 240</sup>	144
Terengganu	11,721 <sup>↑ 30</sup>	82
Labuan	9,087 <sup>↑ 85</sup>	135
Putrajaya	2,550 <sup>↑ 38</sup>	15
Perlis	607 <sup>↑ 4</sup>	8
Total	826603	6067

## People who have received at least one dose by race/ethnicity

White, non-Hispanic	1,772,114 (46.6%)
Other Race	646,601 (17.0%)
Hispanic or Latino	618,967 (16.3%)
Unknown	411,600 (10.8%)
Asian or Pacific Islander, non-Hispanic	145,566 (3.8%)
American Indian or Alaska Native, non-Hispanic	106,549 (2.8%)
Black or African American, non-Hispanic	102,184 (2.7%)

Latest News

- about 4 hours ago **1 case**  
New daily high of 20,006 cases bring total to 1,283,704  
Malaysia reported 10,000 new cases of Covid-19 on Thursday, Aug 12, the health ministry confirmed.
- 4 days ago  
New daily high of 16,879 cases bring total to 1,263,710  
Malaysia recorded 16,879 new Covid-19 cases on Wednesday, Aug 11, bringing the cumulative total to 1,263,710.
- 5 days ago  
Another record high of 17,788 cases on Saturday (July 31)  
Malaysia recorded another record high of 17,788 new Covid-19 cases on Saturday (July 31), the health ministry has confirmed.
- 6 days ago  
134 new deaths bring total fatalities to 6,808  
Another 134 people in Malaysia have succumbed to Covid-19, says the health ministry on Friday (July 30).
- 7 days ago  
12,170 new cases on Thursday (July 29)  
Malaysia recorded 12,170 new Covid-19 cases on Thursday (July 29), the health ministry has confirmed.

# Visual Representation: Data Visualization



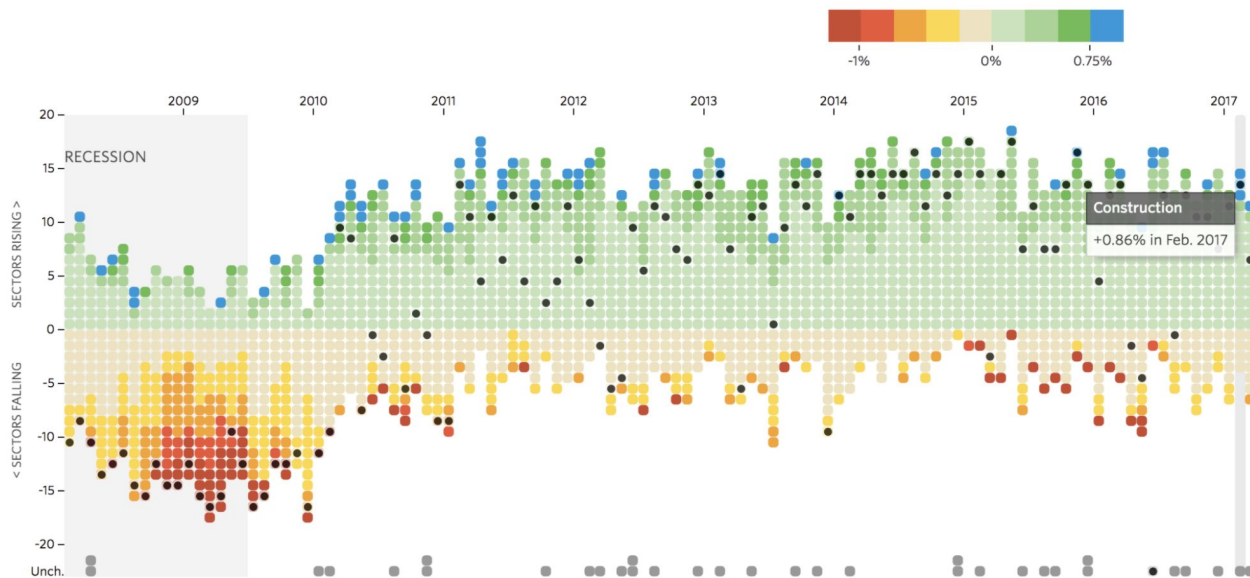
Detailed  
Visualization

## Track National Unemployment, Job Gains and Job Losses

By [Andrew Van Dam](#) and [Renee Lightner](#)

### Winners and Losers: Job Gains and Losses [Jump to National Unemployment](#)

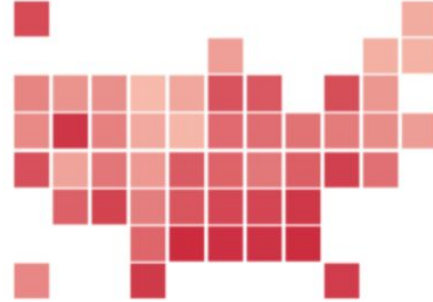
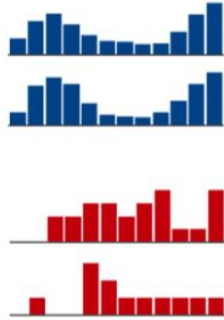
Track the number of sectors gaining or losing jobs each month. Boxes are shaded based on percentage change from the previous month in each sector's payrolls.



# Visual Representation: Data Visualization



Miniature  
Chart

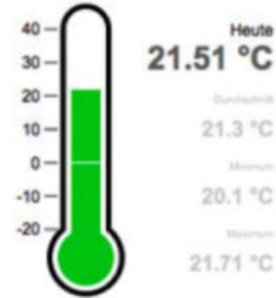


# Visual Representations

  
Progress Bars  
Gauges



 Heart Pts    Steps



(b) Gauges and progress bars (#19, #99, #16).

# Visual Representations



	 Innengastro	 Außengastro	 Hotels
Baden-Württemberg			
Bayern			
Berlin			
Brandenburg			
Bremen			



42  
Numbers

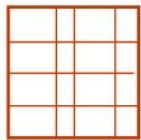
(a) Pictograms as *data* (#85, #37) and *index* (#102).



# Visual Representation



List



Table



Detailed  
Visualization



Miniature  
Chart



Progress Bars  
Gauges



Indicators



Trend  
arrow(s)



Pictogram

42

Numbers

**More Detail**



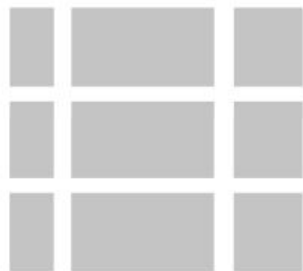
**Less Detail**

## **4/ Layouts**

# Layouts



Open



Table



Stratified



Grouped



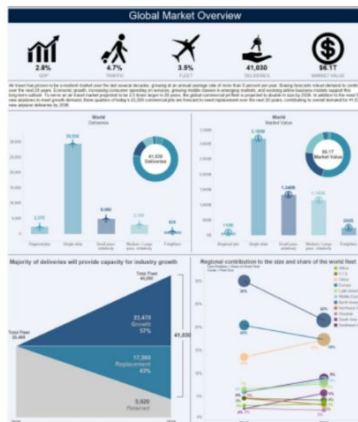
Schematic



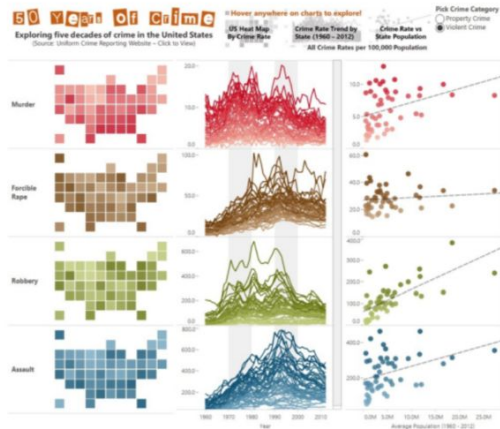
Open Layout



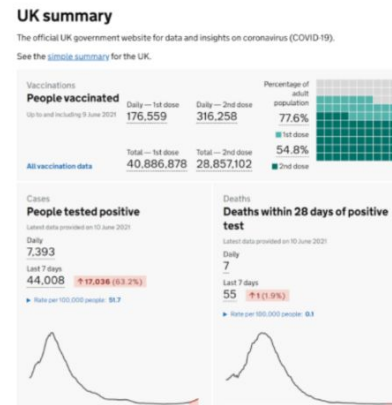
Strata Layout



Grid Layout

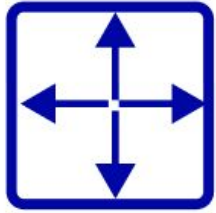


Grouped Layout



## **5/ Screen space**

# Pagination Patterns



Screenfit



Overflow



Detail on  
demand



Parameter  
-ization



Multiple  
pages

**More concise**

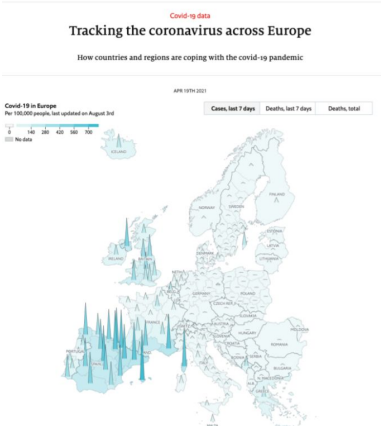


**Less concise**

# Pagination: Scroll



Overflow



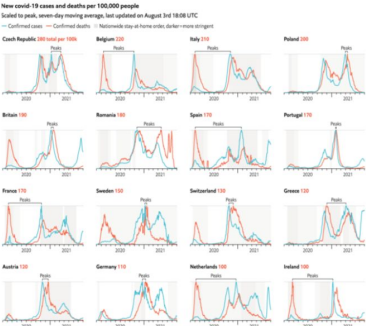
Search country...

Country	Cases per 100,000	Deaths per 100,000	Recovery per 100,000	Active cases per 100,000
Malta	700.0	102.4%	86.1%	585.6
Iceland	470.0	83.1%	88.1%	85.8
Denmark	7.0	81.4%	83.6%	1,113.9
Ireland	5.0	80.5%	87.2%	1,138.9
Britain	85.3m	80.5%	66.0%	338.7
Belgium	14.5m	80.2%	66.1%	1,015.6
Netherlands	18.0m	79.9%	57.7%	951.9
San Marino	49.0	77.8%	77.0%	20.2
Spain	58.0m	77.0%	67.7%	904.6
Portugal	12.3m	77.1%	63.0%	971.1
Norway	5.4m	76.4%	38.8%	793.6
Finland	5.6m	76.1%	45.9%	799.1
France	74.1m	73.8%	57.7%	1,104.6
Sweden	10.0m	73.7%	48.7%	603.9
Austria	62.3k	73.0%	50.4%	179.0

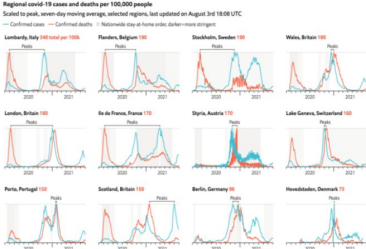
Show all countries

Although vaccination programmes offer hope that life can return to normal, they remain nascent. In the meantime, to assess how European countries are coping with suppressing the virus, The Economist has assembled data on covid-19 cases and deaths for 39 countries, and for 273 sub-national areas for which data are available. We present the total number of deaths per 100,000 in the population. We also break down the infection and death rates for the past seven days to give a better sense of where the virus is most active.

A different way of visualising these data is shown below, in time series for deaths and infections in 16 countries. To facilitate country-by-country comparisons, we have smoothed both variables using a seven-day moving average and indexed them so that each curve peaks at 100. Just three of the countries in our selection – Ireland, Spain and Sweden – have so far recorded fewer deaths during the second wave than the first. Largely because testing regimes have improved, all 16 have recorded far higher infection peaks than in the spring.



In the charts below, we use the same presentation format as ones above, but for 13 selected sub-national areas. The shape of these curves is very similar to that of the national ones, yet there are important discrepancies. For example, after battling a severe outbreak of infections in the autumn, Britain's North West is now in effect in its third wave of the pandemic.



The table below presents the complete data for deaths and cases over the past week for each of the countries and regions that we are tracking. (You can sort each column by clicking on its header.) These figures are updated twice a day.

Region	Country	Population, '000	Cases last week per 100k	Deaths last week per 100k
Balearic Islands	Spain	1,198	851	1.8
Canary Islands	Spain	2,016	844	1.8
La Rioja	Spain	314	647	1.8
Nazari	Spain	600	620	1.8
Catalonia	Spain	7,566	626	1.8
Madrid	Spain	6,842	592	0.8
Basque Country	Spain	2,178	588	1.8
Provence-Alpes-Côte d'Azur	France	5,031	574	0.8
Aragon	Spain	1,321	571	1.8
Galicia	Spain	2,760	538	1.8
Andalusia	Spain	8,427	520	1.8
Valencia	Spain	4,975	512	1.8
Cantabria	Spain	582	501	1.8
Castile and León	Spain	2,408	499	2.8
Extremadura	Spain	1,060	472	1.8

Show all regions

As ever, some caution is required when interpreting these statistics. Differences in the amount of covid-19 testing and occasionally in the recording of deaths means that direct comparisons between one country's statistics and another's can be tricky. For an all-encompassing measure of covid-19 risk, see our excess-death mortality data, which compare overall death rates in each country with the historical average. However, excess-mortality data are often incomplete and are released with a delay of several weeks or more. Substantial data thus provide useful and timely information on the progress of the pandemic.

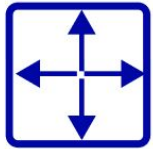
To keep up with our coverage of the pandemic, visit our coronavirus hub. Some of our covid-19 coverage is free for readers of The Economist Today, our daily newsletter.

IN SPRING 2020 much of Europe was shut down to slow the spread of covid-19. Ten months on the continent is once again trying desperately to restrain the pandemic. By July 27th the first wave had resulted in the loss of 80,000 lives across Europe's 39 countries and territories (see the map above). After some respite during the summer months a second wave—now largely driven by a more infectious variant first spotted in Britain in December—has caused a further 390,000 deaths.

- The latest on the coronavirus
- Does America face a growth slowdown? (Jul 2020)
  - India's economy is suffering from long covid (Jul 2020)
  - How common is long covid? (Jul 2020)
  - Which covid-19 vaccine is the most widely accepted for international travel? (Jul 2020)
  - To follow The Economist's coverage of the pandemic, visit our coronavirus hub

Europeans and their governments will be hoping that vaccines, developed in record time, as well as lockdowns will help to reduce infections. More than 30 countries have active inoculation programmes, which make use of three main vaccines, developed by Pfizer/BioNTech, Moderna, and AstraZeneca/Oxford University. So far run shots have been administered. Britain, which on December 8th was the first country in the world to begin vaccinations, has now given jabs to more than one person in 20.

# Pagination: Screenfit



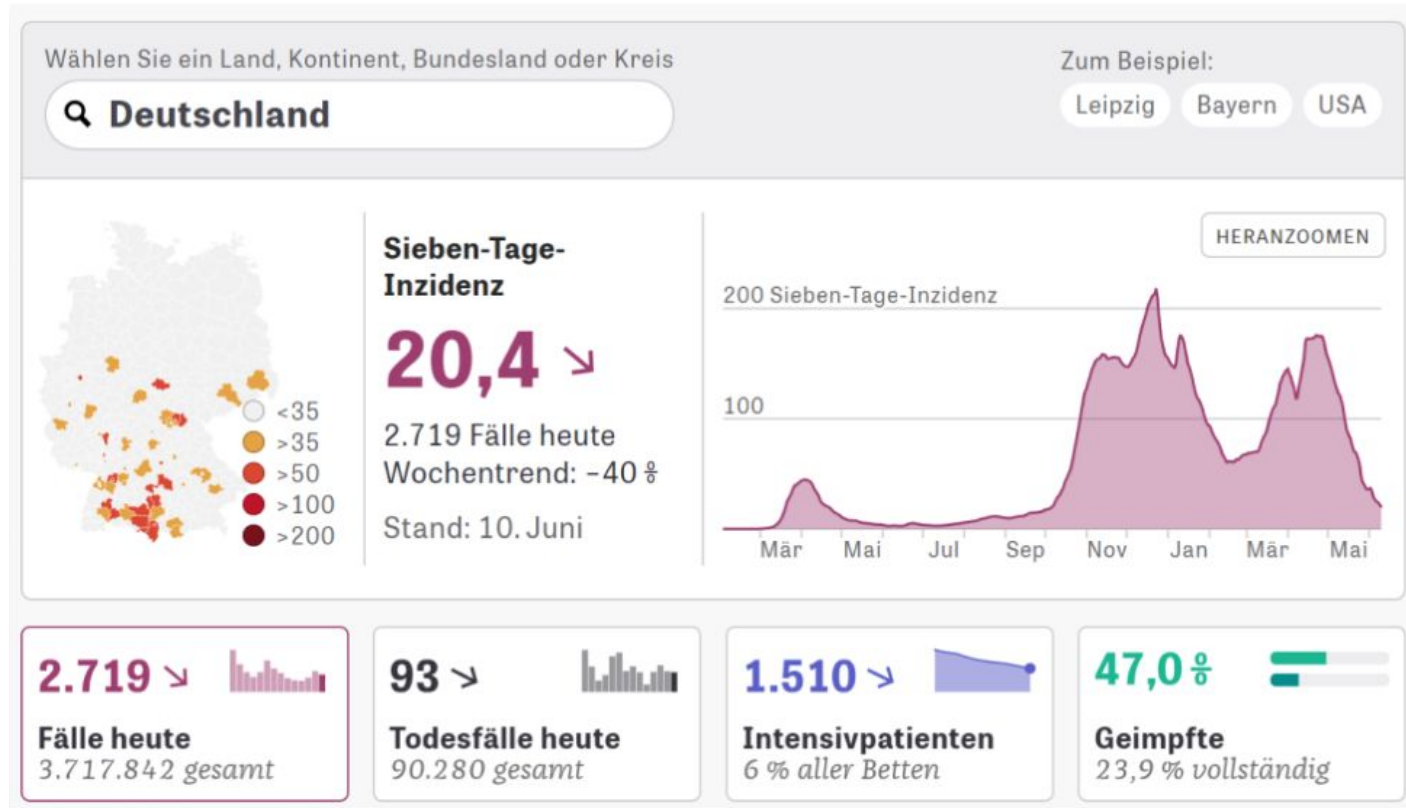
Screenfit



Multiple  
pages

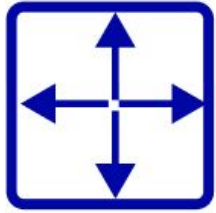


Parameter  
-ization





# Pagination Patterns



Screenfit



Overflow



Detail on  
demand



Parameter  
-ization



Multiple  
pages

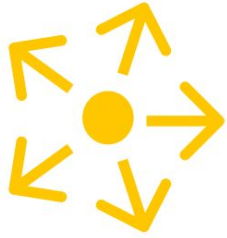
**More concise**



**Less concise**

## **6/ Interaction**

# Interaction Patterns



Exploration



Navigation



Personal-  
ization



Filter &  
Focus

**7/ Meta Information & 8/ Color**

# Meta Information Patterns



Data Source



Disclaimer



Data  
Description



Update  
Information



Annotations

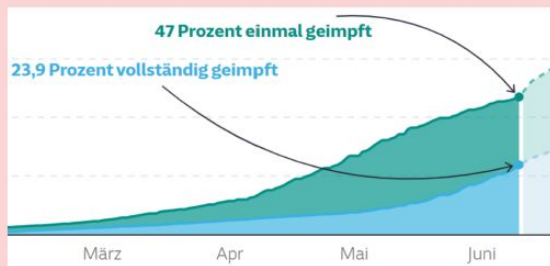
## Cases

From Our World in Data and JHU CSSE COVID-19 Data

Data Source

The number of people who have received a first dose COVID-19 vaccination, shown by date reported. Daily figures include all vaccines that were given up to and including the date shown, and that were entered on the relevant system at the time of extract.

Disclaimer & Data Description



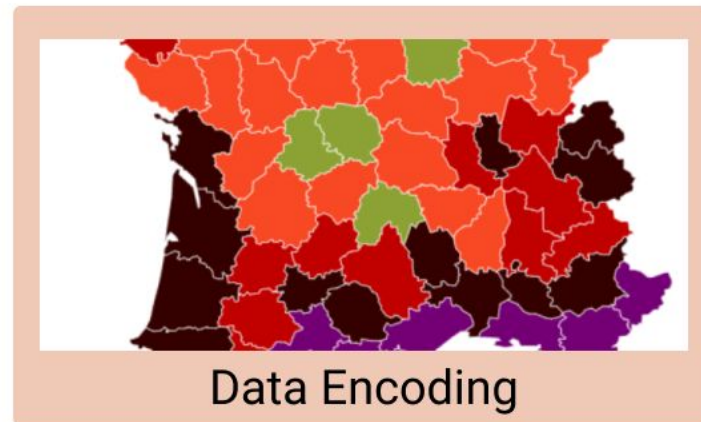
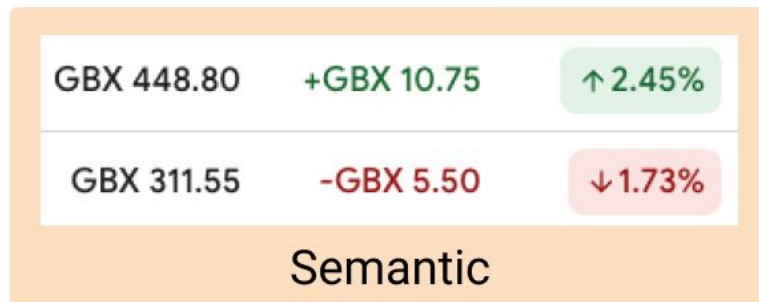
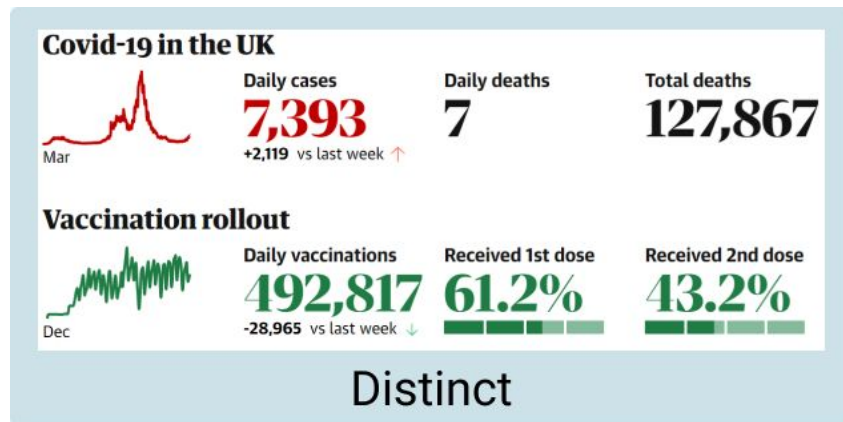
Annotations

## Tracking Coronavirus Vaccinations Around the World

By Josh Holder Updated June 9, 2021

Update Information

# Color Patterns



**Discussion & Questions?**

# Outlook

**1/ Explore and iterate**

**2/ Journaling & Reflection**

**3/ Get in touch:** Slack, Forum

**4/ Drop-in sessions:**

- March 17 (Thu), 1-2pm: Drop-in session
- March 18 (Fri), 1-2pm: Drop-in session
- March 21 (Mon) 10-11am: Drop-in session
- March 23 (Wed), 1-2pm: Drop-in session

**5/ Debrief:** March 25 March (3-4pm)