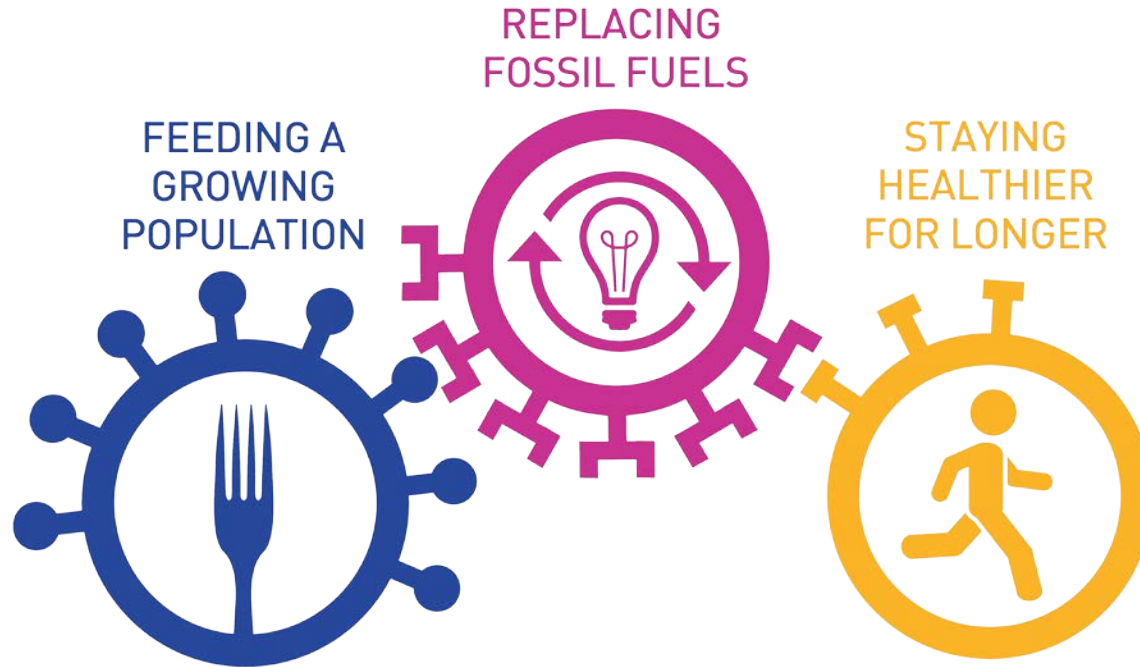


## BUILDING THE BIOECONOMY



# Meeting society's challenges



- The world needs to produce 50% more food by 2050
- Food & agri sector in UK already worth £96Bn a year
- Need for low carbon alternatives to fossil fuels
- Demand for energy predicted to grow by 20% in 2030 (from 2010)
- 21% of UK population will be aged 60+ by 2050
- Tackling obesity would save wider UK economy £50bn per year by 2050



**The bioeconomy  
offers huge potential  
to support a more  
productive, prosperous  
and sustainable UK**

UK BIOECONOMY  
SUPPORTS  
**4 MILLION**  
JOBS ACROSS  
THE UK

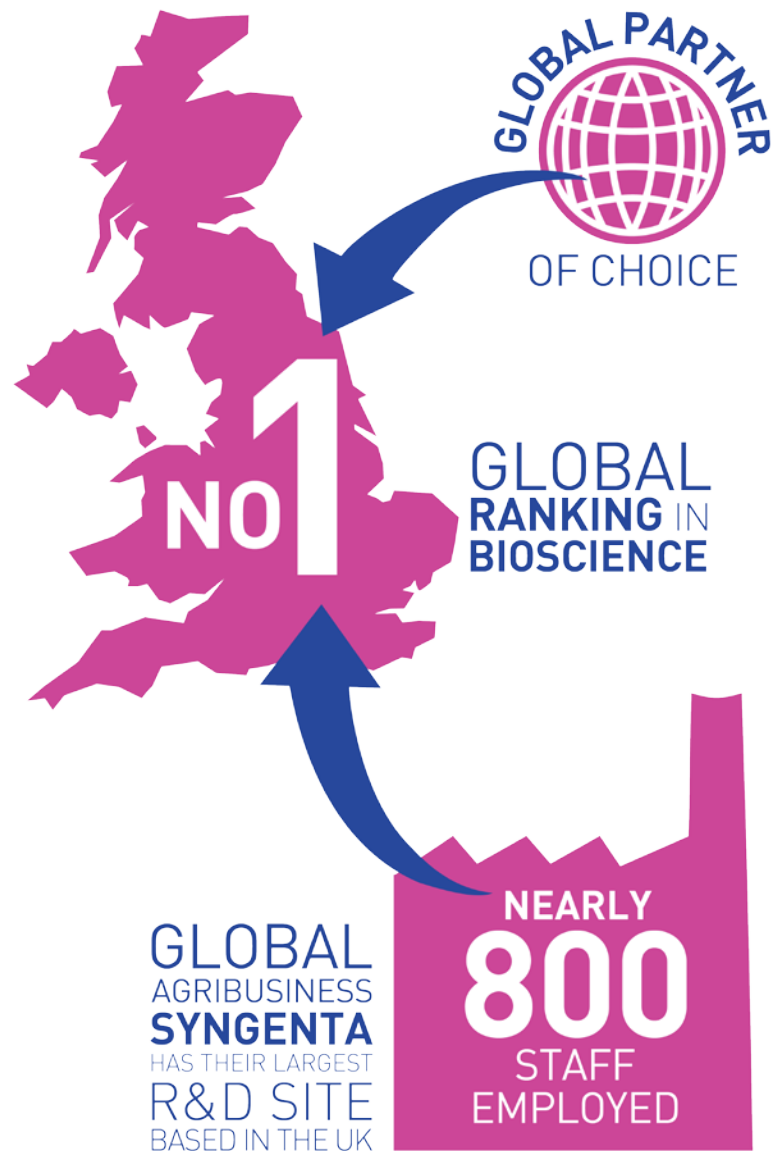



**BILLION** GVA  
VALUE OF UK BIOECONOMY

**BREADTH OF BIOECONOMY**



**UK is world leading  
in bioscience -  
bringing benefits  
to UK society  
and economy**





**BBSRC delivers  
for bioscience  
and for the UK**

**FOR EVERY £1  
OF PUBLIC  
FUNDING  
INVESTED IN BBSRC  
STRATEGICALLY FUNDED  
INSTITUTES, UP TO  
£14 GVA GENERATED  
FOR UK ECONOMY**



**£334<sub>M</sub>**

**CAPITAL  
INVESTMENTS  
SINCE 2010**

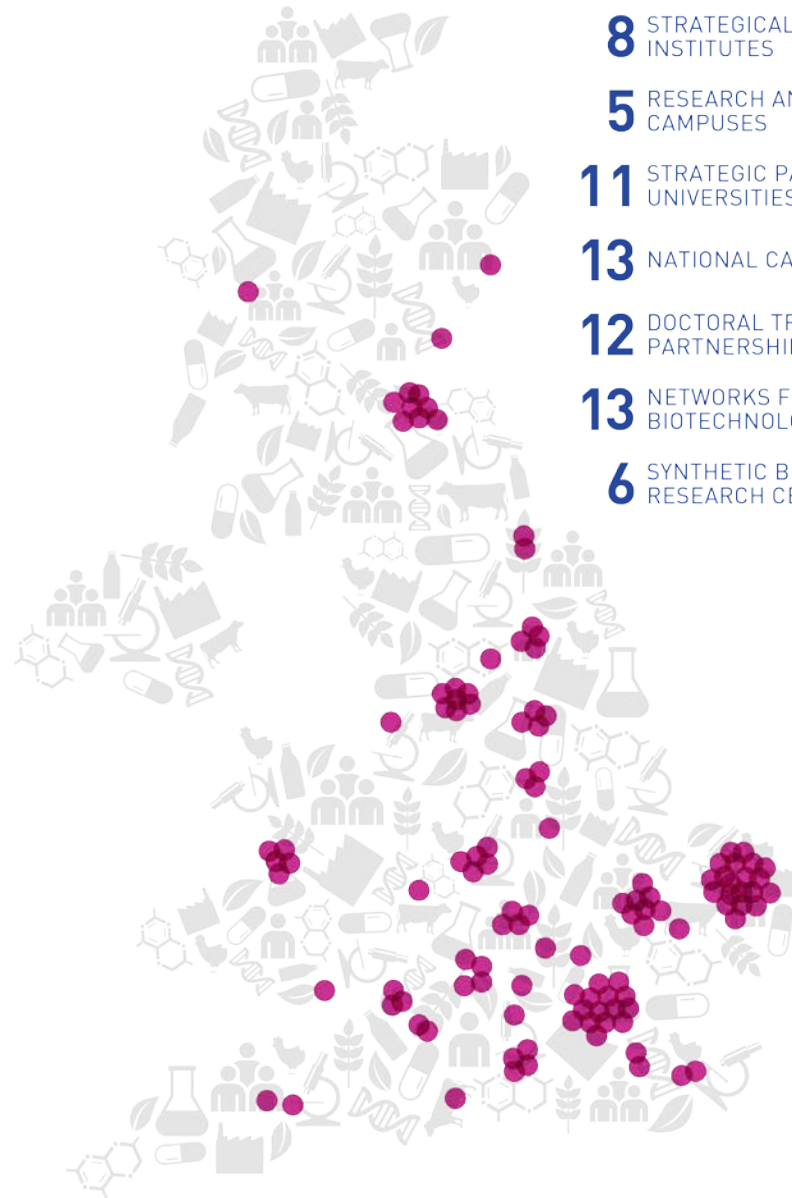


**£72<sub>Bn</sub>**

**ECONOMIC ACTIVITY  
AND COST SAVINGS  
ENABLED BY BBSRC  
INVESTMENTS**  
(from 2008–2013)



**BBSRC invests in  
bioscience research,  
infrastructure and  
skills right across  
the UK**



**8** STRATEGICALLY FUNDED  
INSTITUTES

**5** RESEARCH AND INNOVATION  
CAMPUSES

**11** STRATEGIC PARTNER  
UNIVERSITIES

**13** NATIONAL CAPABILITIES

**12** DOCTORAL TRAINING  
PARTNERSHIPS

**13** NETWORKS FOR INDUSTRIAL  
BIOTECHNOLOGY

**6** SYNTHETIC BIOLOGY  
RESEARCH CENTRES



## TRACK RECORD





# Adding £455m a year to the wheat harvest

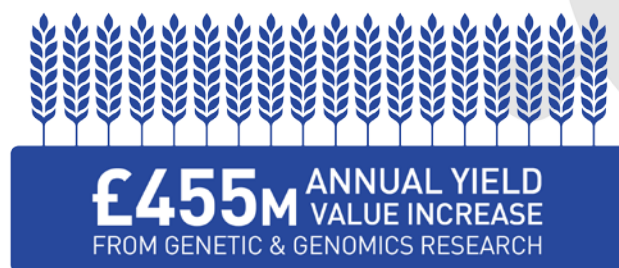


**BBSRC  
ANNUAL  
INVESTMENT**  
TO IMPROVE  
QUALITY, QUANTITY  
AND DIVERSITY



2013 VALUE OF  
**UK'S WHEAT  
INDUSTRY**


**£2.1Bn**



IF UK WHEAT YIELDS INCREASE FROM CURRENT  
LEVELS BY FURTHER 50% OVER THE NEXT  
**15 YEARS**



# 90% reduction in Dengue mosquitoes



**50-100  
MILLION  
DENGUE FEVER  
CASES GLOBALLY**



**£31k** INITIAL  
FUNDING FROM  
**BBSRC**  
FOR RESEARCH  
TO MODIFY MALE MOSQUITOES



**£33M**  
LEVERAGED  
FUNDRAISING  
OF WHICH 50%  
FOREIGN DIRECT INVESTMENT

**OXITEC LTD**



**ENVIRONMENTALLY  
FRIENDLY**

**&**



**COST  
EFFECTIVE**



**90%  
FEWER DENGUE  
MOSQUITOES**  
In all trials across Brazil,  
Panama & Cayman islands

# Healthier milk on the high street



**£16Bn**

**COST TO UK ECONOMY  
OF FOOD-RELATED  
CHRONIC ILL HEALTH**

**& SET TO RISE TO £50Bn  
IN 2050 IF NO ACTION IS TAKEN**



**MILK HAS BENEFICIAL  
PROPERTIES, SO CUTTING  
DOWN ISN'T THE ANSWER**



FROM

**BBSRC**

**FOR RESEARCH TO ALTER MILK FAT COMPOSITION  
BY ADDING OILSEED TO COWS' DIETS**



Researchers from Reading worked with partners across the food chain to reduce bad fat by up to 25% and increase good fat by up to 50%



**M&S's OWN-BRAND  
'BETTER FOR YOU'  
MILK**

Sold to over 3 million customers

**LOWER  
CARBON  
FOOTPRINT**

By altering cows' diets, their milk has a lower carbon footprint than regular milk due to reduced methane emissions



## OUR COMMITMENTS TO BUILDING THE BIOECONOMY



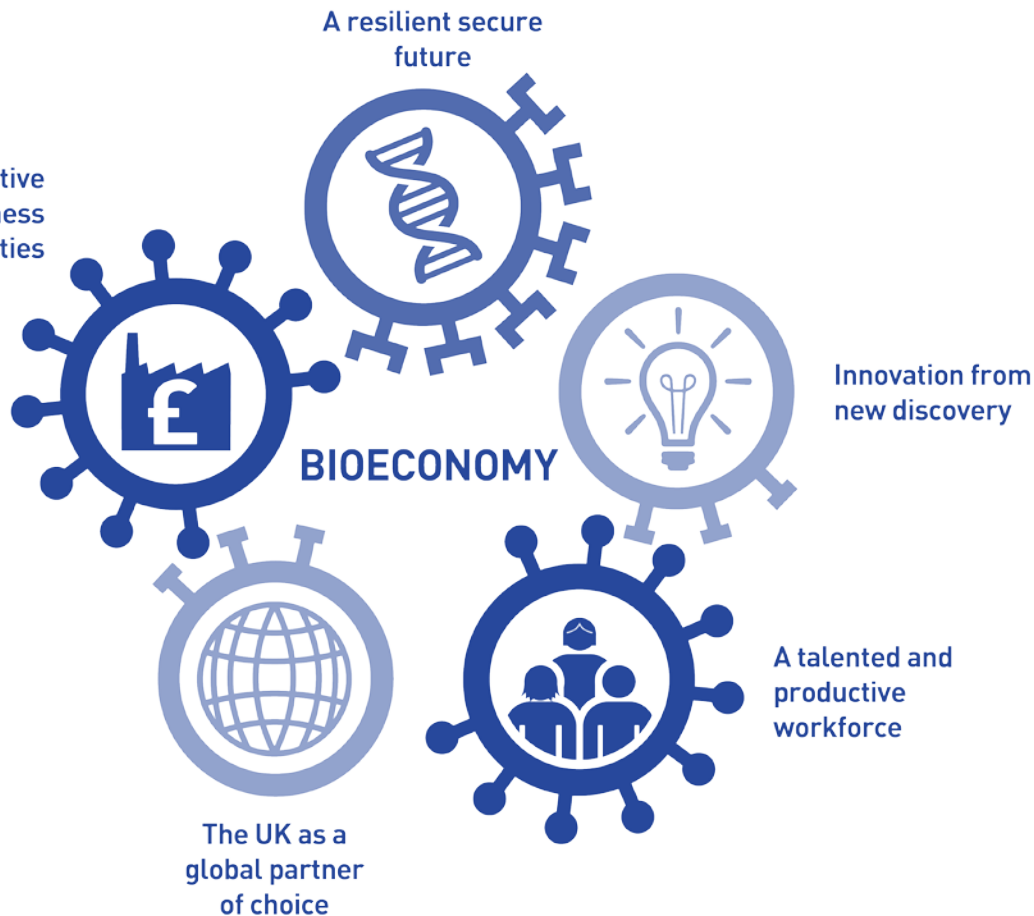
# Grow the bioeconomy for a more productive and prosperous nation

## BIOSCIENCE



underpins the  
bioeconomy to  
deliver...

Transformative  
new business  
opportunities



# Drive bioscience discovery and innovation

**BBSRC will invest in frontier bioscience across the UK to foster innovation in the bioeconomy**



Source: Capital Economics and the Office for National Statistics (2012)

# Build a more resilient and secure future

**BBSRC investments  
will equip the UK to  
respond to the  
challenges of the  
future**



# Transform and create bio-based businesses

**BBSRC-funded bioscience  
will enhance productivity,  
transform traditional  
businesses and create new  
market opportunities**



Bioscience produces more patents  
than any other research area



BBSRC's investments in new technologies,  
such as big data and synthetic biology, are  
transforming industries





# Develop and attract talent

**BBSRC will invest in the next generation of skilled people for the research base and the wider economy**

BBSRC currently invests in  
> 2000 PhD students  
> 5000 researchers & technicians



# Secure UK as global partner of choice

**BBSRC will work with partners to capitalise on UK bioscience to foster new collaborations, inward investment and trade links with emerging economies**

