



# How R is improving the dissemination of statistics within the Department for Work and Pensions

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# Including

- What is DWP?
- Official statistics in DWP
- An introduction to RAP ( a new way of producing statistics)
- How we have implemented RAP at DWP

# What is DWP?

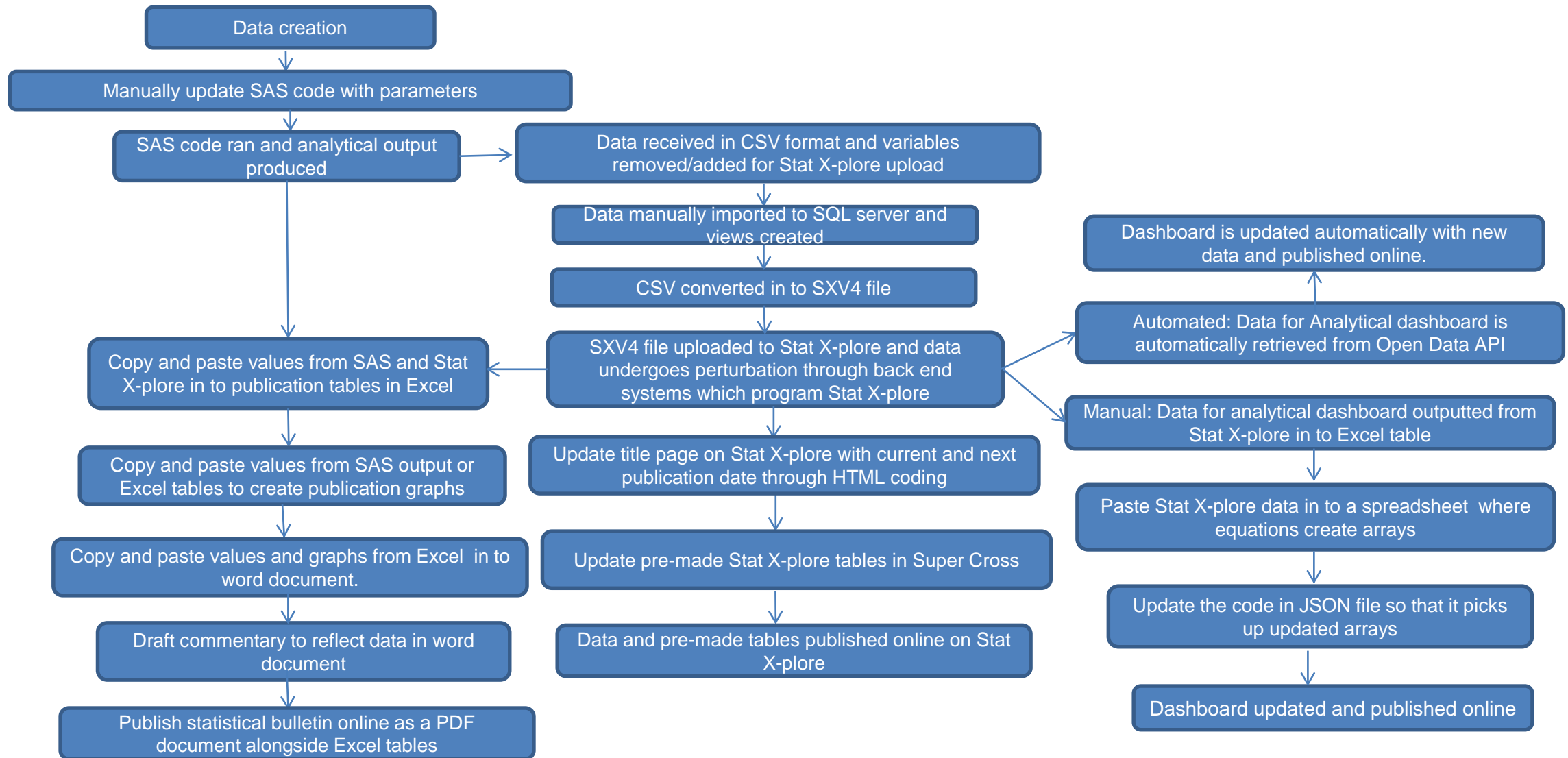
- UK's biggest government department.
- Responsible for administering pension, working age, as well as disability and health related, benefits
- Statistics used by a range of customers such as local government

# Official statistics in DWP

“ We have no axe to grind in any debate, save that it is well informed”

John Pullinger (National Statistician)

# Official Statistics publication process



# Matthew Gregory and Matthew Upson, the creators of RAP

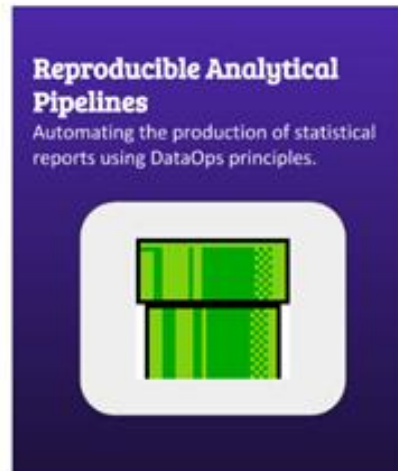


## RAP Companion

*Matthew Gregory, Matthew Upson*

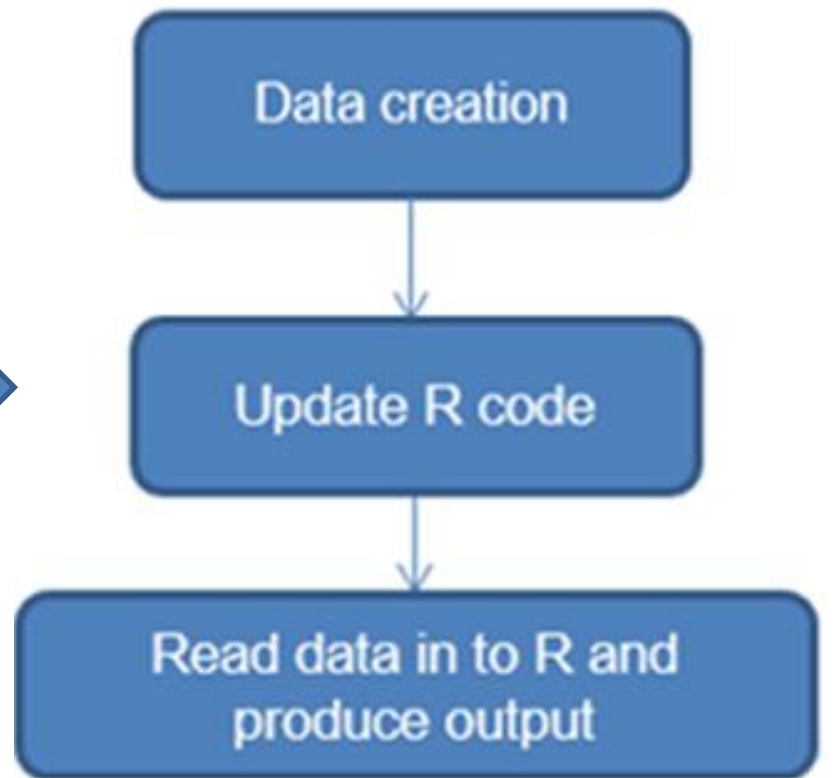
2018-03-04

## Preface



Producing official statistics for publications is a key function of many teams across Government. It's a time consuming and meticulous process to ensure that statistics are accurate and timely. With open source software becoming more widely used, there's now a [range of tools](#) and techniques that can be used to reduce production time, whilst maintaining and even improving the quality of the publications. This book is about these techniques: what they are, and how we can use them.





Reproducible



Analytical



Pipeline







# National Insurance Numbers Allocated to Adult Overseas Nationals

Registrations to September 2017

Quarterly

Published 30<sup>th</sup> November 2017

United Kingdom

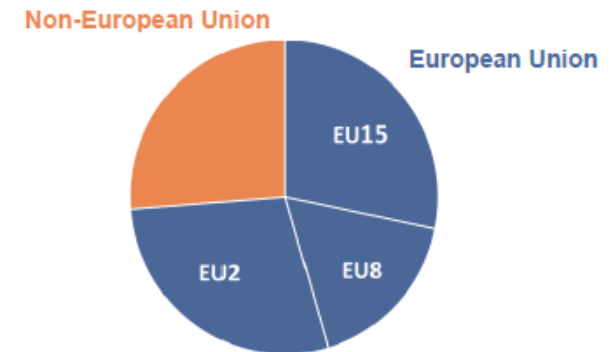
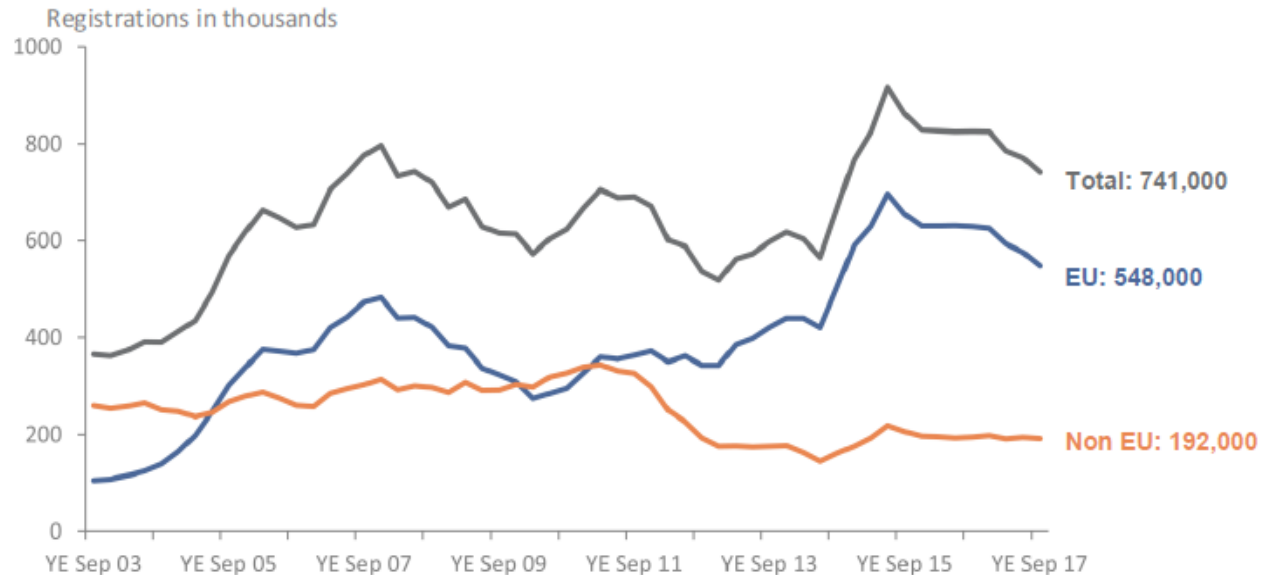
Official Statistics

**What do these statistics show?** A National Insurance Number (NINo) is generally required by any adult overseas national looking to work or claim benefits / tax credits in the UK. As such they show a count – by individual nationality - of the number of NINo's registered to adult non-UK nationals each quarter, irrespective of the length of stay in the UK. The NINo statistics are not a count of the number of adult non-UK nationals currently residing in the UK

## Main stories

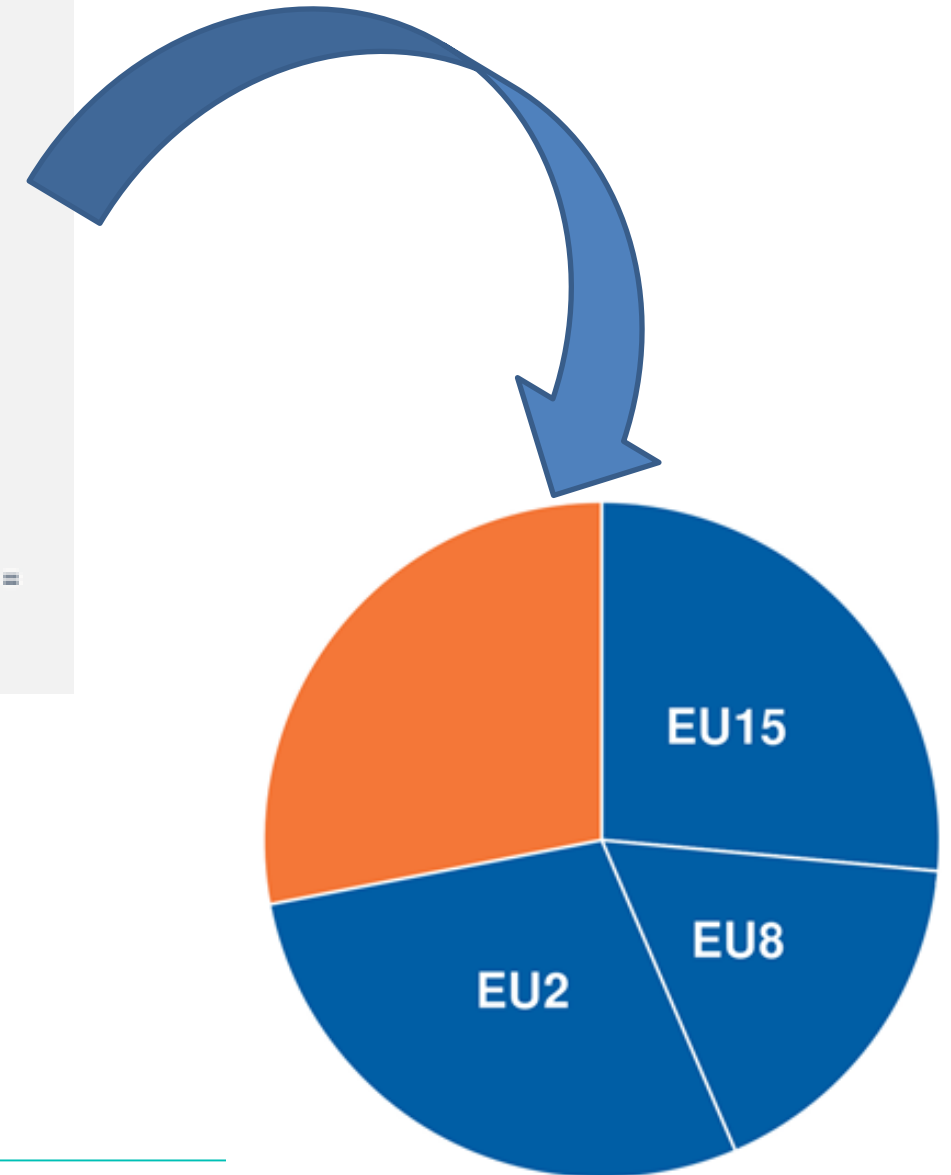
**741 thousand NINo's registered in the year to September 2017: a 10% decrease on the previous year**

**...of these, 74% are from within the EU**



```
## GRAPH 2 ##
```

```
graph_2 <- graph_2_data %>%  
  ggplot+  
  (aes  
    (x="", y= n, fill=eu_or_non))+  
  geom_bar(width = 1, stat = "identity", colour = "white")+  
  geom_text(aes(label = c(  
    "",  
    "EU2",  
    "EU8",  
    "EU15"  
  )), position = position_stack(vjust = 0.5),  
  fontface = "bold",  
  colour = "white",  
  size = 6  
  )+  
  coord_polar("y", start=0) +  
  theme_gov(base_size = 12, base_colour = "white", axes = "xy")+  
  scale_fill_manual(  
    values = gov_cols[c("Non-European Union" = "orange", "EU15" = "govuk_blue", "EU2" =  
"govuk_blue", "EU8" = "govuk_blue" )] %>% unname  
  )
```



<https://github.com/ukgovdatascience/govstyle>

# ...How do you format?

 Department for Work & Pensions

## National Insurance Numbers Allocated to Adult Overseas Nationals

Registrations to September 2017

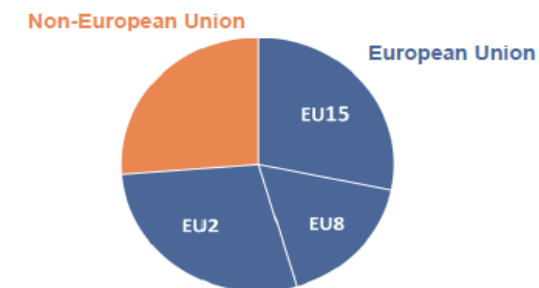
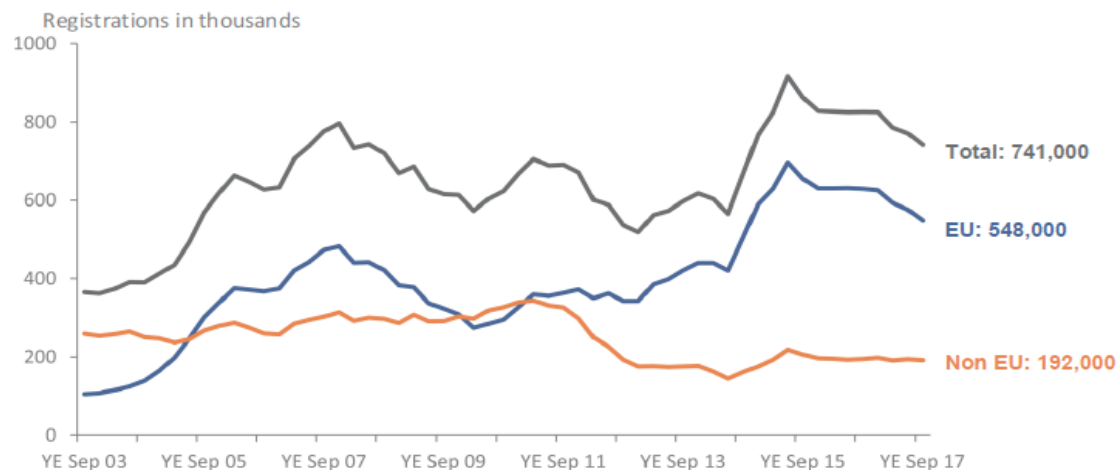
Quarterly Published 30<sup>th</sup> November 2017 United Kingdom Official Statistics

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### Main stories

**741 thousand NINo's registered in the year to September 2017: a 10% decrease on the previous year**

**...of these, 74% are from within the EU**



```

|.container {
  margin-right: 20px;
  margin-left: 20px;
  padding-right: auto;
  padding-left: auto;
}

@media (min-width: 768px) {
  .container {
    width: 750px;
  }
}

@media (min-width: 992px) {
  .container {
    width: 970px;
  }
}

@media (min-width: 1200px) {
  .container {
    width: 1170px;
  }
}

```

# Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

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Currently v4.1.3




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span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
span 4				span 4				span 4			
span 4				span 8							
span 6						span 6					
span 12											

```

<div class = "row">
<div class="col-lg-7" id= "Headline_left"><!--Column left -->*&#x27;r Publication_year_filter (all_ninos_time_series) %>%
select(reg_th)` thousand NINo's registered in the year to September 2017: a `r Publication_year_filter (all_ninos_time_series) %>%
select(Percent)` % `r Publication_year_filter (all_ninos_time_series)%>% select (change)` on the previous year**
</div>

<div class = "row">
<div class="col-lg-1"><!--Column middle -->

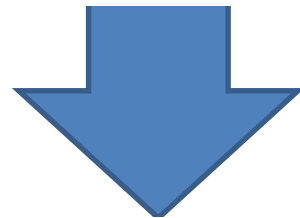
</div>

<div class="col-lg-4" id= "Headline_right"><!--Column right -->__...of these, `r filter (Percent, eu_or_non == "EU") %>% select
(Percent)` % are from within the EU__

</div>

</div>

```



```

#Headline_left, #Headline_right {
background-color: #00437b;
color: white;
font-size: 17pt;
}

```

**741 thousand NINo's registered in the year to September 2017: a 10 % decrease on the previous year**

**...of these, 74 % are from within the EU**

# Prototype Vs Real thing

# Conclusion

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