

# Food systems and food choices

EGEA2018, November 9, 2018, Lyon

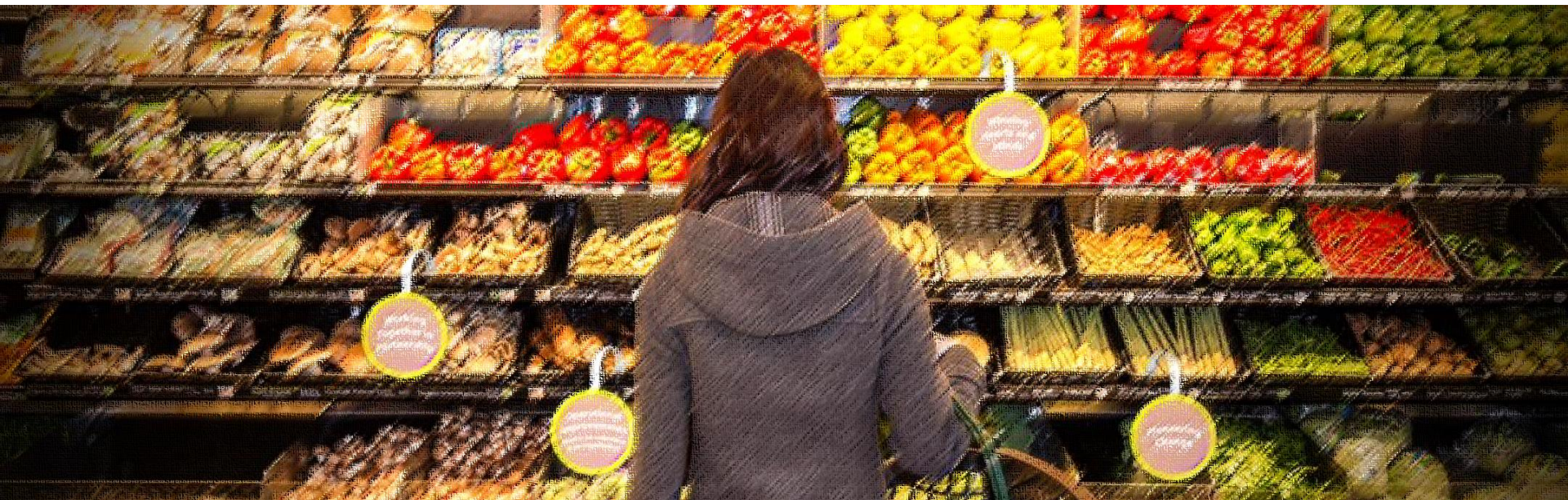
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**@sartorialfoodie**

**@N8agrifood** 



## Who am I?

### Knowledge Exchange Research Fellow

(N8 AgriFood project, Theme 3: Improved nutrition and consumer behaviour)

### Research areas:

- Healthy Sustainable Diets and Food Consumption

Food Waste

Household food insecurity

Eating out/takeaway, and Cooking

Food Prices



University of  
South Australia



UNIVERSITY  
OF ABERDEEN



The  
University  
Of  
Sheffield.

*Proceedings of the Nutrition Society* (2015), 74 (OCE5), E351

doi:10.1017/S0029665115003985

Summer Meeting, 6–9 July 2015, *The future of animal products in the human diet: health and environmental concerns*

### Greenhouse gas emissions associated with sustainable diets in relation to climate change and health

C.J. Reynolds<sup>1</sup>, J.I. Macdiarmid<sup>1</sup>, S. Whybrow<sup>1</sup>, G. Horgan<sup>3</sup> and J. Kyle<sup>2</sup>

<sup>1</sup>Rowett Institute of Nutrition and Health, <sup>2</sup>Institute of Applied Health Sciences, University of Aberdeen, AB25 2ZD and <sup>3</sup>Biomathematics & Statistics Scotland, Aberdeen, AB21 9SB

*Nutrients* 2014, 6, 2251–2265; doi:10.3390/nu6062251

OPEN ACCESS

*nutrients*

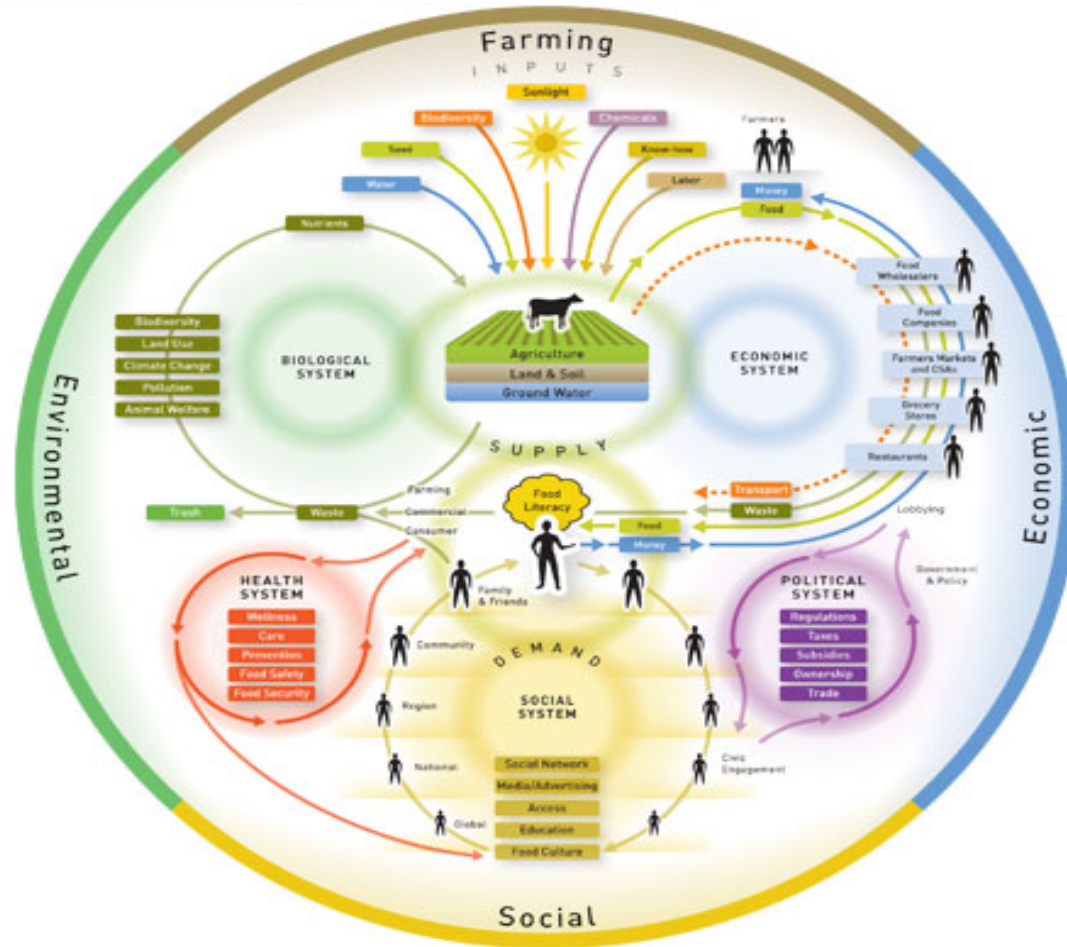
ISSN 2072-6643

www.mdpi.com/journal/nutrients

Review

### Are the Dietary Guidelines for Meat, Fat, Fruit and Vegetable Consumption Appropriate for Environmental Sustainability? A Review of the Literature

Our food system is in a constant state of change...



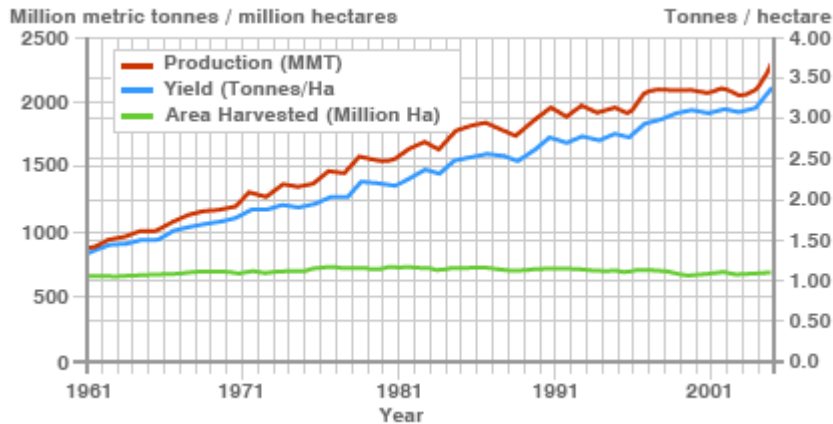
...but change can be a force for good!



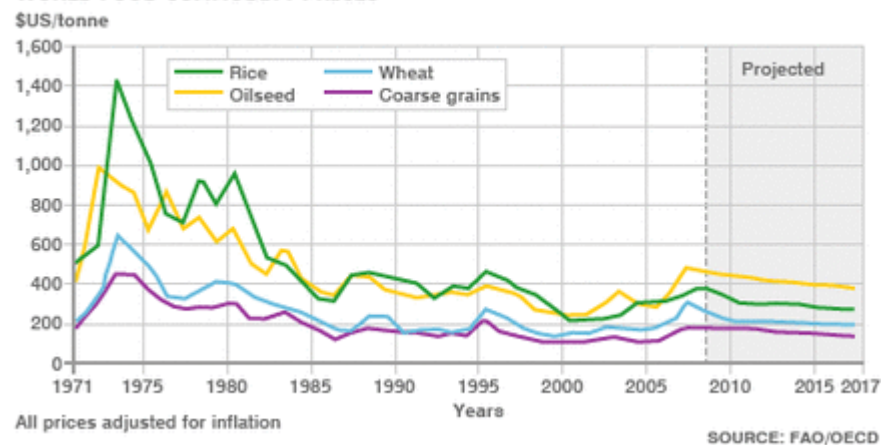
How can we amplify positive trends to produce positive  
health outcomes?

We have access to more and cheaper food than ever before...

**WORLD CEREALS PRODUCTION AND YIELDS**

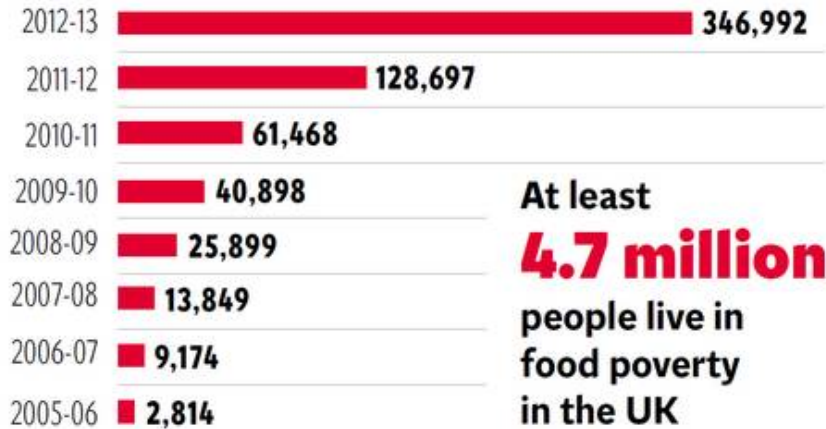


**WORLD FOOD COMMODITY PRICES**

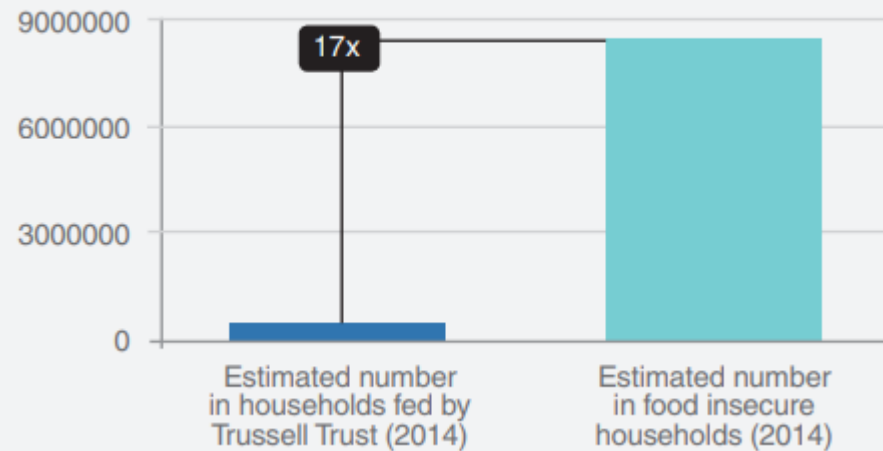


... but we currently have no way of knowing how many people in the UK are too poor to eat. Estimates could be up to 9 Million people

NUMBER OF PEOPLE GIVEN EMERGENCY FOOD FROM TRUSSELL TRUST FOODBANKS

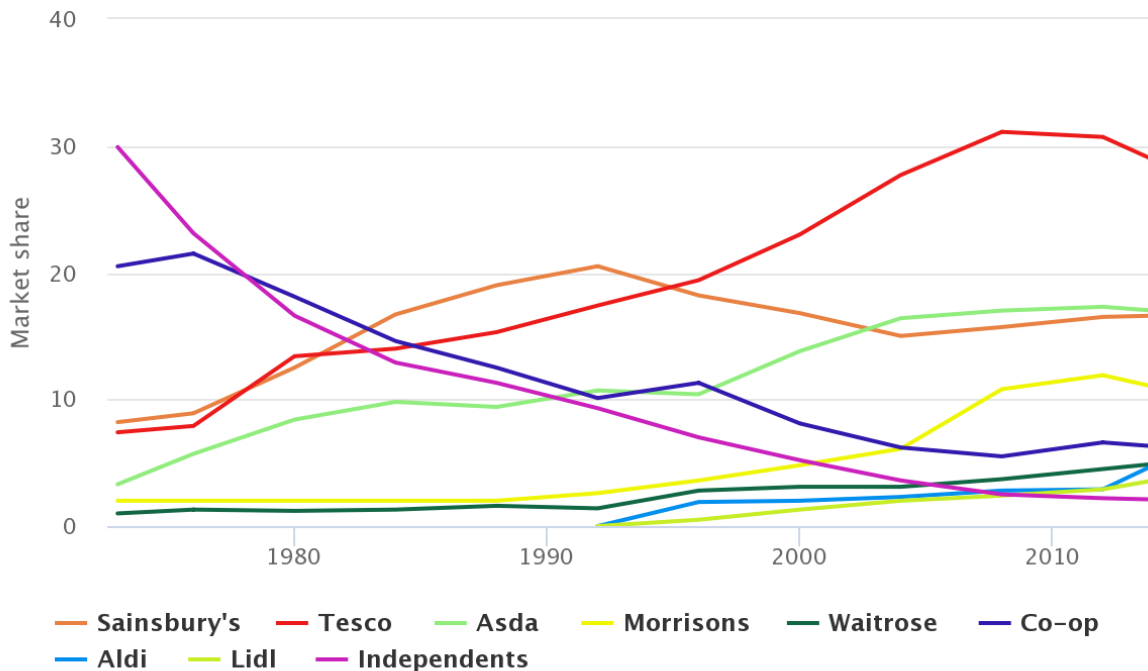


Number fed by foodbanks Vs. Number of food insecure



## How (and where) we purchase food is changing...

UK grocery industry in the last 40 years



Online deliveries  
5% of market share could be 20% by 2025

75% of the population **eating out** of home at least once in seven days in 2014, rising from 65% in 2010.

Highcharts.com

UK % market share of supermarkets – Groceries market (yearly average values).

Sources, Kantar, IGD <http://www.fooddeserts.org/images/supshare.htm>,

<http://www.telegraph.co.uk/finance/newsbysector/retailandconsumer/11057120/The-rise-and-fall-of-British-supermarkets.html>

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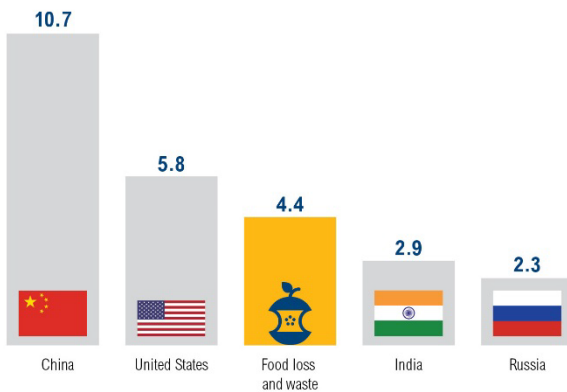
How we cook (and eat) is changing..

- The average time spent cooking <less than six hours per week (<18 minutes per meal), (EU average)
- The average kitchen size decreasing.
- Entertaining at home and “cooking for fun” increased in popularity = leisure activities
- Plant based diets on the rise...



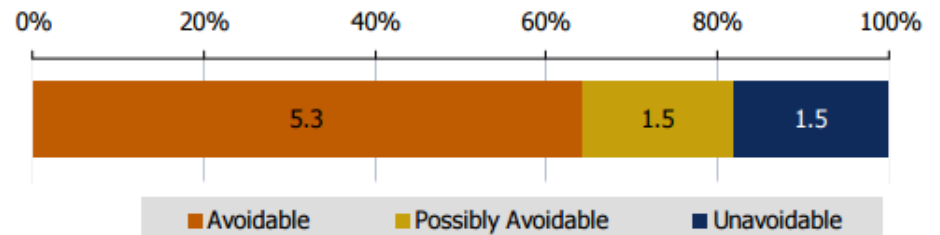
### We are wasting food!

If Food Loss and Waste Were its own Country, it Would Be the Third-Largest Greenhouse Gas Emitter



GT CO<sub>2</sub>E (2011/12)\*

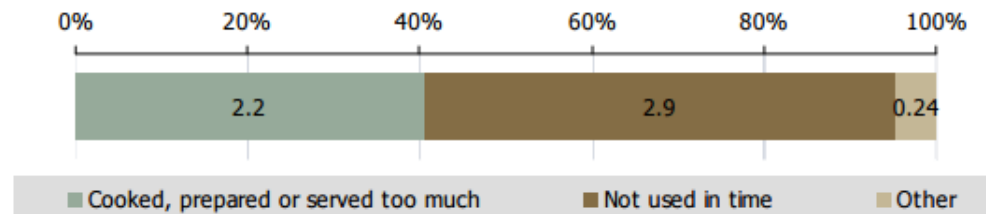
**Figure D:** Weight of food and drink waste generated in the UK, split by avoidability



Figures within bar state waste in millions of tonnes per year

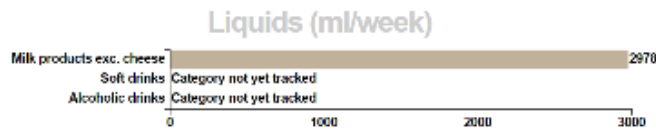
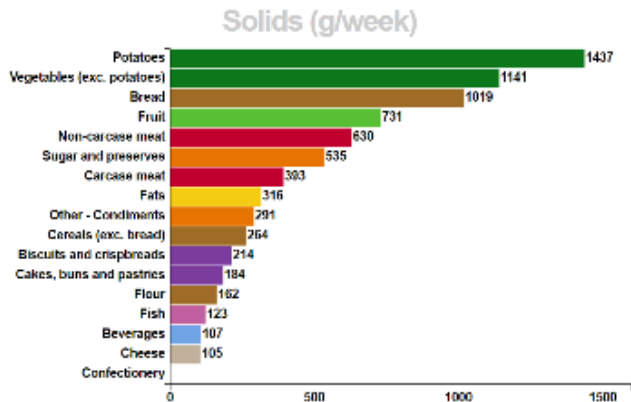
Of the avoidable food and drink waste, 2.2 million tonnes is leftover after cooking, preparing or serving and 2.9 million tonnes is not used in time (Figure E).

**Figure E:** Weight of avoidable food and drink waste generated in the UK, split by reason for disposal

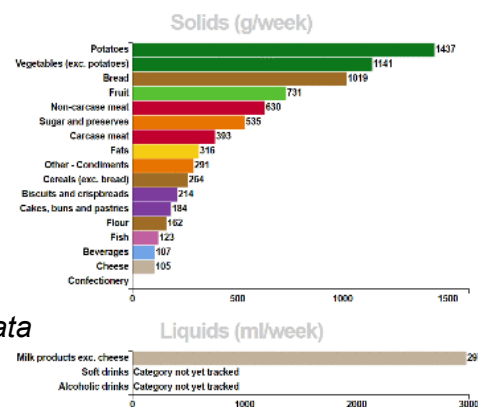
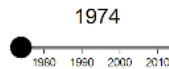
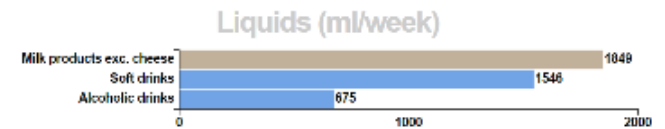
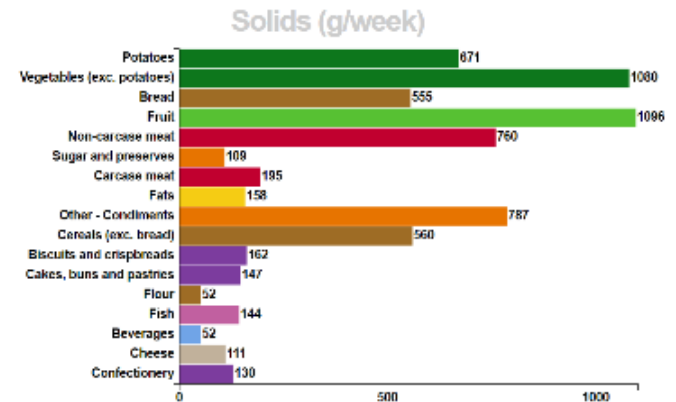


Figures within bar state waste in millions of tonnes per year

### The UK Diet is changing...

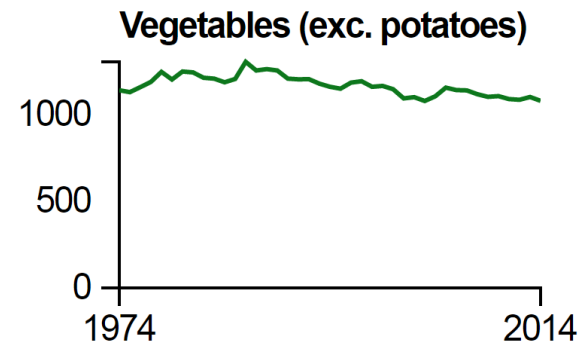
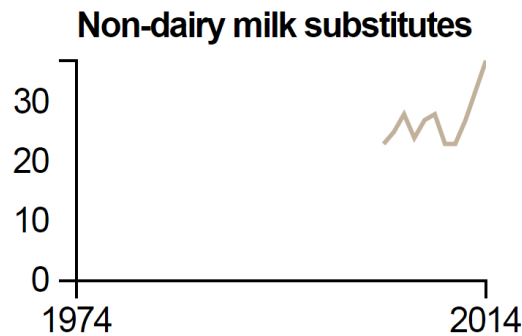
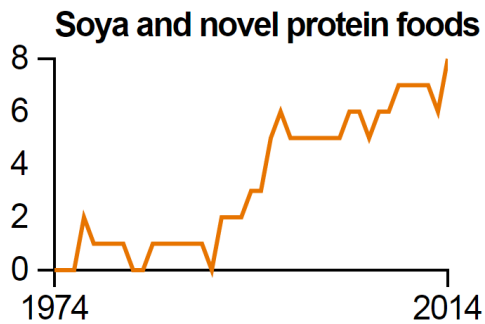
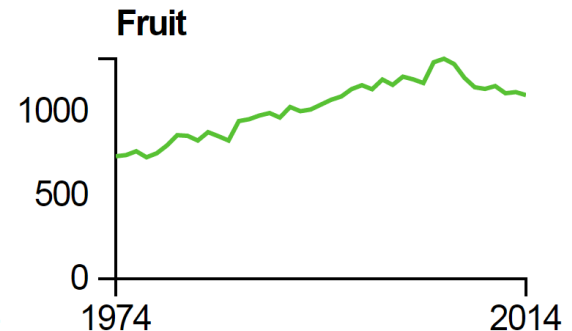
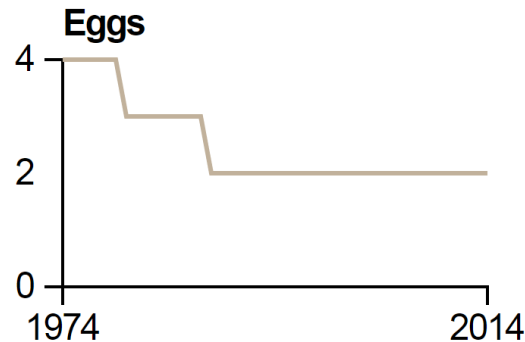
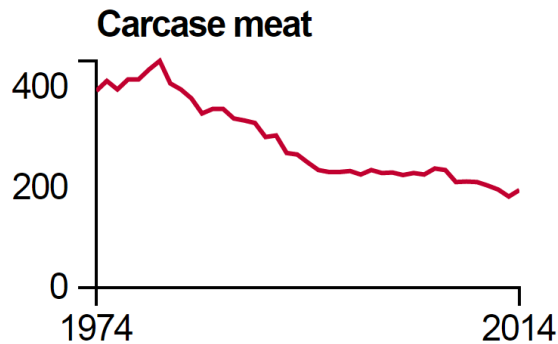


1974 to 2014



Source: DEFRA Family food open data  
[https://data.gov.uk/dataset/family\\_food\\_open\\_data](https://data.gov.uk/dataset/family_food_open_data)

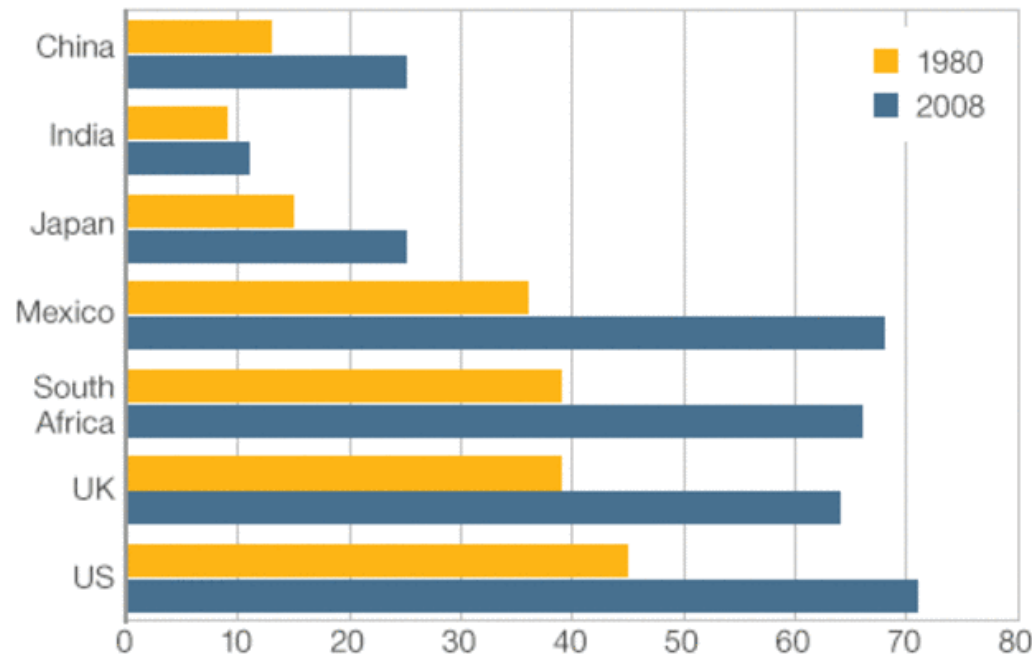
## A change in the UK diet (g per week)



Source: DEFRA Family food open data  
[https://data.gov.uk/dataset/family\\_food\\_open\\_data](https://data.gov.uk/dataset/family_food_open_data)

Due to the food we eat\*...Our waist lines are changing.

Percentage of overweight and obese adults with BMI greater than 25, by country



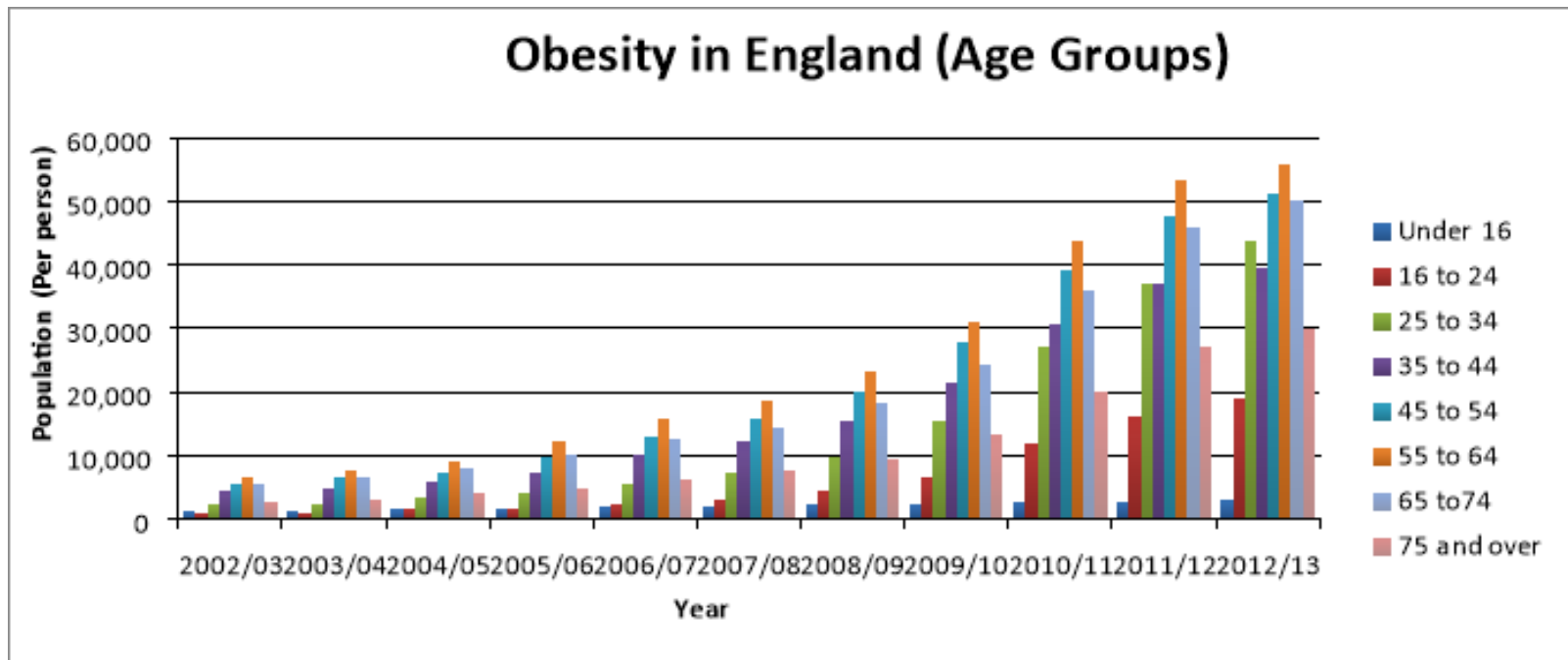
Source: Overseas Development Institute

5% of NHS spending is on treating obesity related illness

~\$2 trillion in global healthcare costs due to obesity!

\*Also other factors including lifestyles and activity levels.

Generational change, over time...



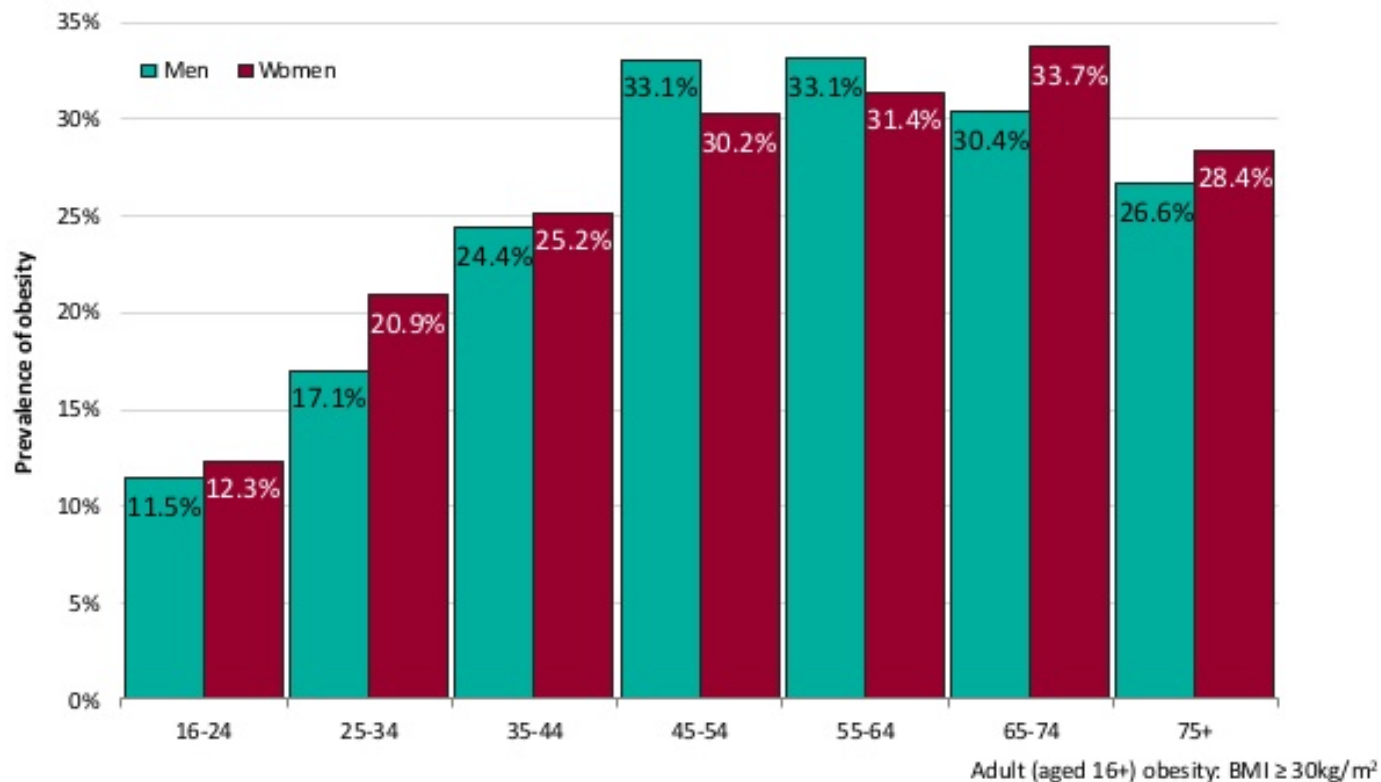
Source: Hospital Episode Statistics (HES), Health & Social Care Information Centre (2014).



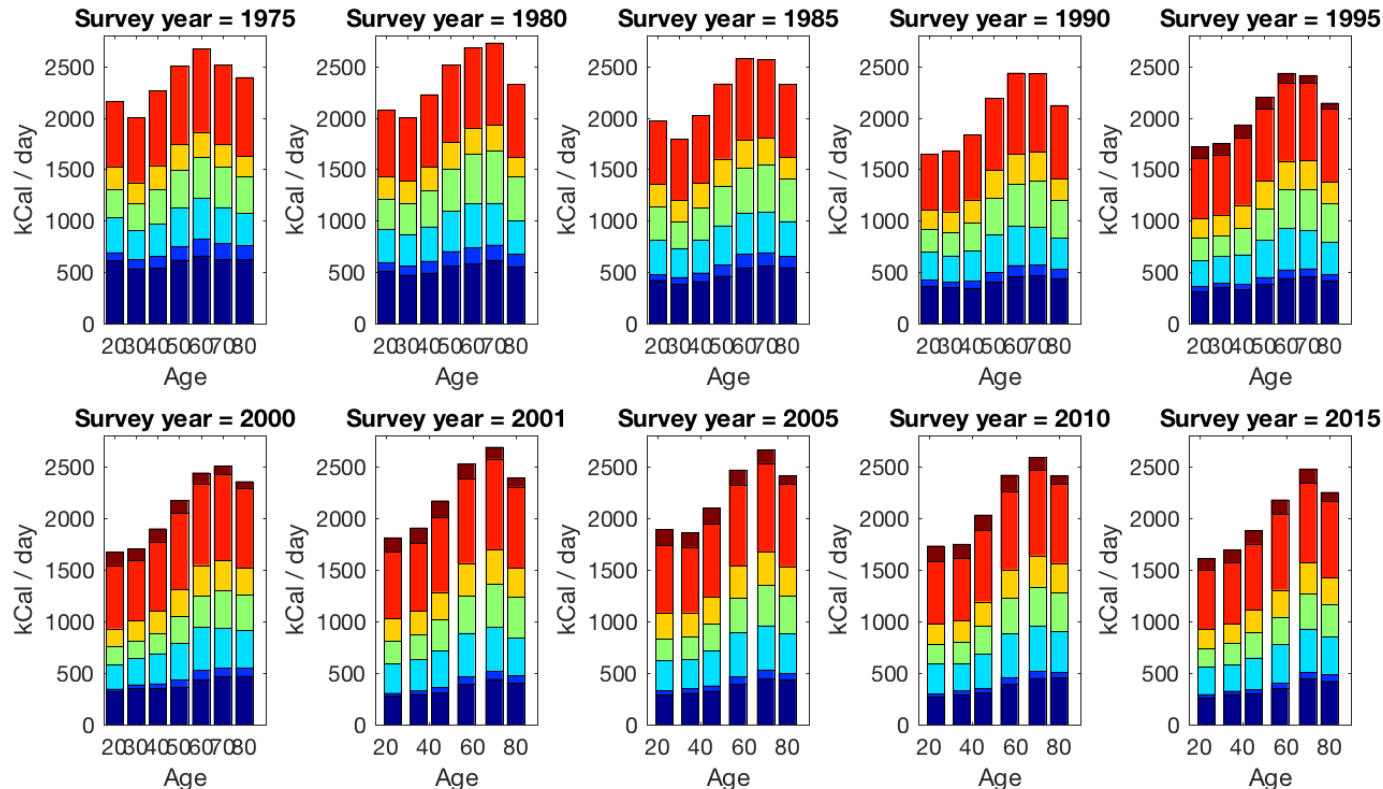
Public Health  
England

## Adult obesity prevalence by age

Health Survey for England 2010-2012

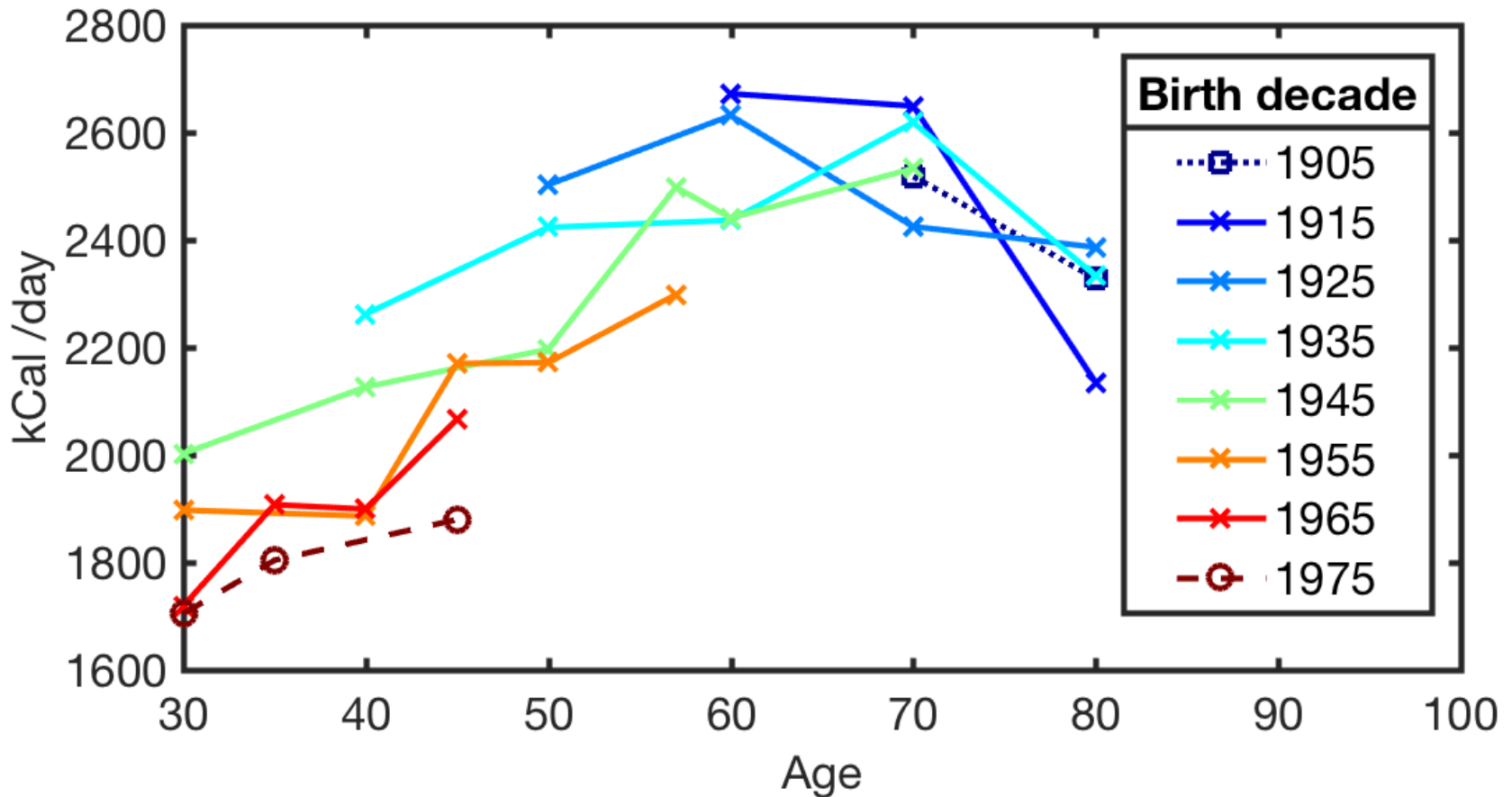


## The dietary patterns of the each generation are moving



Total kCal per day, per age group (16+), Purchase surveys 1975-2015  
 National Food Survey, 1974-2000, Living Cost and Food Survey (2000-2018)

Younger generations different diet starting points. Lower kCal.



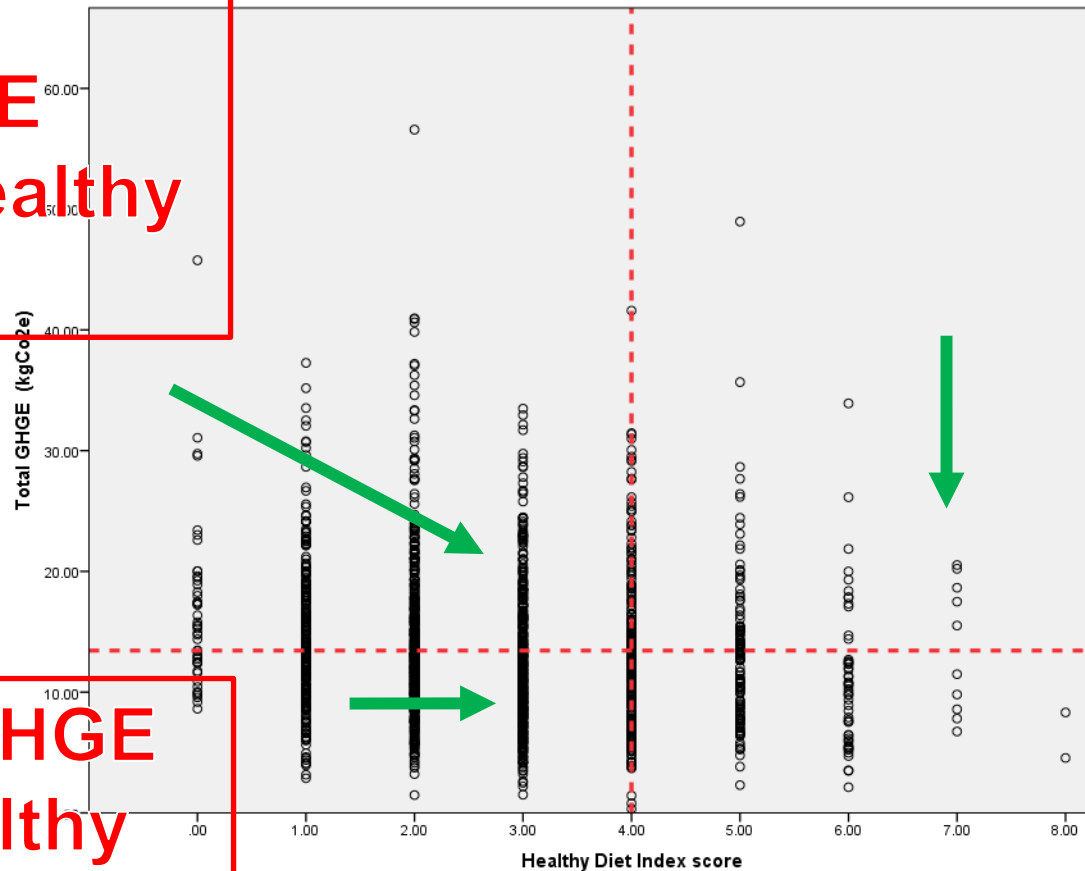
*Total kCal per day, per age group (16+), Purchase surveys 1975-2015  
National Food Survey, 1974-2000, Living Cost and Food Survey (2000-2018)*



Learn from the “Positive deviants”

**High  
GHGE  
Unhealthy  
diet**

**High GHGE  
Healthy diet**



**Low GHGE  
Unhealthy  
diet**

**Low GHGE  
Healthy diet**

## Take home messages:

There is potential to change many different aspects of individual's food environments, food habits, and food practices.

Amplify the positive trends to produce positive health outcomes (What are the positive deviants doing?).

Tailored messaging strategies are required to speak to an individual's diet and habits.

We must understand what people are doing (and aspiring to do) in order to shift food choices and produce positive health outcomes.

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Thank you

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*Thanks to Professor Sarah Bridle for assistance with UK diet visualisation.*

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