Nesta

ComRes

INNOVATION POPULATION

THE UK'S VIEWS ON INNOVATION

April 2014

ACKNOWLEDGEMENTS

Nesta

The *Innovation Population* was commissioned and managed by **Stian Westlake, Louise Marston** and **Jen Rae** at Nesta. This report was edited for Nesta by **Jen Rae,** with thanks due to **Olly Arber** and the Nesta digital team for the development of our accompanying web app *'Which Innovator are you?'* **www.nesta.org.uk/quiz/which-innovator-are-you**

ComRes

This report was written for Nesta by **Andy White,** Senior Analyst at ComRes. The research was conducted by **Andy White,** who led the project at ComRes, and his team: **Rachel Phillips** (Research Manager – Quantitative), **Rachel Britton** (Research Manager – Qualitative), **Holly Wicks** (Research Analyst).

ComRes is a leading market and opinion research consultancy providing data–driven insight into corporate reputation, public policy and communications. ComRes is a founding member of the British Polling Council, and published pollster for the BBC, ITV News, CNN and *The Independent.* Its coverage includes public and elite audiences across all sectors in all global markets.

For further information, please contact Katharine Peacock at **Katharine.Peacock@comres.co.uk**

Nesta is the UK's innovation foundation.

An independent charity, we help people and organisations bring great ideas to life. We do this by providing investments and grants and mobilising research, networks and skills.

Nesta is a registered charity in England and Wales with company number 7706036 and charity number 1144091. Registered as a charity in Scotland number SCO42833. Registered office: 1 Plough Place, London, EC4A 1DE.

www.nesta.org.uk

INNOVATION POPULATION

THE UK'S VIEWS ON INNOVATION

CONTENTS

FOREWORD

ATTITUDES TO INNOVATION

Who cares about innovation? The answer, it turns out, depends on two other questions: what sort of innovation you're talking about, and to what end?

To our knowledge, there has been little research on public opinions about either innovation or government policy on innovation, either in the UK or elsewhere.

We know that in other fields – such as science – regular surveys help inform public debate and policymaking. So Nesta worked with ComRes to carry out a large-scale quantitative and qualitative survey of the attitudes of people around Britain to innovation and innovation policy.

The results are striking. They show that there is indeed a group of people in the UK who are enthusiastic about innovation and new technologies and relaxed about how they will shape the future. However, this group is relatively small – one in five people – and disproportionately affluent and male.

However, this is not to say that the bulk of population are technophobes or luddites. Two-thirds of the population clustered into three segments who were enthusiastic about technology, as long as its benefits, especially in social terms, could be clearly articulated. The research also showed these groups had clear questions about the downsides of innovation, such as the impact of the internet on social life, or the environmental impact of our superabundance of gadgets.

The research also identified around one in six people who were much more concerned than enthusiastic about innovation. They were disproportionately female and less affluent, and feared for the impact of technology on their wellbeing and on society.

We believe this research is important for two reasons:

Firstly, it can help inform the debate about the impacts of innovation, and who benefits, by providing some quantitative information about people's attitudes and preferences.

Secondly, it carries a message for policymakers that generally goes unheard. For decades, innovation policy has been the domain of technocrats and of party-political consensus.

This has delivered some important benefits, such as the maintenance of a relatively good spending settlement for scientific research over two governments and the establishment of bodies like the Technology Strategy Board.

But the flipside of technocratic consensus is that innovation has never been high on the party political agenda. To the extent that British politicians talk about innovation, they almost always talk to that small group who hold innovation to be self-evidently worthwhile. It is not part of any national narrative in the way that education, healthcare or even transport have been. In a democracy, this carries the risk that while innovation funding will be safe from partisan point-scoring, it will never be in line for the significant funding that more popular policy areas receive.

An implication for this research for those who believe that the government should fund more innovation is that politicians need to start talking about innovation to bigger audiences, not just the one in five who are innovation enthusiasts. And that to do so, they need to talk not just about innovation for its own sake, but about the benefits that it brings for consumer, for society and even the world.

This publication includes the results of the analysis of innovation attitudes and the segmentation of the UK population. In June we will be supplementing this with a more detailed look at voters' beliefs about the role of government in relation to innovation.

As usual, we welcome your feedback.

Stian Westlake
Executive Director, Policy & Research

INTRODUCTION

Innovation Population represents the culmination of three months of public opinion research into British attitudes to innovation. It pulls together online surveys of over 6,000 UK adults and face-to-face focus groups with over a hundred people in six locations across the country. While there is a large existing body of research into attitudes to science and technology, the guiding principle behind this project was that 'innovation' is a broader concept encompassing an enormous range of products, services, systems, structures, activities and agents – from multibillion dollar international research projects, like the Large Hadron Collider, to the everyday innovations that individuals make in their own lives, like modifying an item of clothing or inventing a new recipe.

We know intuitively that attitudes towards innovation are as diverse as the population itself – that some people are more inclined towards risk, creativity, long-term planning, or originality, for example. *Innovation Population* statistically segments the British public along these lines, into five attitudinal groups or personas – **INNOVATION FUTURISTS, INNOVATION ROMANTICS, INNOVATION CREATIVES, INNOVATION REALISTS,** and **INNOVATION SCEPTICS.** Segmentation is an interpretive tool driven by research objectives and educated judgments. The segmentation we have put forward is designed to help people understand and address the communications challenges around innovation policy. It is not a one-size-fits-all solution to all opinion research problems in this area, but, alongside the general findings and those for standard demographics (gender, age, social class), we hope it will be a useful framework for those whose are interested in how the public views innovation.

This report, which launches Nesta's Innovation Personas, represents the first phase of work on public opinions on innovation. The second phase will focus on the implications of these findings for effective ways of communicating about innovation to the general public.

GENERAL FINDINGS

The first phase survey tested participants' broad attitudes to innovation, technology and progress, focusing on openness to change and perception of risk, long-term planning and ethics, as well as the value of specific innovations. We found that attitudes towards innovation are broadly favourable, with nearly three-quarters of the British population (71 per cent) believing that current spending levels by UK businesses and government are about right or too low. Most people are interested in hearing about new ideas and innovation, particularly in specific areas like healthcare and technology. There are, however, significant attitudinal and behavioural differences across key demographics.

Men and women differ on the intrinsic value of innovation, with women tending to focus on the more practical benefits of innovation, while men are more likely to be excited by new ideas regardless of concrete outcomes. There are also striking differences between the views of more and less affluent people. A detailed analysis of these findings starts on page 46.

The research also looked at opinions on the role of Government in encouraging innovation, as well as areas of public concern such ethics and rights protection, dealing with risks, and an increasing culture of disposability. Our Innovation Personas provide a way of illustrating how these complex questions can often provoke a varied response from the general public.

Every stage of the research showed that people most valued innovation in areas that had a demonstrable impact on health, wellbeing and quality of life.

INNOVATION PERSONAS OVERVIEW

Although it is helpful to have an assessment of people's views at a general level, we wanted to explore the complexity of views about innovation beyond an analysis of differences in age, gender, social class or location. We tested a range of attitudinal dimensions at a personal and sociopolitical level to build segmentation profiles of the British population. The segmentation process is explained in detail on page 12. Our analysis identified five archetypal views, which we have characterised as Innovation Personas:

INNOVATION FUTURISTS (19 per cent of the UK population) are engaged in many aspects of the innovation debate and can see the benefits of change in all areas of life. They understand the different facets of innovation well, are generally comfortable with the pace of change in society and take a long-term view on their own lives and the wider world. They are not concerned about innovation over-reach and tend to view controversial innovations such as nuclear or GM foods more favourably than other segments. They are also more likely to say they have been innovative themselves.

INNOVATION ROMANTICS (12 per cent of the UK population) find consumer innovation exciting and interesting, but tend not to engage with innovation with long-term objectives. They tend to think of innovation as consumer goods – 'gadgets' and 'new technology' that they encounter in their personal lives. They attach high intrinsic value to innovation and tend to approve of most innovation they come into contact with or hear about. They are more likely than other segments to agree that *"new ideas and products are what make a country great – even if they don't have much economic benefit".* Innovation Romantics are not long-term planners and tend not to be concerned about the future, and they are the least likely to have participated in innovative activities.

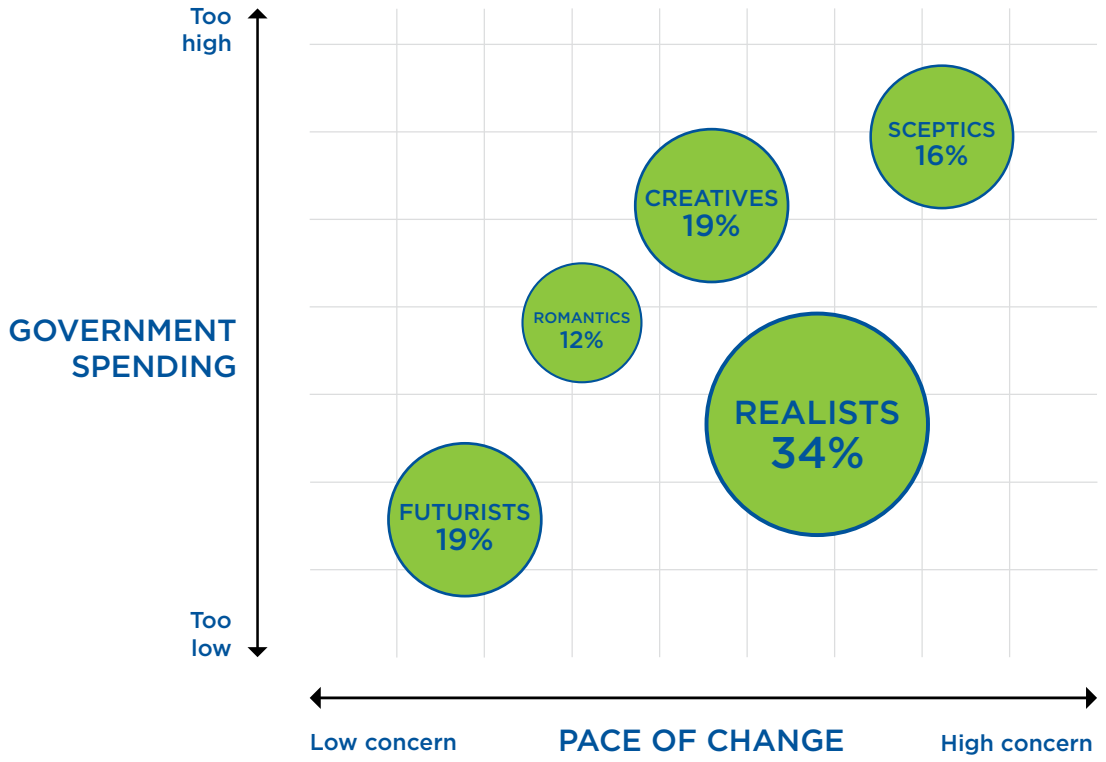
INNOVATION CREATIVES (19 per cent of the UK population) are typically younger than average, confident and on-trend, display high levels of personal creativity and a social perspective on life. They are curious and interested in new ideas, especially those that demonstrate creativity and solve practical problems. They are also the least cautious of the innovation groups, and the most likely to agree that they are *"creative and often come up with new ways of doing things".* They are often early adopters of new technology and ideas, recommending new products to peers. They struggle to bring innovation together as a single concept, and therefore tend to see innovation as a series of different processes. They tend to think about innovation in the context of their own hobbies and interests.

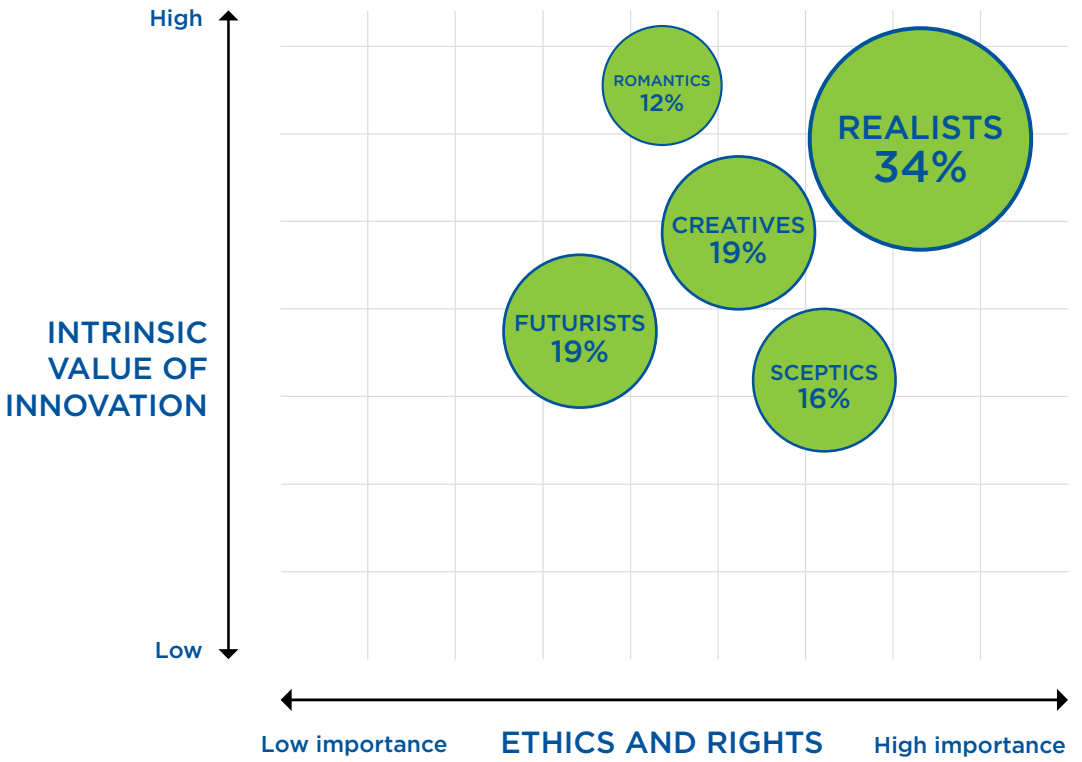
INNOVATION REALISTS (34 per cent of the UK population) appreciate innovation but are not excited by it per se, believing that ethics and rights are more important than innovation and progress. They acknowledge that it is necessary to keep pace with change and they balance the drawbacks of innovation with the benefits. They are the segment most interested in current affairs, particularly valuing social innovations in areas like health, transport and education. Their most pressing concerns are focused on the impact of innovation on society, such as privacy, desocialisation and the perception that lifestyles are becoming increasingly disposable as products become obsolete.

INNOVATION SCEPTICS (16 per cent of the UK population) are particularly concerned about the pace of change in society. They are cautious and practical, placing relatively low value on innovations until they are confident that they have real-world benefits. They see new ideas as less important than solving problems by using existing ideas and technologies better. They tend to be more focused on the impact of innovation on their lives and are more likely to be late adopters of new products and technologies. They often feel a sense of powerlessness and a feeling of being left behind, concerned about the impact of new ways of doing things on job security, and they worry about how society adapts to change overall. They find value in innovation in health, education and social care when they see how it can actually make an impact on their lives or those close to them.

COMPARING THE INNOVATION PERSONAS

The following two plots give an indication of how each persona differs on key attitudinal measures. (% shows percentage of total population represented by each segment)





RESEARCH OBJECTIVES

Nesta wished to conduct a detailed programme of research to understand the UK public's attitudes to innovation and technology, as well as government activity in this area. The objectives of this research programme were to:

1. **Understand public attitudes towards innovation and technology in the UK, and whether they think government should do more to promote them in the future.**
2. **Profile attitudes towards innovation and technology among different demographic groups in the UK.**
3. **Identify which segments of the UK population are most open to innovation and technology and which segments require convincing of their benefits.**
4. **Identify which messages would be most effective at convincing the UK population that government should focus on promoting innovation and technology in the UK above other concerns.**

METHODOLOGY

Phase 1 (Online Survey and Segmentation)

ComRes conducted an online survey among a nationally representative sample of 4,121 UK adults between 25 September and 10 October 2013. Data were weighted by age, gender, region, social grade to be representative of all UK adults.

The aim of this survey was to understand very broad attitudes towards innovation among the British public and to develop a statistical segmentation of the population according to personal attitudes relating to innovation.

Segmentation refers to a range of techniques and approaches that seek to categorise a population by their attributes, attitudes, behaviours, and/or needs. The Innovation Population segmentation allows attitudes and behaviours relating to innovation to be understood beyond the level of differences in age, gender, social class, and location. Indeed, the segmentation profiles over the next five sections show that while there are clear tendencies within different demographic groups, people from many different backgrounds share similar perspectives on innovation.

In this case, segmentation has been used in order to enhance the output from the qualitative phase of this research programme, by ensuring that each focus group brings together people with similar patterns of opinion on innovation.

PHASE 2 (FOCUS GROUPS)

ComRes conducted 12 focus groups in six locations across the UK:

Group	Location	Date	Segment(s)	Gender
1	**Manchester**	12 Nov 2013	INNOVATION SCEPTICS	Female
2	**Manchester**	12 Nov 2013	INNOVATION FUTURISTS	Male
3	**Birmingham**	12 Nov 2013	INNOVATION ROMANTICS	Female
4	**Birmingham**	12 Nov 2013	INNOVATION SCEPTICS	Male
5	**Glasgow**	13 Nov 2013	INNOVATION CREATIVES	Female
6	**Glasgow**	13 Nov 2013	INNOVATION REALISTS	Male
7	**London**	13 Nov 2013	INNOVATION REALISTS vs. INNOVATION ROMANTICS	Mixed Male/Female
8	**London**	13 Nov 2013	INNOVATION FUTURISTS vs. INNOVATION SCEPTICS	Mixed Male/Female
9	**Leeds**	14 Nov 2013	INNOVATION FUTURISTS	Female
10	**Leeds**	14 Nov 2013	INNOVATION ROMANTICS	Male
11	**Bristol**	14 Nov 2013	INNOVATION REALISTS	Female
12	**Bristol**	14 Nov 2013	INNOVATION CREATIVES	Male

Recruitment

Recruitment specifications were designed to focus on archetypal participants from each segment – those scoring most strongly on the key identifiers of each segment. This approach allows us to understand the distinct characteristics of different attitudinal segments in as much depth as possible. A broad range of social grades and ages were chosen in each group, reflecting the social grade and age breakdowns of the respective segments.

Rationale

Segmenting public attitudes – and limiting groups to one segment or two opposing segments – was intended to allow distinct thought patterns and lines of argument to be explored in much greater depth than would be possible with attitudinally broader group specifications. Innovation is a very broad and vague subject, and the segmentation generated discussions that were specific to different groups.

PERSONA PROFILES

SEGMENTATION PROCESS

Segmentation refers to a range of techniques and approaches that seek to categorise a population by their attributes, attitudes, behaviours, and/or needs. The Innovation Population segmentation allows attitudes and behaviours relating to innovation to be understood beyond the level of differences in age, gender, social class, and location. Indeed, the segmentation profiles over the next five sections show that while there are clear tendencies within different demographic groups, people from many different backgrounds share similar perspectives on innovation.

In this case, segmentation has been used in order to enhance the output from the qualitative phase of this research programme, by ensuring that each focus group brings together people with similar patterns of opinion on innovation.

Methodology

ComRes conducted a factor analysis on respondents' agreement or disagreement with statements relating to innovation issues. This grouped together related statements (e.g. *"I always make an effort to buy ethical products and services"* and *"I don't worry too much about the ethics of products and services"*) into single factors, to ensure only orthogonal variables were included in the cluster analysis.

The factor analysis identified seven factors (ranked in order of variance across the dataset):

Factor	Question/Statement	Pole A	Pole B
Pace of change and innovation overreach	Governments and corporations take too many risks and this is usually damaging to ordinary people.	Agree	Disagree
	I often feel the world is changing too quickly.	Agree	Disagree
	In your opinion, is (R&D spending) too much, too little, or about the right amount?	Too much	Too little
	Big technological innovations are usually a waste of time, solving problems that didn't exist in the first place.	Agree	Disagree
	Innovation should be driven by businesses and consumers. Government doesn't need to be involved.	Agree	Disagree
Personal creativity and risk taking	You need to take risks to get ahead in life, even if you can't always be sure what will happen.	Agree	Disagree
	I am creative and often come up with new ways of doing or thinking about things.	Agree	Disagree
Importance of new ideas and risks in society	New ideas and products are what make a country great – even if they don't have much economic benefit.	Agree	Disagree
	It is more important to think about future generations than our own generation.	Agree	Disagree

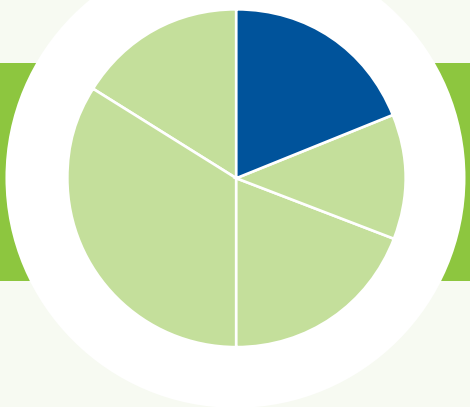
Future planning	I tend to plan for the future in life, even if that means making sacrifices in the short term.	Agree	Disagree
	I prefer to live for today, without thinking too much about what the future holds.	Disagree	Agree
	I am generally a cautious person.	Agree	Disagree
	I prefer to have a fixed routine every day.	Agree	Disagree
Excitement about innovation	I often find new innovations pointless and wonder why people get so excited about them.	Disagree	Agree
	I get excited about new innovations even if they don't serve an obvious purpose.	Agree	Disagree
Ethical/rights focus	I don't worry too much about the ethics of products and services.	Disagree	Agree
	Innovation and progress are more important than ethics and human rights.	Disagree	Agree
	Ethics and human rights should be central to research and innovation policy – even if that slows down progress.	Agree	Disagree
	I always make an effort to buy ethical products and services.	Agree	Disagree
	The immediate problems the world faces are too serious for us to worry about what might happen in 50 years' time.	Disagree	Agree
State and social focus	Governments should be the main driving force behind innovation – by funding initiatives and regulating it carefully.	Agree	Disagree
	Change in culture and society is usually a good thing.	Agree	Disagree
	I spend most of my spare time socialising or communicating with my friends and family.	Agree	Disagree

A **cluster analysis** was then performed on these factors, using the K–means technique – this uses measures of Euclidean Distance to cluster respondents iteratively into groups sharing similar response patterns, and is well suited to opinion research data.

Segment solutions were assessed for their statistical integrity, and for the extent to which they enabled us to understand public attitudes in greater depth.

INNOVATION FUTURISTS

19 PER CENT OF THE UK POPULATION



Factor	
Pace of change and innovation overreach	Unconcerned
Personal creativity and risk taking	Average
Importance of new ideas and risks in society	Average
Future planning	Tend to be future planners
Excitement about innovation	Tend not to get excited
Ethical/rights focus	Low ethical/rights focus
State and social focus	Average

Characteristics	
Gender	Typically Male (63%)
Age	In line with general population
Social grade	Typically ABC1 (more affluent)
Current affairs interests	Broad, low interest in environment
Innovation interests	Science, technology, vehicles, engineering
Activities	More active in all areas than other segments

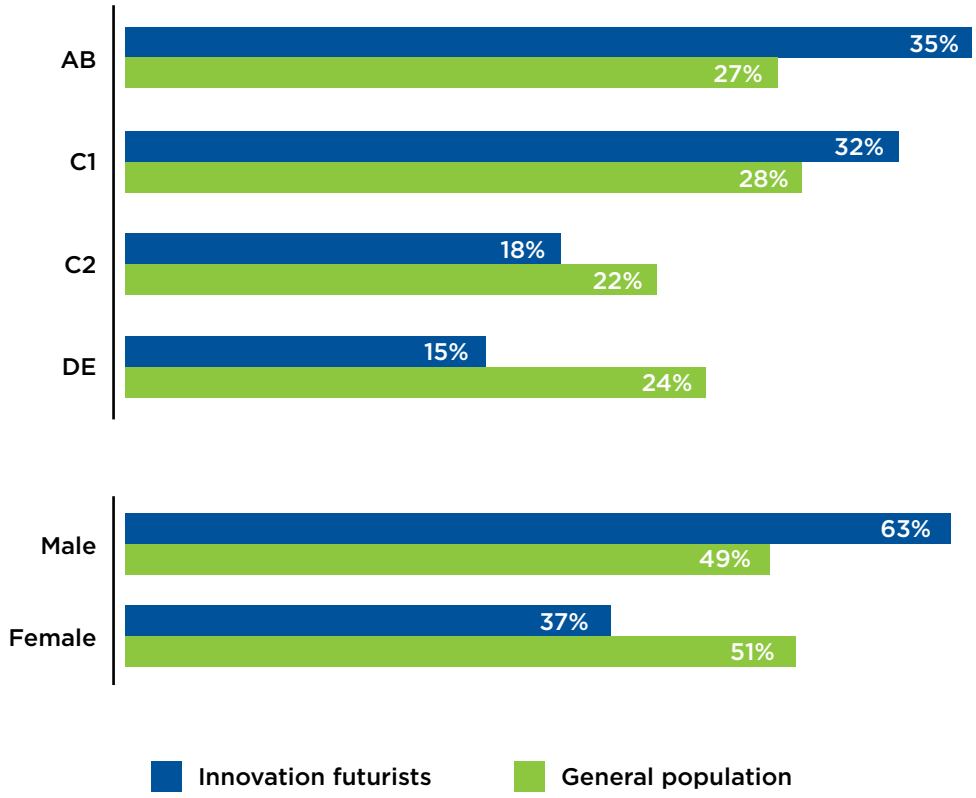
Innovations	
Favourable	Typically all, including controversial innovations
Unfavourable	–

Overview

INNOVATION FUTURISTS (19 per cent of the UK population) are the natural audience for innovation policy communications. They tend to be unconcerned about the pace of change in society, and take a long–term view on their own lives and the wider world. They are more active in most areas of innovation and are more favourable towards controversial innovations, tending to balance risk with reward in their analysis. Their increased engagement with innovation means that they most readily understand the relationship between disparate types of innovation.

Who are they?

While our attitudinal segments include people from a disparate range of backgrounds and demographic profiles, the archetypal **INNOVATION FUTURIST** is an affluent (ABC1) male:



1. DEFINING INNOVATION

INNOVATION FUTURISTS understand the different facets of innovation well, comfortably pulling together different strands of innovation policy. When asked to share *"new ideas or new things that have caught (their) attention",* they demonstrate a greater range and depth of interest than other segments.

> *Okay, well I'm a financial advisor and one of the things I look at is stocks and shares and there was a company I was looking at that's invented a way to extract heavy oil from the North Sea, so it's effectively increasing reserves of oil.*
> **(Male, Manchester)**

> *The other one which I'm fascinated, it keeps cropping up, but where you can print actually – well you can print a gun, you can print any... —A 3D printer. —Yes, 3D, I think that's absolutely amazing that you'll be able to print anything.*
> **(Female, Leeds)**

> *The other thing that I've done just recently is wrote to James Dyson, emailed him. I don't know if you remember, but he came out with a fan, quiet, a quiet fan. That turns me on, and I've said if you can do that on a big scale. Small scale it down and make a ... quiet hairdryer.*
> **(Male, Manchester)**

> *It's a Fitbit One, it's called, and it's just about a tracking thing that tracks your calories. It actually tracks your sleeping patterns as well and things like that and I just quite like the idea of it.*
> **(Female, London)**

> *Well, I saw something the other day about voice recognition for security, and banks are wanting to develop this so that when you phone up you only have to talk to them without having to go through your name, address, post code, inside leg measurement and all the rest of it. It's supposed to be 97 per cent foolproof, so it's a very good fraud prevention measure.*
> **(Male, Manchester)**

When asked to categorise a range of current and historic innovations, they tend to see patterns quickly and place innovations together in coherent groups. They can then see the overarching connections between all innovations, using words like 'improvement', 'advancement', and – without being prompted – 'innovation'.

> *Personally, 'improvement', because most new technologies or new ideas are an improvement on something that exists already.*
> **(Male, Manchester)**

> *Advancement.*
> **(Male, Manchester)**

> *Advancement.*
> **(Female, Leeds)**

> *Innovation.*
> **(Male, Manchester)**

> *Innovation.*
> **(Female, Leeds)**

2. PACE OF CHANGE AND LONG–TERM VIEW

INNOVATION FUTURISTS are generally comfortable with the pace of change in society and are not concerned about innovation overreach. They tend to see the progress of time as an inevitability that should be anticipated and harnessed, rather than obstructed.

> *It's all about competition, isn't it, so everyone is trying to win a race to get to the next phase to push things on for themselves?*
> **(Male, Manchester)**

> *It's moving forward all the time isn't it?*
> **(Female, Leeds)**

> *Well, the railway was seen as potentially a risky invention, humans couldn't possibly travel faster than they could walk, so I think you've got to take calculated risks otherwise you'll stand still and you'll never achieve anything. Just to go all out and be blasé with potential risk is obviously dangerous.*
> **(Male, Manchester)**

> *Yes, I think in the future it's going to be even more important, the internet, than now. It's going to be everywhere for everything. I once saw in the media that they talked about the future and they said how now when we go into a room we look where the light switch is. They talked how in the future we will see where the internet portal is because everything will be connected to the internet.*
> **(Male, London)**

They are not entirely optimistic about the future, though, with concerns about the environment and diminishing energy resources commonplace.

> *I think the more eco-friendly or environment-based technologies are important. I wouldn't say that a watch that you could read your email on is necessarily important in 50 years, but certainly the environmentally based ... I would like to think that's extremely important.*
> **(Male, Manchester)**

> *But they need a solution sort of now, because otherwise by 2020 we're not going to have enough fossil fuels, and renewables aren't enough on their own, they just aren't.*
> **(Female, Leeds)**

3. ROLE OF GOVERNMENT

INNOVATION FUTURISTS plan for the future in their own lives, and expect governments to do the same. As well as the theme of parenthood, common to all segments, this segment tend to express sophisticated policy concerns about changing demographics.

> *Yes. I mean, what's going to be passed on to the kids, basically, and the grandkids, and great-grandkids. I mean, the Government's supposed to actually protect that.*
> **(Female, Leeds)**

> *I heard something on the radio last week; there are, I don't know, 13,000 centurions or something in the country. They reckon by 2030 or something there will be over 100,000 people living to over 100, living to beyond 100 years. So that tells you that we are going to have to adapt what we do. It's a sizeable number when you think about the people underneath that. People who reach 100 are a certain proportion but there'll be more people who reach 80 and more people that reach 90. Actually that's going to require us to take another look or look differently at a number of things.*
> **(Male, London)**

There is also a perception that party politics can obstruct long-term planning, with electoral cycles meaning that policymaking lacks consistency and foresight.

> *So you almost need a combined view that over 20 years, whoever is in power, needs to go ahead with this. You can't just be chopping and changing or whatever.*
> **(Male, Manchester)**

> *I think they should focus on the long-term problems, really, rather than short term. Yes, and non-political. I mean, it's the political factors which seem to drive, and whatever one party says, the other one will criticise, and it's not always for the benefit of the country, it's a vote-catcher, really.*
> **(Female, Leeds)**

However, they generally believe that the market and consumers should be the engine of innovation, with government there to steer it and correct imbalances. Where social and commercial objectives do not align, they perceive a role for the state.

> *There is the common good of society [which] ain't always protected by the people who innovate and come out with stuff, and I think when it's of national importance, you know something that's going to affect every one of us, if there is something along that line I think it needs to be shared by government and the innovators, but most of the time, just let the innovators get on with it.*
> **(Male, Manchester)**

The group identifies strongly with individual innovators. They believe they should be allowed the space, funding and freedom to think about new ideas and concepts which will have a long–term implication rather than a short–term fix for a problem.

> *A lot of these ideas have come from bright people thinking 'Oh, that's interesting', and then just come up with the idea, and then the application is found later, so I think you also need to, (the government) need to be putting money into universities for research, just for blue–sky thinking.*
> **(Female, Leeds)**

> *I think, especially new companies as well, you'll develop a product, you'll set up as a small company, people do need that assistance.*
> **(Male, Segment 1, Manchester)**

4. BEHAVIOURS

Many **INNOVATION FUTURISTS** have job roles and personal interests that require them to be innovative in a broad sense. This does not necessarily mean that they work in 'innovative' industries, but rather that they tend to take a clear interest in new ideas and new ways of doing things.

> *I'm in IT so everything I think about is really technology based, but there's a company that is trying to promote, it's just got beyond like a concept stage, they've got like a working model whereby it's going to replace Wi–Fi with light.*
> **(Male, Manchester)**

> *I'm a manager of an estate agents. We've got a few branches and we're working on like a big company app, I guess that best describes it, for agents to use when we're out because we're constantly out of the office all day long, so when we go into properties or meeting new customers, we're basically be able to use that app to get the information back onto the system so that it's speeding up our day, because so much of our time is spent typing up notes basically so to speed up the system basically.*
> **(Male, Manchester)**

> *One of the things that I found, I work in engineering, and we went for a conference on Monday about new tools and things, pretty boring, but they've actually invented like a surgical saw that if it comes in contact with flesh, and they tested it on a sausage, it knows it's flesh and it immediately cuts out. That is absolutely fantastic for us.*
> **(Female, Leeds)**

As consumers, they tend to take an informed perspective on the utility of different innovations in their everyday lives. Over a quarter (28 per cent) of **INNOVATION FUTURISTS** have programmed computer software, compared with 18 per cent of the general population, while over a third (37 per cent) have taken apart and reassembled a mechanical or electronic device, compared with 28 per cent of the general population.

5. CONTROVERSIAL INNOVATIONS

INNOVATION FUTURISTS tend to view controversial areas of innovation policy like nuclear energy and GM foods more favourably than other segments. They find it interesting when the government funds innovation, works with others to push boundaries, takes risks and exploits new technologies if there is a societal need.

> *I think recession combined with population growth means that people's views have changed on, for example, genetic engineering of foods because there is just not enough food to go round unless you make these developments in farming and genetics, so exploit what we've already got and make it better through technology.*
> **(Male, Manchester)**

> *There's a lot of carrots being dangled for, you know, companies like ourselves to go into nuclear, and to fund nuclear, and to get your finger in as many pies as you can do that tick the boxes for the government funding. So it's interesting how they're playing it, really. Like you say, they are investing in alternatives to it, but they do seem to pushing (nuclear).*
> **(Female, Leeds)**

6. BENEFITS OF INNOVATION

Without romanticising innovation, this group see the benefits of change in all areas of life, from the global down to the personal, often demonstrating a clear perspective of the progress of time. This makes them more open to the concept of radical innovation as well as incremental innovation.

> *My brother lives in Brazil about 1,500 miles away from Rio. I am in daily contact with him in a way that I was not when he was here. I can speak to him on WhatsApp, I can Skype him, I can Twitter, I'm on Facebook. These are all things that allow me to communicate with my brother in a way that 20, 30 years ago I would not have been able to do.*
> **(Male, London)**

They also tend to immediately grasp the potential of major medical innovations.

> *I've actually got something about that as well, because they're now using it in medicine. They've 3D–printed a tube when a baby's windpipe collapsed, and replaced it with the one that they 3D–printed. Another one was somebody's crushed their eye socket in an accident, and they rebuilt it using a 3D printer. It's just amazing.*
> **(Female, Leeds)**

Where other segments often see communications technology as desocialising, **INNOVATION FUTURISTS** counter with the benefits of global reach and immediacy.

> *I don't really get the point that with technology and looking on the phone, you lose all the communication with others. Totally the opposite; it's total communication. For example my class at school when I went there, I would've lost contact if it wasn't for Facebook, for WhatsApp, for all these things that still make us be able to communicate with each other really easily. So that way we don't lose the friendship.*
> **(Male, London)**

> *My mother has recently discovered Skype system. Her sister emigrated to Portugal and she's got her first tablet as well, which she's massively excited about, and everything I go round I can't see her face because the tablet, she looks at it here, 'Hello, how are you?' She loves the fact that she can see her sister, who lives in Portugal, and when they come over it's as if they've only just spoken, they've only just seen each other the week before, so that's a great positive that you can keep in contact with loved ones and friends.*
> **(Male, Manchester)**

> *Everything instant, I can give you an example. We had a parcel delivered. We were waiting for this parcel delivered to the company. We needed it quickly, so someone phoned up and said, 'When it's going to be delivered?' They said between 1:22 and I think it was 1:37, the tracker is indicating it will be there in the next five minutes or whatever and it was. Now, to me, after it had been delivered I said, 'Find out who that delivery person set up was, we'll use them', so I love that everything instant thing, it's great.*
> **(Male, Manchester)**

> *Overall, they believe that innovation benefits the economy by creating jobs. Well, it's important for the economy because it creates jobs.*
> **(Male, Manchester)**

7. CONCERNS

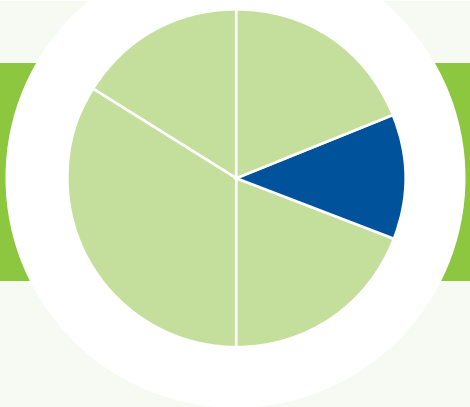
This segment are largely relaxed about innovation, but may occasionally talk about progress being undermined by market inefficiencies, bad decision making, and withholding access to innovations.

> *Car manufacturers have been accused of holding back technology, which could be saving everyone money because in the long run it's not making the petroleum companies as much money as it could do if it was easier for everyone to switch to electric cars, or dual fuel cars, all this kind of thing.*
> **(Male, Manchester)**

> *There is the whole rumour that the cure for cancer has been found by pharmaceuticals, but the cancer drugs cost so much to produce and are so expensive that it will put the organisation out of business if they release it.*
> **(Male, Manchester)**

INNOVATION ROMANTICS

12 PER CENT OF THE UK POPULATION



Factor	
Pace of change and innovation over-reach	Average concern
Personal creativity and risk taking	Low
Importance of new ideas and risks in society	High
Future planning	Tend not to plan ahead
Excitement about innovation	High
Ethical/rights focus	Low ethical/rights focus
State and social focus	Market and consumer oriented

Characteristics	
Gender	60% Male, 40% Female
Age	Typically older
Social grade	Typically C2DE
Current affairs interests	No specific interests
Innovation interests	Science, Technology, Communications
Activities	Least active in most areas

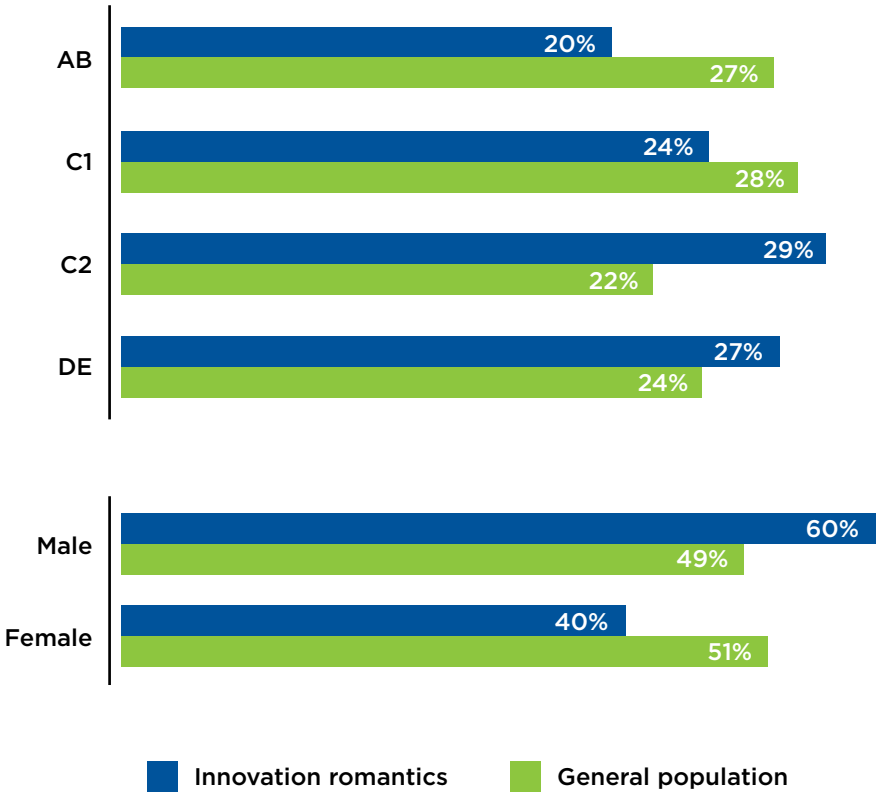
Innovations	
Favourable	Typically all, including controversial innovations
Unfavourable	–

Overview

INNOVATION ROMANTICS (12 per cent of the UK population) find consumer innovation exciting and interesting, but tend not to engage with innovation as a policy or with long-term innovation objectives. They are more likely than other segments to agree that *"new ideas and products are what make a country great – even if they don't have much economic benefit".* The high intrinsic value they attach to innovation means that they tend to approve of most innovations they have come into contact with or heard about in the media. They are, however, the least likely to have participated in any of the innovative activities tested in the survey. Despite two-thirds (68 per cent) saying they would be interested in hearing about new scientific and technological innovations, only 9 per cent have conducted a scientific research experiment, compared with 13 per cent of the general population.

Who are they?

While our attitudinal segments include people from a disparate range of backgrounds and demographic profiles, the archetypal **INNOVATION ROMANTIC** is a C2DE male:



1. DEFINING INNOVATION

INNOVATION ROMANTICS tend to think of innovation as consumer goods – 'gadgets' and 'new technology' that they encounter in their personal lives.

> *I'm quite into gadgets as well; the new androids and stuff that are out where you can flip the thing on the television.*
> **(Female, Birmingham)**

> *I'd say technology.*
> **(Male, Leeds)**

> *I've just bought my son a laptop and it's got touch screen on and everything and I'm really into that kind of gadget.*
> **(Female, Birmingham)**

Innovation is generally seen to be exciting – almost a form of entertainment for this segment.

> *Futuristic.*
> **(Male, Leeds)**

> *I think a lot of it catches your eye because you're just, wow, I can't believe someone's thought about that.*
> **(Female, Birmingham)**

The causes of innovation are believed to be a mixture of the creative ingenuity of 'madcap' inventors and commercial investment, with the two seen as separate stages in the process.

> *Yes, I was going to say, you know, some geniuses just need an outlet to getting their ideas out, (agreement) like the dude who made the Wind Up Radio; he didn't want no money for that, he made a Wind up Radio. (Agreement).*
> **(Male, Leeds)**

> *The guy who invented the first time recorded sound, he recorded 'Mary had a little lamb', how on earth could he possibly see whether there was any profit in that? He did that as an exercise of, 'Look at what I can do. Look at what I've done'. (Agreement).*
> **(Male, Leeds)**

> *You only ever heard of all these innovations because a company's got behind them and bank rolled them after they've – you know. I think a lot of creative people just like the challenge, but then the people who put the money in, and set the factories up to mass produce, and stuff, they see the commercial potential.*
> **(Male, Leeds)**

2. PACE OF CHANGE AND LONG–TERM VIEW

INNOVATION ROMANTICS are not long–term planners, and tend not to be especially concerned about the future. This influences their political views, which tend to be small state and focused on immediate outcomes.

> *Maybe I'm selfish but I don't care what's going to happen in 50, or 60, 70 years' time. I suppose I'm very much, if it doesn't affect me then never mind. (Laughter) If it's going to make my life easier tomorrow, the next year, whenever, then happy days.*
> **(Male, Leeds)**

> *But I just think every generation looks after itself so years ago they weren't thinking, do you know what John, we need to do something for when young ones grow up, they were just doing what they wanted to do to make their life easier: inventing phones, making cars, whatever. They weren't thinking that they'll have super cars and hybrid cars.*
> **(Male, Leeds)**

Energy is the one area where long–term concerns may be expressed, typically in terms of depleted resources and the need to discover new energy sources.

> *The fact that we're running out of electricity and energy. What is it fracking?*
> **(Female, Birmingham)**

> *I think a lot of planning is done for the future, not for now. I mean, at one time, them solar panels, they weren't free. So they've brought them in at a time when all the powers of electric – and it's all getting expensive, you know. So it's a pretty good model actually. It's the in thing, isn't it, for the future, do you know what I mean?*
> **(Male, Leeds)**

3. ROLE OF GOVERNMENT

They generally see the world of innovation as a world driven by consumer demand.

> *A lot of innovation is driven by commercial interest and then – so having that consumer market is something that does bring on technology, and that's why we've got, you know, iPhones that you can sell and no cure for cancer, because there's a lot of work put into things that have got a market value.*
> **(Male, Leeds)**

> *But they're only doing what the consumers want as well. If people didn't want all the crap that we buy they wouldn't bother making it all. (Laughter)*
> **(Male, Leeds)**

This tends to translate into pro–market views, believing, for instance, that tax breaks are one way of driving innovation in the UK.

> *I think the government have got to make the country that they govern attractive financially for businesses to plant their feet there. If the taxation's too high there, they're going to go to a country where the taxation is lower, and that country's going to be part of that innovative rise. So I think the governments got a duty to try and make their country be as attractive as possible to invite businesses to do their stuff in that country.*
> **(Male, Leeds)**

> *I think you need regulation, but the trouble then is the free market economy only grows if it's a free market economy. If it's a regulated economy then it doesn't grow as well, you run the risk of then creating another bubble which will burst.*
> **(Male, Leeds)**

A national perspective on innovation is common, contrasting Britain with countries like the United States.

> *Well, they just seem to be... I don't know what it is about Britain, we just have this thing. It's like we're five, ten years behind America. We're always waiting to catch up to everyone else for some reason. I don't know if it's a British thing, it's just things I've noticed. We don't have that drive.*
> **(Male, Leeds)**

Allusions to *Dragons' Den* are particularly popular among **INNOVATION ROMANTICS,** as this ties in completely with their understanding of the way innovation works.

> *It's a bit like Dragons' Den to me, but where the funding comes from would be the question. If it was just a general thing that came in the paper maybe oh yes you're funding entrepreneurs, you'd be thinking, hang on who is paying for this? With things like Dragon's Den it's really great isn't it when somebody goes in with a good idea and they go well right well we'll offer you this and there's a bit of a deal that goes on. I think everybody would like that.*
> **(Female, Birmingham)**

Solutions to the challenges of progress are rarely debated in depth, but are generally accepted positively and unanimously.

> *Getting kids to make computer games instead of just playing them. (Agreement)*
> **(Male, Leeds)**

> *Yes and more widely like with the solar panels and things like that, so you're actually looking after the environment as well, because I think that's massive now the whole environment thing and cutting down on energy waste and pollution and all that sort of stuff. So it's really important.*
> **(Female, Birmingham)**

4. BEHAVIOURS

They are not innovators themselves, regarding themselves as lacking in creativity and drive. Their view of the typical innovator is someone with a different personality and skillset.

> *You imagine a lot of the people that are behind this technology are probably autistic and stuff, do you know what I mean, like all these computer people who are probably not the kind of people that are good communicators and stuff, so that's why they get involved in all this stuff. You see programmes on all the people that were around Microsoft and stuff in the 70s, they just seem like your total geeks, don't they? You know, just lock themselves in the bedroom and doing this stuff all the time, and that was their outlet.*
> **(Male, Leeds)**

5. CONTROVERSIAL INNOVATIONS

INNOVATION ROMANTICS are usually relaxed about controversial innovations which other segments may perceive to raise difficult ethical implications, such as human stem cell research.

> *Well, one of the – stem cell research is a bit of a touchy subject, but at the end of the day if it kills peoples' cancer I think it's good. I think it's a good thing.*
> **(Male, Leeds)**

They are also positive towards communications innovations that other segments perceive to be damaging to communities and social fabric.

> *I just think it's amazing, not, like, for a long time, you read about new technology and it's things in science, or it's things in the industry, but now the cutting edge is what you can own yourself, like the iPhone and the iPod, and I just think it's amazing.*
> **(Male, Leeds)**

6. BENEFITS OF INNOVATION

Innovations not only serve practical purposes, but also make life more interesting and entertaining for **INNOVATION ROMANTICS.**

> *Well, I've got a tablet now, and it took me a while to get used to it, but it's lovely, because anything comes up on the television that I don't know about, or a piece of music that I haven't heard before, and a composer I don't know, I tap away, and lo and behold, the answer comes. So it's just fantastic for me. I love it. It's just marvellous.*
> **(Female, London)**

> *I've got the iPhone 4 and somebody showed me one with the fingerprints and I really want to go and get one of them now just because of that. I'm sold on things like that.*
> **(Female, Birmingham)**

> *First and foremost mobile phones and tablets (agreement) have probably influenced and affected everybody's life. Me personally, professionally, it makes my life a hell of a lot easier that if I'm going out to see a client I don't have to go with a briefcase with all sorts of guff in it. I can go with a tablet and bump, bump, bump, there you go, this is what we can do, and you can go as far as putting applications through there, and then telling them that this is what you've got and emailing it without having to go see them; rather than go back to your office, print something off, make an appointment to go back and see them again, get them to sign it, and then have to post it off. It just makes everything so much easier that you can do everything in one go.*
> **(Male, Leeds)**

7. CONCERNS

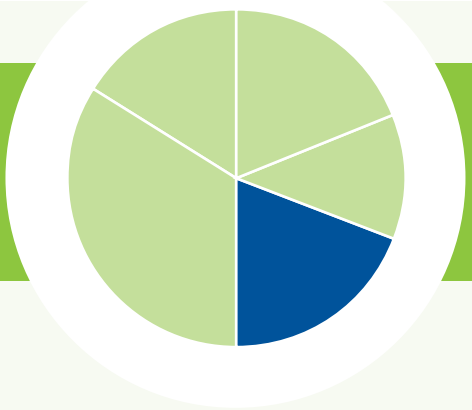
This segment are generally unconcerned about the consequences of innovation, but they do see problems with the education system failing young people who are interested in science and technology.

> *They've made it too hard for the average person to go to university.*
> **(Male, Leeds)**

> *Yes, we were lucky to get an hour of either IT or Technology.*
> **(Male, Leeds)**

INNOVATION CREATIVES

19 PER CENT OF THE UK POPULATION



Factor	
Pace of change and innovation overreach	Average concern
Personal creativity and risk taking	High
Importance of new ideas and risks in society	Low
Future planning	Tend not to plan ahead
Excitement about innovation	Above average
Ethical/rights focus	Average
State and social focus	Tend to think socially

Characteristics	
Gender	Broadly equal: 57% Female, 43% Male
Age	Typically younger
Social grade	In line with general population
Current affairs interests	No specific interests
Innovation interests	The Arts, Sport
Activities	Used a smartphone for e–banking

Innovations	
Favourable	Online shopping, smartphones
Unfavourable	GM foods, space travel

Overview

INNOVATION CREATIVES (19 per cent of the UK population) are typically younger than average, confident and on–trend, displaying high levels of personal creativity and a social perspective on life. They are the least cautious segment, and the most likely to agree that they are *"creative and often come up with new ways of doing or thinking about things".* They struggle the most bringing innovation together as a single concept, and therefore tend to see innovation as a series of different processes with different features. They relate best to innovation when it is described in terms of everyday practical solutions and modes of communication – including arts and entertainment media, where they are more interested in hearing about new innovations than other segments.

1. DEFINING INNOVATION

INNOVATION CREATIVES are often early adopters, and tend to recommend new products and ideas to their peers. They tend to think about innovation in the context of their own hobbies and interests.

> *Okay, I had a couple of things. The first one was I am a big tea drinker, but I hate the way there's nothing snazzy or good for tea drinkers, it's just a kettle, a bog standard kettle. So, I did a bit of research, because if you're a coffee drinker you've got all sorts of gadgets and gizmos and lovely things that go hiss and whiz and make lots of noise and I don't like coffee. So, I did a bit of research and I actually purchased this after the research, it's a Breville One Cup and it still just makes one cup of tea, but I absolutely love it because it's like your dispenser that you get at a machine, you put your cup in, you get it straightaway and then hit the button and you can put, you know, have your herbal teabags and whatnot.*
> **(Female, Glasgow)**

> *Well, I've got a hobby; I don't know whether this fills the criteria that you're after but I've got a hobby and it's restoring old cars. I've just recently been following up some information I've picked up – you lads will probably know more about it than I do at the moment – and it's 3D scanning. Anybody heard about that?*
> **(Male, Bristol)**

> *I make soap for a living and bath bombs and lip balms and everything, so I'm always sharing my ideas with my friends.*
> **(Female, Glasgow)**

Tying together innovation as a single concept or policy objective is less straightforward, as they are focused much more on the features, pros and cons of individual innovations.

> *(Moderator: What, if anything, do these have in common?) They're all written in black pen. They're all important, yes.*
> **(Male, Bristol)**

> *Inventions or something.*
> **(Female, Glasgow)**

> *You read things all the time that you think, 'That might be quite quirky, it might be quite good', but at the end of the day it might just be a bit rubbish. If you actually come across something that really works well and you go, 'Nifty idea.'*
> **(Female, Glasgow)**

INNOVATION CREATIVES are curious and interested in new ideas, especially ideas that demonstrate creativity and solve practical problems.

> *There's got to be a benefit, whether it's a financial benefit, a time–saving benefit to attract me.*
> **(Female, Glasgow)**

> *I found this thing which is called the Skycouch, so basically if you imagine that you're on a plane, there's a row of three, there is a footrest that comes from under here and it basically becomes like a flat bed in economy, but it's only run by Air New Zealand at the minute. So, basically you pay, like if there's a couple travelling, you pay half price for the third seat and that's then the whole row becomes yours, or if it's a family of three and they've paid for three seats in that row, then they get the Skycouch, so basically, like you can lie flat in economy.*
> **(Female, Glasgow)**

> *I found like a 3–D pen, not a 3–D pen, a Wi–Fi pen and everything you wrote was then automatically typed up into words and I thought that would be really useful for work and things.*
> **(Female, Glasgow)**

> *I emailed it though, but it's like a new thing this last couple of weeks, an inflatable bike helmet, so it looks like a scarf when you're cycling and then, at impact, it goes really strange, it goes all over your head, including the front, it inflates like an airbag. It was invented in Sweden, but a lot of people have taken it on because it just looks like you're wearing a big neckerchief, but if you start falling it can sense the movement and the fall. If you fall off the bike and someone hits you, it goes up all over your head like that, like a big airbag.*
> **(Female, Glasgow)**

2. PACE OF CHANGE AND LONG–TERM VIEW

The pace of change in society is not a defining issue for the **INNOVATION CREATIVES** segment, with most neither embracing nor fearing the passage of time, often focusing on the effects of technological change on end users rather than on society as a whole.

> *(Moderator: How many of you are scared by change in society?) I'm not scared of it, but I have got one of the first iPod, I do like gadgets and I've got one of the first iPod Minis. I've got the first iPad and I've got one of the first Kindles and within six months it was out of date and I'm not going to spend another £500 getting the next one.*
> **(Female, Glasgow)**

3. ROLE OF GOVERNMENT

INNOVATION CREATIVES tend not to think about innovation as an issue involving government. The impact of rules and regulations on their own jobs is sometimes highlighted as a barrier to innovative work.

> *Because (of health and safety regulations) you've got to get a scaffold because you can't stand on your steps because they don't allow you to use steps and you think, but if I was at home I could change my light bulb; I can stand on a chair and do it.*
> **(Male, Bristol)**

4. BEHAVIOURS

Although they see themselves as creative, they do not necessarily see that that makes them innovators.

> *In my everyday life, I'd maybe say creative because I create an end product, whereas soap, is it useful? It's a kind of thing you need to have really or people wouldn't talk to you. I wouldn't say it was – I don't know.*
> **(Female, Glasgow)**

> *Everybody comes up with ideas, everybody...*
> **(Male, Bristol)**

> *I think it's to do with what I trained in and just naturally like I'm cast maker, a mould maker, so that's constantly thinking about how you're going to get things to work properly.*
> **(Female, Glasgow)**

> *Well I mean I class myself as a creative person. I'm a photographer and I class myself, my job, as pretty creative, but generally like in my own house, I love making things and just making – I love doing something, upcycling certain things.*
> **(Female, Glasgow)**

5. CONTROVERSIAL INNOVATIONS

INNOVATION CREATIVES are not seriously worried about the effects of innovations on their lives, but tend to believe that technologies can both help and hinder – perhaps by adding to the stress of modern life.

> *...because you just use your phone now. So, maybe, I don't know, I'm just wondering if I'm starting to maybe think I don't want to be constantly charging something in my house. Almost every socket in my house is charging something up and I'm just starting to wonder if something would be innovative enough to stop me having all these different things. I don't know whether I'm just getting a little bit sick of yet another product that I'm plugging in...*
> **(Female, Glasgow)**

Occasionally they are able to draw the link between interesting, creative inventions and the genuine potential for innovation to tackle important challenges.

> *(3D printing is) creating organs and that's creating things; that's an innovation which is ultimately going to change people's lives.*
> **(Male, Bristol)**

6. BENEFITS OF INNOVATION

They tend not to adopt a historical perspective on the benefits and drawbacks of innovation in society, seeing change as inevitable and something to which they have generally adapted well.

> *I think to me, kind of change, having to change, is almost innovative, that's what innovation is, do you know what I mean? That's how you move on, that's how you adapt, that's how you progress.*
> **(Female, Glasgow)**

> *Mobile phones – it's everything in your pocket, isn't it? You've got your camera, your sat nav.*
> **(Male, Bristol)**

> *Every new idea creates another idea for somebody else to go and invent something better and different to that so everybody...*
> **(Male, Bristol)**

7. CONCERNS

While they are generally unconcerned about the impact of change and innovation on society, they do talk about social effects – like disposability and desocialisation.

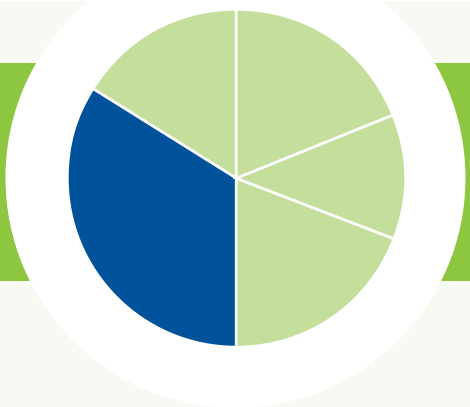
> *With your telly, for example if your telly broke 20 years ago, you could go down your local hardware shop and buy a spare bit to fit it. Now if your telly breaks, you've got to go to the manufacturers, because only they know how to do it.*
> **(Male, Bristol)**

There are also some privacy concerns in relation to communications technology, although not expressed as often or as consistently as other segments.

> *Who decides where we draw the line between privacy and public life? So, of course, I don't think there's anyone who would think that paedophilia isn't wrong, but actually, do I want the government looking through my emails because someone out there might be a paedophile? Probably not.*
> **(Female, Glasgow)**

INNOVATION REALISTS

34 PER CENT OF THE UK POPULATION



Factor	
Pace of change and innovation overreach	Average concern
Personal creativity and risk taking	Average
Importance of new ideas and risks in society	High
Future planning	Average
Excitement about innovation	Low
Ethical/rights focus	High
State and social focus	Average

Characteristics	
Gender	57% Female, 43% Male
Age	In line with general population
Social grade	Typically ABC1
Current affairs interests	Wide interest in current affairs
Innovation interests	Healthcare, energy, education
Activities	In line with general population

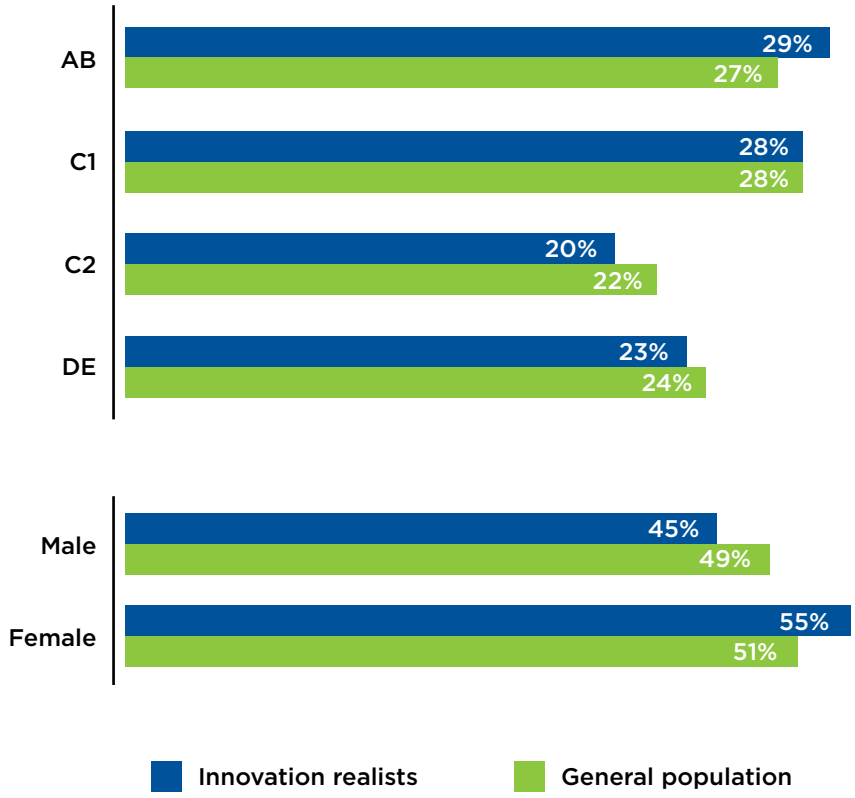
Innovations	
Favourable	Human stem cell research
Unfavourable	GM foods, space travel

Overview

INNOVATION REALISTS (34 per cent of the UK population) are the largest segment in the Innovation Population, and likely to be particularly important to those trying to communicate the benefits of innovation. This is because they tend to appreciate the broad innovation policy environment, but are not excited by innovation per se, believing that ethics and rights should be central to innovation policy and delivery. They are the segment most interested in current affairs, particularly valuing social innovations in areas like health, education, and transport.

Who are they?

While our attitudinal segments include people from a disparate range of backgrounds and demographic profiles, the archetypal **INNOVATION REALIST** is somewhat older (average age 50, compared with 43 for **INNOVATION CREATIVES**) and more interested in current affairs than other segments.



1. DEFINING INNOVATION

INNOVATION REALISTS tend to think of social innovations when asked to describe new ideas. This often means ways of improving the systems and institutions which influence our quality of life, but also extends to practical, everyday innovations.

> *Then you're making use of the space, so I thought that looked quite – particularly good. There's a new innovation from the government at the moment, about new mothers being offered £200 in shopping vouchers to breastfeed. I thought that was quite a good way, targeting deprived areas and it's trying to – they've done it before with smoking and losing weight and things. But I thought that was quite a good idea.*
> **(Female, Bristol)**

> *Six weeks ago in the newspapers, there was a company, or a university company in Glasgow, who invented a label that you stick on open food and it measures whether it's actually still fresh or whether it's still... It's not like the traditional, you just stick a label on it saying frozen, eight months, it measures whether or not it's still fresh and good to eat. It's away down south to be with a venture capitalist to market it and try and get... So that was really interesting.*
> **(Male, Glasgow)**

> *You take the NHS and there, I think innovation is important. Cancer Research and all the research, that's kind of innovation. Someone somewhere is sitting and being innovative about ways to test for things, do things. So, there's an element of you have to be innovative in that way to improve health and other things. For some things it's important and for other things it doesn't matter does it?*
> **(Female, Bristol)**

Incremental innovations make more sense to **INNOVATION REALISTS** and are more likely to be conversation topics than the radical innovations which interest other segments.

> *I think unless it's like a totally new invention, I think innovation is about constantly making things better, as these guys have said, and changing. I think there are some things that come on that are not innovation, are totally new. The mobile phone, I suppose you could say it's innovation on a telephone, but the whole principle behind it, it was a whole new concept.*
> **(Male, Glasgow)**

2. PACE OF CHANGE AND LONG–TERM VIEW

INNOVATION REALISTS are neither especially relaxed nor unusually concerned about the pace of change in society. They tend to describe it terms of different generations in their own family.

> *When I get a lot older, and I have grandchildren, my understanding of technology is probably going to be a lot better than it is than my grandparents. So I can't imagine life without it now, because I've always had it. So I'm wondering, if I'm going to be like my grandchildren and go, 'Oh no, don't you know this?'*
> **(Female, Bristol)**

> *The first computers in the 70s, the little ZX Spectrum or the little table tennis, a little daft game and you look at it now, you can now get internet ready televisions, they're talking about holographic televisions. I mean that's only been in 30 years. So I don't know where my daughter or grandkids, if it keeps going at this rate of change and this rate of progression, I have no idea where it will.*
> **(Male, Glasgow)**

> *And it's, yes, and yes, the environment isn't sort of static, it's constantly changing and so everything needs to change.*
> **(Female, Bristol)**

Some are more concerned about the pace of change, perceiving its impact on product durability, national identity and workplace demands.

> *It is quite scary yes, because the change is so fast. Companies are there to make money, they all invest money and make profit out of it, so you can see where they're coming from if they make that software obsolete, then you have to buy the new box or the new software. So you're constantly buying in to it aren't you? Sometimes you stand back from buying something new because it could be obsolete so fast.*
> **(Male, Glasgow)**

> *I also think that some countries feel that they're pressurised to bring out these new products. Because it's expected of them. Like Japan for example, they're known for bringing out all these new ideas and they have to keep up with it, because other countries are expecting that from them. So we feel like, oh we have to think of new ideas otherwise you know, we have to keep up with our reputation.*
> **(Female, Bristol)**

> *I think as well especially in Britain and in Europe there's a constant push to – like society's getting busier and busier. More things are expected from you...to do things cheaper and faster, and you know, innovation helps with that. Like for example if you get a faster computer it means that you can work faster. It helps productivity.*
> **(Female, Bristol)**

3. ROLE OF GOVERNMENT

INNOVATION REALISTS see government as important as a lawmaker and regulator, rather than as a source of untethered funding for new initiatives.

> *And also, it must be deemed as quite important, because Vince Cable is the Secretary of State for Business Innovation and Skills, so they obviously think it's important to have it on the agenda. It exists within the government to be there, to drive that forward, doesn't it? So it's deemed as important for our society.*
> **(Female, Bristol)**

> *For me, the amount of money that gets talked about, I cannot get my head round it. It used to be millions, now it's billions. I just cannot physically get my head around the amounts of money that we waste in this country. It's just baffling to me, that we're in the state we're in.*
> **(Male, Glasgow)**

Where government can play a role in delivery of major public projects – in healthcare, education and transport – there is more acceptance of high government spending.

> *The government has a role to play in innovation, for example, the high-speed rail link London to Manchester that will cut journey times by two-thirds. It suddenly means that you could commute from that area in to London. So you are less stretched on housing, you've less profitable areas and the country almost joins together. That's great that they invest in that innovation.*
> **(Male, Glasgow)**

4. BEHAVIOURS

Everyday activities are seen to be innovative, and there is a tendency to play down the importance of hi-tech gadgets and inventions.

> *Surely everybody does it. Surely when you sit in a pub and I tell somebody that I can fit an exhaust to a car, I watched it on YouTube, is that not being innovative? It might sound really, well I don't know if that would bore you to tears, if I told you the details it probably would, but when you're talking about what somebody has done, DIY in the house or an app for a phone or maybe somebody has got solar panels or somebody else has invested in it. That's interesting, and you ask questions about it, to a point, then you can break off. But I think we all talk about it.*
> **(Male, Glasgow)**

5. CONTROVERSIAL INNOVATIONS

Ethics and human rights are seen as more important than innovation and progress by this segment. This does not mean that they are mutually exclusive goals, with innovations in sustainability often attracting attention – tying in with broader concerns about a culture of disposability.

> *I found an environmentally friendly watering can. I do a lot of gardening, so reducing carbon footprint and I've started changing my attitude recently, so that caught my eye.*
> **(Male, Glasgow)**

> *There's a bit to do about the recycling, I don't think we're very good. I was in Holland 20 years ago, my brother–in–law's Dutch, they've got recycling down to a fine art. Whether it was tins of paint, plastic and bottles, plastic bottles, they recycle Coca–Cola bottles or beer bottles. They just buy a crate and they take the crate back and they might get £5 back for a crate of beer bottles. That's cost saving. Or wine bottles, even plastic bottles, you get money back on them. We just throw them away because there's no incentive to take a ginger bottle back to the shop.*
> **(Male, Glasgow)**

There is also an acceptance among many **INNOVATION REALISTS** that the drawbacks of innovations need to be weighed against the benefits. Although data privacy does concern this segment deeply, they are able to weigh this against the benefits.

> *Let's say, for example, the Oyster card. If you think about it, it's a tracking device. Would you like the idea of someone saying to you, 'I'm going to follow you everywhere you go and I'm going to record every single move you do'? If they put it to you that way you would say, 'No, I'm happy with the paper travelcard.' But when they put it to you this way: 'It's going to save time, you're going to save money on your fares,' et cetera, I'm sure you were all for it.*
> **(Female, London)**

When asked to imagine the motives of innovators, there is a perception that innovators in fields like healthcare are more likely to be motivated by good intentions than those working on consumer goods and services.

> *I think you still get these people, look at research and development in kind of a disease, people who work in labs, these kind of people are still really kind of in to finding out solutions for things.*
> **(Male, Glasgow)**

6. BENEFITS OF INNOVATION

While this segment tend to balance the benefits of innovation with the drawbacks they can identify, they do acknowledge that it is necessary to keep pace with change.

> *We need more ideas because of the way we're all going. We need to keep up with the pace of things.*
> **(Female, Bristol)**

There is a general view that most innovations bring both benefits and drawbacks, and that this is the conclusion to be drawn from any sensible analysis.

> *There's a positive and a negative with all things isn't there? Online banking and you've got people who – obviously with the phishing emails and things like that.*
> **(Female, Bristol)**

7. CONCERNS

The pressing concerns for **INNOVATION REALISTS** are desocialisation and disposability. They are concerned that modern technologies too often replace social interactions with virtual communications.

> *People don't have conversations anymore. People go out and you can see couples at a table having a meal and they're not talking because they're texting on their phones. I think they're all well and good mobile phones, but I think it's having a negative effect on society in some ways, and family life. I think there's a lot of good technology, but I also think there's a lot of technology that's an absolute waste of time and money, and energy. Sometimes it's just technology for the sake of it.*
> **(Female, Bristol)**

> *I did say that the internet is fantastic, but it actually does scare me. I'm personally not on Facebook, and I just chose not to be. There's enough other mediums I'm using at the moment, but I do – I'm scared when I watch the news and you talk about grooming and other stuff that goes on. How technologies using the security behind it. That worries me for when my children get a little bit older and they want to start using these things.*
> **(Female, Bristol)**

> *People are shopping differently, they're shopping on the internet, they're shopping totally... The way people now buy things is changing and shops are shutting, people are losing their jobs. Whole communities are getting harmed. As much as technology is a wonderful thing, and I would always say it is, but there is a flip side to that.*
> **(Male, Glasgow)**

As with other segments, some concern is expressed that the march of progress has made it impractical to repair modern consumer goods.

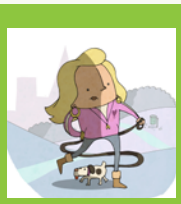
> *I'm horrified at how much we throw away. The television we've got, we went to buy a television but only after our one broke, because I refused to buy a flat screen until the massive great beast of a thing broke down, after seven years, after the warranty was run out and the support was gone for it. But the telly that my mum and dad had lasted 15–20 years. They all talk about washing machines and fridge–freezers and everything, whereas now if something breaks you don't phone anybody out you just shut the door, put it out the back and throw it away and go and buy a new one.*
> **(Male, Glasgow)**

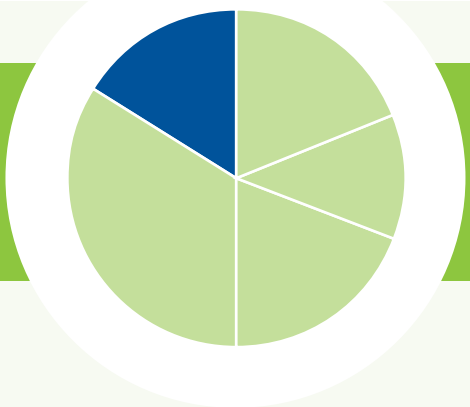
In some cases, they express serious concerns about the unintended consequences of innovations in areas like healthcare:

> *There was also something, going back to – wasn't there talk about the Beckhams going for another child because they could guarantee that they were having a girl or something? That sort of thing. There's one thing coming up with something to, you know, get rid of diseases and stuff like that, to help improve people's lives, but to actually pick your family, blonde hair, blue eyes. I want a girl, not a boy.*
> **(Female, Bristol)**

INNOVATION SCEPTICS

16 PER CENT OF UK THE POPULATION





Factor	
Pace of change and innovation overreach	Concerned
Personal creativity and risk taking	Low
Importance of new ideas and risks in society	Low
Future planning	Tend to be future planners
Excitement about innovation	Tend to get excited
Ethical/rights focus	Above average
State and social focus	Average

Characteristics	
Gender	Typically Female (70%)
Age	Typically younger
Social grade	Typically C2DE (less affluent)
Current affairs interests	Economy, Healthcare/NHS
Innovation interests	Healthcare, social care
Activities	Created or modified a recipe, created or modified an item of clothing

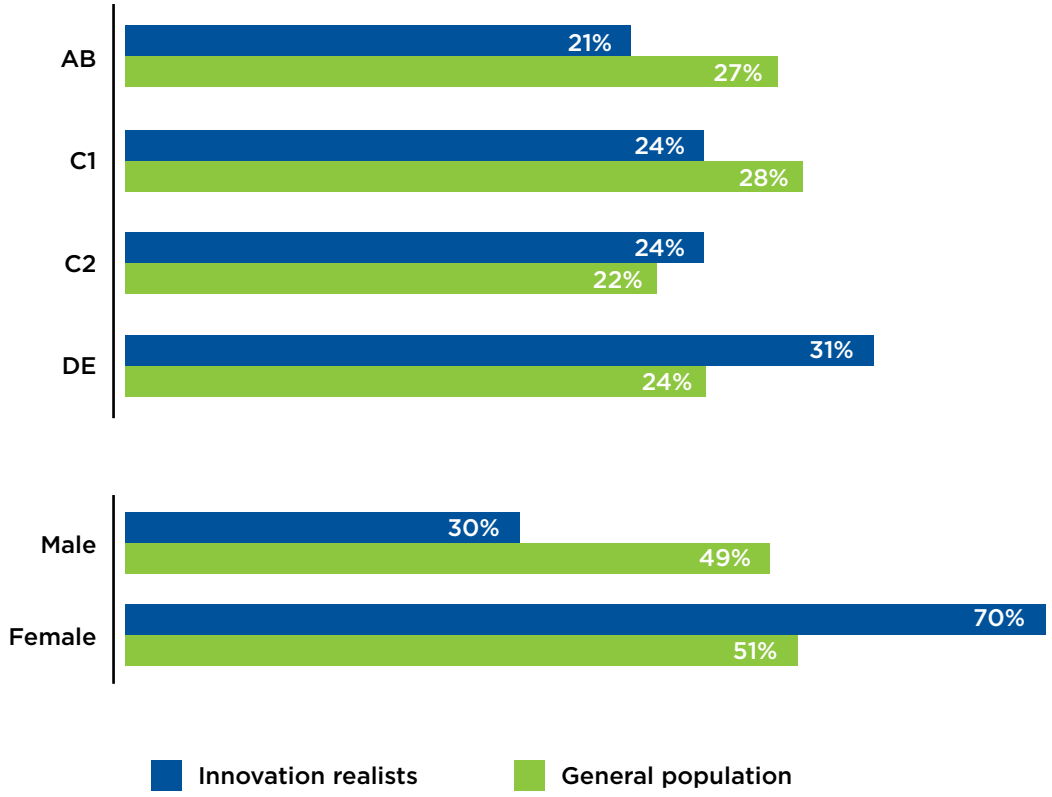
Innovations	
Favourable	Medicine, health–related
Unfavourable	GM foods, nuclear energy, space travel, robots

Overview

INNOVATION SCEPTICS (16 per cent of the UK population) are people who are particularly concerned about the pace of change in society. They are cautious and practical, seeing new ideas as less important than solving problems by using existing ideas and technologies better. Like INNOVATION REALISTS, they are interested in social innovations, but tend to be more focused on the impact of policy on their lives, rather than ethical concerns. They also express much more concern about the recession and the availability of good jobs. They are very uncomfortable with radical innovation, preferring to talk about all innovation as incremental innovation.

Who are they?

While our attitudinal segments include people from a disparate range of backgrounds and demographic profiles, the archetypal **INNOVATION SCEPTICS** is a C2DE woman:



INNOVATION SCEPTICS are the segment most detached from the political mainstream, often feeling a sense of powerlessness, which is reflected in their often pessimistic viewpoints.

> *We can't change things anyway, so even if they come up with something we didn't agree with or we didn't want, then we couldn't change it. You see, I've never voted in my life ever, well that's because I don't really want to get involved with the bits and pieces because I've got no interest in it because I can't change it on my own anyway, I just go with the flow.*
> **(Female, Manchester)**

1. DEFINING INNOVATION

New ideas are seen through the prism of everyday life – including the economic struggles that people face.

> *The one that caught my attention was when I was looking through Facebook, the hairdressers that I go to was doing a swag night. So basically you go and put a donation in a bucket and it's for a charity. Take five pieces of unwanted clothing or bags or shoes, hang them on a rail, your rail and then you look at other people's and basically swap them.*
> **(Female, Manchester)**

> *This is the climate struggling with food, petrol, energy costs; there was an advert on television last week, Johnny Ball, and he was putting forward this affordable warmth scheme. I think it's like a government grant backed scheme. You need to meet certain criteria to qualify but you could get an A–rated boiler. That's something that's caught my eye.*
> **(Male, Birmingham)**

When asked to define innovations collectively, they tend to focus on innovations as practical solutions that improve people's quality of life.

> *They're something that makes your life a bit easier.*
> **(Female, Manchester)**

> *It's all part of life isn't it?*
> **(Male, Birmingham)**

The word 'innovation' is seen as technical jargon, and not part of everyday vocabulary.

> *I wouldn't say innovation is a very widely used word.*
> **(Female, Manchester)**

> *Innovation sounds a bit technical, doesn't it?*
> **(Female, Manchester)**

Innovations are generally seen to evolve from existing ideas and processes, and **INNOVATION SCEPTICS** are more comfortable talking about those innovations which fit this pattern.

> *(Moderator: What, if anything, do the NHS and the World Wide Web have in common, in terms of how they came about?) They evolved. So they start off as something that's someone's little idea. So for example, the NHS, different things get added to the NHS because they're done say on back streets and then they decide to bring them to the forefront and then get government funding and then it involves from there. They find that there's a need and then more people and they have to evolve it again, change the practices and similar with the World Wide Web. That was developed for the government again, and then it was obviously to be rolled out because people are interested in it. That's my understanding of the two anyway, I might be wrong.*
> **(Female, Manchester)**

> *But these all evolve don't they, someone's come up with the idea, whereas this is already existing, so it's ongoing, it's the norm. Nothing here is, in its time it was innovative but it isn't anymore, it's happening, it's nothing... Innovative is something, hang on a minute, that's a good idea, nobody has ever done that before. That's what it is isn't it? But it evolves from stuff like this doesn't it?*
> **(Male, Birmingham)**

> *I think that's only natural that's going to happen because the competition now, the companies are eager to outdo each other, so that in itself is going to take care of itself because they all want to be the best, so they're always going to improve.*
> **(Female, Manchester)**

The purpose of innovations is important. This segment are least likely to see an intrinsic value in innovation, although they are excited by innovations that serve obvious practical needs.

> *I think it just has to be useful as well. If you're going to sell an idea it's got to be of some purpose to the people who are going to buy it or use it.*
> **(Female, Manchester)**

2. PACE OF CHANGE AND LONG–TERM VIEW

INNOVATION SCEPTICS are generally late adopters, placing relatively low value on innovations until they are confident that they have an application.

> *I'm not really into, apart from my phone, into that much new technology and stuff like that. I've just got a basic laptop, but my brother he's a techno person.*
> **(Female, Manchester)**

The pace of change weighs heavily on their minds, with people in this segment often being more cautious of change than other members of their own family.

> *(The subject I teach) is not academic at school but I know pupils can do homework in 60 seconds and teachers know it's copying; you cut and paste from Wikipedia and that's their research project done. No thought, it gets an A, they do their homework in ten minutes as opposed to three to four hours. I don't think there's any thought or development, in that regard.*
> **(Male, London)**

> *Oh yes, my children are the ones who had to show me how to do it on the computer to be quite honest with you.*
> **(Female, Manchester)**

> *Some things move too fast to be honest, sometimes in certain areas in terms of you don't really get chance to digest it, it's not something that you've got before it's moving onto the next. I think with the younger generation, they trained to move quick.*
> **(Female, Manchester)**

> *(The population)'s massive. It's heading to 70 million, so the infrastructures we've got in place aren't enough to cope with that amount of people.*
> **(Male, Birmingham)**

> *It's gone from being an extended family to family society to just being the nuclear, so everyone's in their own house.*
> **(Female, Manchester)**

Job security, consumerism, and a feeling of 'being left behind' are common among the **INNOVATION SCEPTICS** segment:

> *It was always a job for life, until I got made redundant ten years later. So it wasn't, I don't think there's anything now you can call a job for life.*
> **(Male, Birmingham)**

> *I think we've just become a very materialistic society, so we've all got to have, whether it's these small little gadgets, but we've got to have the next one, and the next one, you know from the little microwave to the bigger microwave that all singing and all dancing to the phone that's the best phone and all that kind, the next grade, the next one. Instead of being happy with the one you've got till it completely falls apart kind of thing, it doesn't happen that way.*
> **(Female, Manchester)**

> *It is the norm, but those that get left behind, you don't know how detrimental that may actually be to them in the future.*
> **(Female, Manchester)**

3. THE ROLE OF GOVERNMENT

> *Innovation is seen to be dependent on structures and institutions, as well as big inputs like energy and financial investment. There is some talk of market forces and individual enterprise, but generally it is felt that the state has a role to play.*
> **Planning. (Female, Manchester)**

> *Demand, I was going to say demand.*
> **(Male, Birmingham)**

> *Funding.*
> **(Female, Manchester)**

> *Investors, government.*
> **(Male, Birmingham)**

The government's role is seen to be to foster innovation by building these structures and focusing on major social programmes, rather than interfering in the end delivery of innovative products.

> *(There's a role for government) maybe on the NHS and things like that, and education – things that affect everybody – but not inventions.*
> **(Female, Manchester)**

> *Infrastructure.*
> **(Male, Birmingham)**

> *I suppose if it's education, health, transport, it's politics as well, it all links in with politics and what they decide to invest in. Whether it's the rail, or transport or those kind of things, I think there needs to be an investment within that within society, and they make the decision who's going to benefit from that. It's got to be planned.*
> **(Female, Manchester)**

This includes education reforms that prepare young people better for the challenges of modern society.

> *Yes, I think the education authorities should change some of the curriculum. Things more like learning about business and tax and all that stuff. When you leave school you don't know anything about tax, so if you do want to be that entrepreneur at a young age, and go out there not having much knowledge from school about it. So stuff like that.*
> **(Male, Birmingham)**

Few have felt the impact of economic growth on their own personal and working lives.

> *Encouraging small businesses and not making it difficult for them to trade, having help, whether it be through the banks or whatever. I know this money that they've transferred in to the banks, quantitative easing, to let it pass down, it never got down to the likes of small businesses like me, yourself and other guys. Getting it down to the base level because us one man bands who employ a couple or two or three people, it can grow. But we never get to see anything where it helps us.*
> **(Male, Birmingham)**

INNOVATION SCEPTICS are long–term planners in their own lives, but some believe that the government fails to plan beyond the next election.

> *(The environment)'s the sort of thing that the government are never going to get involved with, because it's going to be 30 years down the line before we feel any effect on it.*
> **(Male, Birmingham)**

4. BEHAVIOURS

This segment tend not to be early adopters, often talking about innovation in terms of the behaviour of other people around them, rather than themselves.

> *Like my mate said like this new telly, he said, 'Come and have a look at my telly.' I thought I was in the telly like. It was as big as me, I mean bloody hell, you know, it was completely crazy.*
> **(Male, Birmingham)**

5. CONTROVERSIAL INNOVATIONS

This segment tend to focus on the direct negative impacts of innovations like smartphones and digitalisation, rather than the ethical consequences of controversial innovation projects. This focus on practical drawbacks distinguishes them from **INNOVATION REALISTS**, who take a broader, more sociopolitical view of the downsides of innovation.

6. BENEFITS OF INNOVATION

The **INNOVATION SCEPTICS** segment respond best to clear illustrations of practical benefits that innovations bring in everyday situations.

> *Half my family (is in Spain), some here and some in South America and some in South Africa, so I just feel like, when I was a child it was phone calls and two or three visits a year sort of thing, whereas now, I've got a WhatsApp message, I know it's back to technology, sorry, but a WhatsApp message with all my cousins in Spain and we speak, we say good morning every morning, I'm doing this, quick picture, then I get a nice picture of the beach and they get a nice picture of rain, and it's kind of like that, and I just think it's just making the world a lot smaller.*
> **(Female, Manchester)**

They value innovation in areas like health, education, and social care. 'High concept' innovations like space travel are perceived to be beyond the realms of possibility.

> *How it's going to affect you practically around stuff like space, not everyone is going to go to space. But stuff in terms like the key things like education and health how that's actually going to affect you and your family personally.*
> **(Female, Manchester)**

Developments in healthcare that clearly improve results – like keyhole surgery – can be popular, and can generate immediate emotive responses.

> *I think medicine and the NHS I think has moved forward. Medically there's a lot more, even just having an operation when you have keyhole, something like that, it's just like amazing.*
> **(Female, Manchester)**

> *The NHS is moving on due to modern technology.*
> **(Male, Birmingham)**

> *My granddad had a heart attack and he's just had that keyhole. Basically we took him in, he was lying on the bed, couldn't move or anything and was having, I forgot what it's called, the pain stuff, morphine, and they were saying, 'Put your hand up when you can't feel the pain' he didn't raise his hand for ages. Finally did and they took him down to surgery, I think it was an hour and 40 minutes, they brought him back and he was sat up, perfectly fine. Like it looked like he was going to die, and then within the space of two hours he was fine. I couldn't believe it. They did it through his wrist, so a tiny little thing on his wrist to open up an artery. I couldn't believe it.*
> **(Female, Manchester)**

> *Some things are vitally important aren't they, to do with health.*
> **(Male, Birmingham)**

Rebalancing the curriculum towards digital skills is seen as a positive idea, despite this segment's own reluctance to engage with digital technologies.

> *I thought that was good with the computer games, because it's building something for the future, so not only are they coming away with English language, English literature, a basic knowledge of science, they're coming away with something that they can go to and say, 'I want to do computer studies'.*
> **(Female, Manchester)**

7. CONCERNS

Desocialisation – the decline of social interaction through extended families and wider communities – is seen to be a big threat to the social fabric, and communications technologies are believed to have exacerbated this.

> *I'm 35; I consider myself reasonably young. I don't think it's any coincidence that people generally – there are more cases of depressive states, more people in psychotherapy, more people more likely to self–harm because I think the actual basic ability to interact meaningfully is dying.*
> **(Male, London)**

> *It's gone from being an extended family to family society to just being the nuclear, so everyone's in their own house.*
> **(Female, Manchester)**

> *If I sat at home tonight WhatsApping, emailing, texting I think I'd be far more depressed. I think we've lost the ability to hold our thoughts. I think the texting most people do, they have a thought in their head and they need to express it and a lot of it is dangerous, a lot of it is nonsense. We've lost the ability to filter our thoughts.*
> **(Male, London)**

> *Technology wise, yes it's a positive, but the way people treat each other now. Like I said there's no community or anything like that is a negative, because nobody really looks out for each other. You might do you know for your neighbour's on the street because obviously you've lived there for a long time and you know your neighbours. But it's like, I don't know my neighbours across the road, I don't know who they are, where they come from or anything like that. Where years ago, you would know.*
> **(Female, Manchester)**

Children and teenagers are seen to be at particular risk of succumbing to this process of desocialisation, particular among parents, and that the impact is being underestimated.

> *I worry about, so like in ten years' time as well, if all these kids are on, the interaction with normal people, you know like, I know they say social networking and stuff, but they're on their own aren't they? It's quite a lonely thing if you're chatting on your phones, another ten years is anybody going to speak to anybody? These kids that are five, six now, when they get to teenagers they're not going to have friends.*
> **(Female, Manchester)**

> *I think there's a lot of naivety especially around games, a lot of it, because I work in education, a lot of kids play on games and the amount of young people that play quite violent, aggressive games and they've got no parent supervision and they're 18 plus games. It's not seen, because it's a game, it's not seen as any kind of disturbing kind of activity that are shooting people and all sorts of strange characters that are involved in the game. It's never actually questioned by parents.*
> **(Female, Manchester)**

> *I've seen the school kids on the bus, watching porn on their phones.*
> **(Female, Manchester)**

There is a worry that staring at screens has become the norm, both socially and in a working environment.

> *I was in a bar a few weeks ago with work and there was a big sign on the wall that said, no we don't we have Wi–Fi speak to each other. I was with work, a few of us had gone in and we were going to ask for it, and I saw this sign and I thought, that's just so bad that they've got to put that up. If they would have had Wi–Fi with me and my boss and two colleagues, I guarantee we would have all sat with our laptops on, answering emails, still talking but not really, like five minute stops. I think that's quite negative.*
> **(Female, Manchester)**

Like other segments, the issue of disposability is also raised, as well as the theory that businesses sometimes withhold innovations to maximise profits.

> *Everything is disposable.*
> **(Male, Birmingham)**

> *They've had light bulbs that last for donkey's years for a couple of years, but they're manufacturing them with built in reliability, so that they fail after a short time, so that we keep buying them. They build washing machines with built in reliability, so they only last for a few years, so you buy another one. There's nothing to go wrong in them basically, they're a simple bit of kit, but they don't make them to last, otherwise you would buy a washing machine, they would be out of business.*
> **(Male, Birmingham)**

PHASE 1 IN DETAIL

SUMMARY

Attitudes towards innovation are broadly favourable, with nearly three–quarters of the British population (71 per cent) believing that current spending levels by UK business and government are about right, or too low. Most people are interested in hearing about new ideas and innovations, particularly in specific areas like healthcare and technology. There are, however, significant attitudinal and behavioural differences across key demographics.

Social class

There is a strong class dimension to public attitudes to innovation. People falling into the most affluent (ABC1) socio–economic grades:

- Are more likely to be comfortable with the **pace of change** in society.
- Tend to **take more risks** in their personal lives and see risk taking as a driver of progress.
- Are more likely to be **long–term planners.**
- Back **higher spending** on research and development by business and government.

Gender

Men and women differ on the **intrinsic value of innovation,** with women tending to focus more on the practical benefits of innovation, while men are more likely to be excited by new ideas regardless of concrete outcomes.

Men are significantly more likely to back **higher spending** on research and development by business and government, and to be interested in areas like **science and technology, engineering,** and **communications.** Women show a greater interest in areas like **social care** and **education.**

These differences are also reflected in the kinds of innovative activities in which people participate – with women much more likely to have created or modified a recipe or an item of clothing, and men more likely to have programmed a piece of computer software.

It is important to note that gender differences are tendencies rather than universal differences, with significant minorities of women valuing higher innovation spending and showing interest in science and technology.

London

The results for interests and behaviours relating to innovation often show pronounced differences in London, with much higher interest in areas like **public transport** and **communications.** The generally unpopular issue of space exploration is also more positively viewed in London.

Healthcare and medicine

The area of innovation that has the broadest appeal is healthcare and medicine. There is high support for innovations like **human stem cell research,** and the public are interested in reading about healthcare in the news and hearing about innovations in this field.

ATTITUDINAL DIMENSIONS

In order to maximise the value of the qualitative focus group phase of the research programme, it was decided that it would be beneficial to segment the British public attitudinally – rather than along typical demographic lines, such as age, gender, social grade and location. This was because background research[1] suggested that innovation is such a complex, multifaceted and cross–cutting issue that it would be difficult to identify consistent differences across typical demographic breaks.

In order to build a framework for the attitudinal segmentation, a range of dimensions was agreed by ComRes and Nesta which would allow each element of popular attitudes to innovation to be isolated and tested. In each case, the aim was to test these dimensions at both a personal and a sociopolitical level:

- Openness to change.
- Openness to risk.
- Long–term thinking and planning.
- Intrinsic 'romantic' value of innovation.
- Ethical focus.
- Social/individual (personal level only).
- State/market (sociopolitical level only).
- Innovation spending (sociopolitical level only).

The survey was designed so that respondents were tested four times on each dimension, being asked to agree or disagree with statements relating to each dimension. This approach was chosen in order to avoid biases being introduced by question design and survey structure. The statement pairs with which respondents were presented are detailed over the following pages. The analysis has focused on findings which were consistent across most or all statements that make up a particular dimension.

1. BIS (2011) 'UK Innovation Survey.' London: BIS; Flowers, S., von Hippel, E., de Jong, J. and Sinozic, T. (2010) 'Measuring User Innovation in the UK.' London: NESTA; Ipsos MORI (2014) 'Public Attitudes to Science 2014.' London: Ipsos MORI; Luntz, F. (2007) 'Americans Talk Innovation. An analysis for America's Governors.' Washington DC: National Governors' Association.

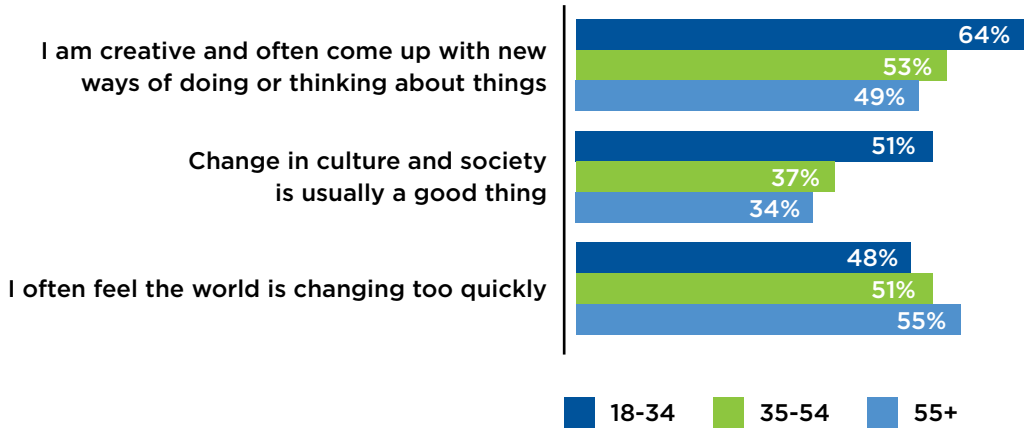
CHANGE

	Personal	Sociopolitical
Comfortable, creative, high pace	*"I am creative and often come up with new ways of doing or thinking about things."*	*"Change in culture and society is usually a good thing."*
Uncomfortable, rigid, steady pace	*"I prefer to have a fixed routine every day."*	*"I often feel the world is changing too quickly."*

Innovation and change – in the way people live their lives or in the way society functions – are intrinsically connected concepts. These statements aimed to explore respondents' natural behaviours, attitudes, preferences and fears about change and the pace of change.

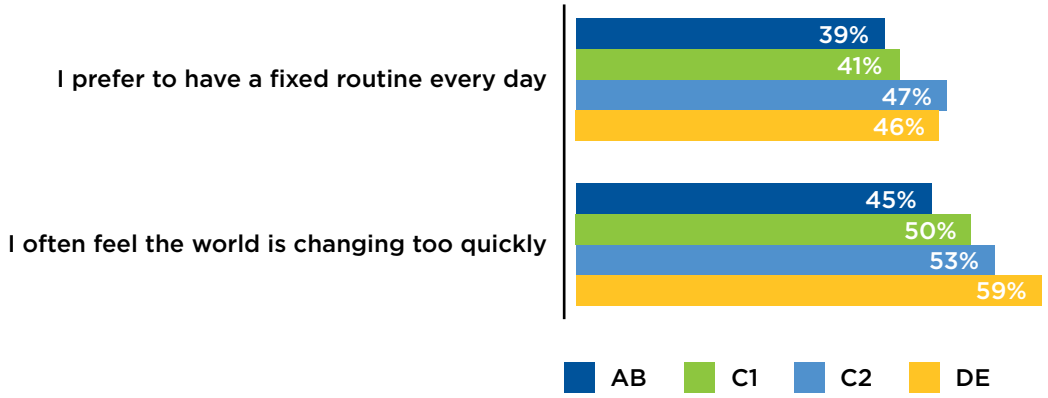
Younger people (aged 18–34) are more likely to see themselves as creative and to feel that change in culture and society is usually a good thing, while **older people** (aged 55 and over) tend to feel that the world is changing too quickly:

Percentage agreeing (by age group)



People from **less affluent** social groups (social grades C2, D and E) are more likely to feel that the world is changing too quickly and prefer a fixed routine in their personal lives:

Percentage agreeing (by social grade)



Bases: Age 18–34 (1,102), Age 35–54 (1,432), Age 55+ (1,587).
Bases: AB (1,211), C1 (1,224), C2 (667), DE (1,019).

RISK

	Personal	Socio-Political
Risk-averse	*"I am generally a cautious person."*	*"Governments and corporations take too many risks, and this is usually damaging to ordinary people."*
Value of risks	*"You need to take risks to get ahead in life, even if you can't always be sure what will happen."*	*"Allowing people to take risks and fail is what drives society forward."*

Perceptions of risk are inherently important to establish how open or otherwise people are to new and innovative ideas, which may have unpredictable consequences. These statements aim to explore the extent to which respondents appreciate the value of taking risks, both personally and sociopolitically.

People from more affluent social groups (social grades A, B and C1) are more likely to be comfortable with risk taking and to see the value of risk taking to society:

Percentage agreeing (by social grade)

Bases: AB (1,211), C1 (1,224), C2 (667), DE (1,019).

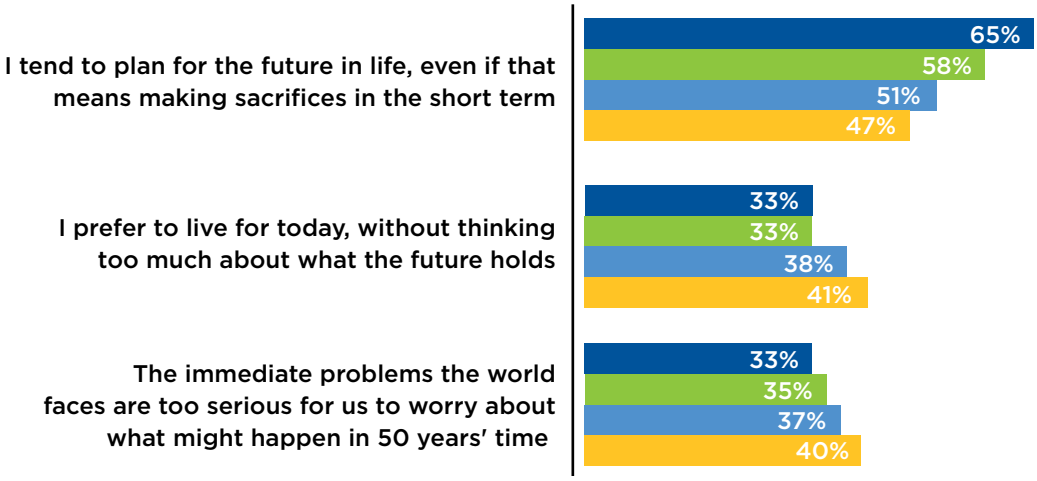
FUTURE PLANNING

	Personal	Socio-Political
Planning, forward thinking, long-term view	*"I tend to plan for the future in life, even if that means making sacrifices in the short term."*	*"It is more important to think about future generations than our own generation."*
Reactive, immediate, "in the now"	*"I prefer to live for today, without thinking too much about what the future holds."*	*"The immediate problems the world faces are too serious for us to worry about what might happen in 50 years' time."*

Innovation requires investment in intangible outcomes, as well as a consciously long-term policy outlook. These statements aimed to explore the public's willingness to take a long-term outlook on personal and sociopolitical development.

Social grade correlates strongly with this attitudinal dimension, with **more affluent** (social grades A, B and C1) adults more likely to plan for the future in their personal lives and to disagree that the immediate problems the world faces are too serious for us to worry about what might happen in 50 years' time:

Percentage agreeing (by social grade)



Bases: AB (1,211), C1 (1,224), C2 (667), DE (1,019).

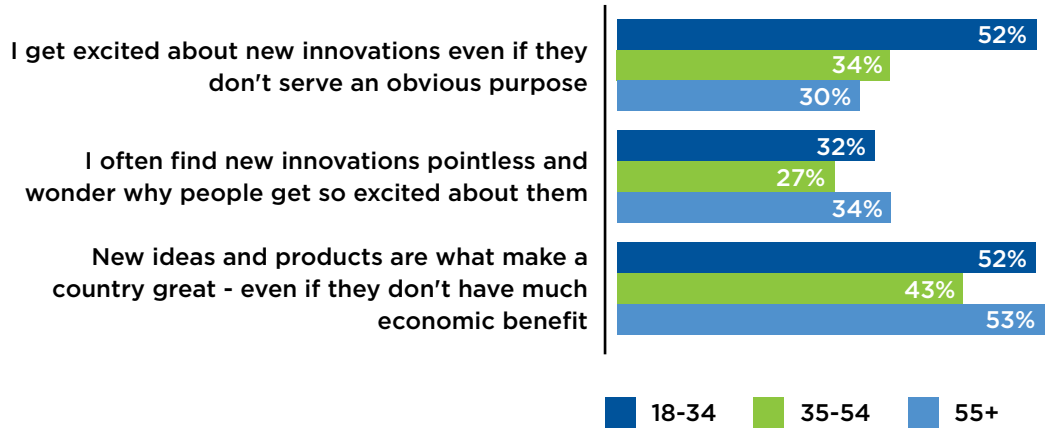
INTRINSIC VALUE OF INNOVATION

	Personal	Socio-Political
Excited, important	*"I get excited about new innovations even if they don't serve an obvious purpose."*	*"New ideas and products are what make a country great – even if they don't have much economic benefit."*
Pointless, waste of time	*"I often find new innovations pointless and wonder why people get so excited about them."*	*"Big technological innovations are usually a waste of time, solving problems that didn't exist in the first place."*

These statements aim to explore the extent to which respondents appreciate the intrinsic value of innovation, beyond its practical or economic impact.

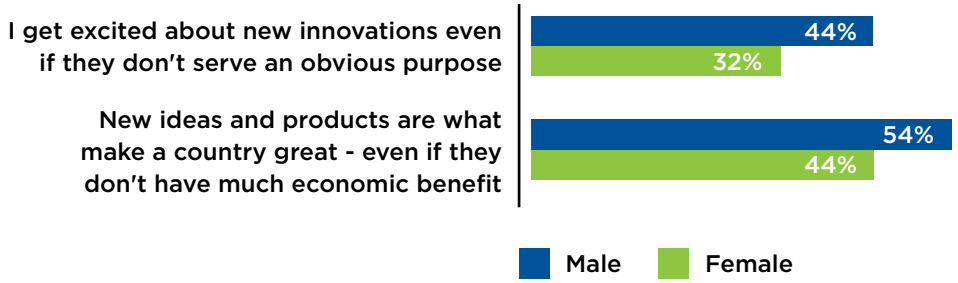
Younger people (aged 18–34) are more likely than older people to get excited about innovations, while **older people** (aged 55+) tend to agree that innovation at the national level is a matter of national pride:

Percentage agreeing (by age group)



Men are more likely than women to believe in the intrinsic value of innovation:

Percentage agreeing (by gender)



Bases: Age 18–34 (1,102), Age 35–54 (1,432), Age 55+ (1,587).
Bases: Male (1,893), Female (2,228).

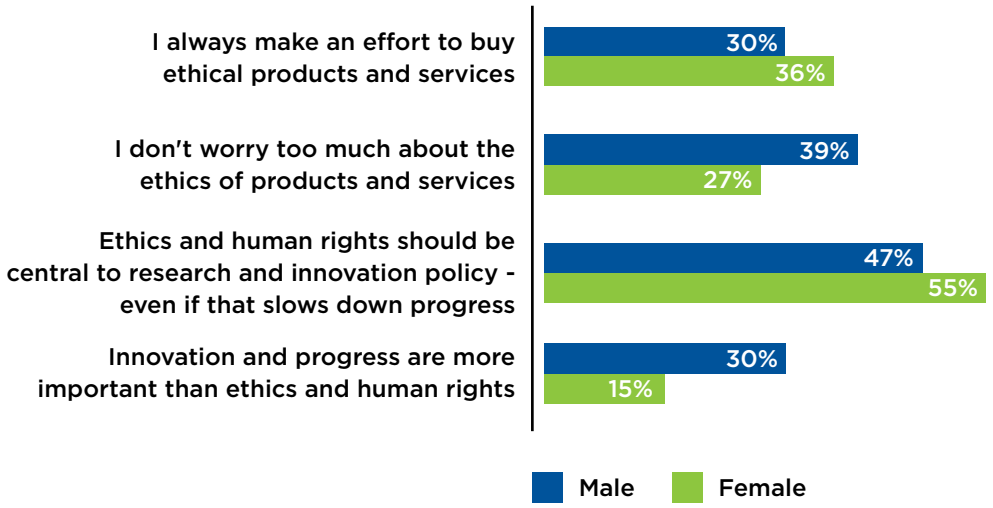
ETHICS AND RIGHTS FOCUS

	Personal	Socio-Political
Conscious of ethical dimension to decisions	*"I always make an effort to buy ethical products and services."*	*"Ethics and human rights should be central to research and innovation policy – even if that slows down progress."*
Ethics and human rights rights a low priority	*"I don't worry too much about the ethics of products and services."*	*"Innovation and progress are more important than ethics and human rights."*

Innovation can challenge existing ethical frameworks, as new technologies and societal changes pose new philosophical problems. These statements aimed to explore the extent to which respondents felt ethics and human rights were, or ought to be, central to innovation at all levels.

Ethical consumption is less prevalent than an ethical focus to societal change. **Women** are more likely to be ethical consumers and to feel that ethics and human rights should be central to policy:

Percentage agreeing (by gender)



Bases: Male (1,893), Female (2,228).

Labour and Lib Dem voters are more likely to value ethical consumption and an ethical foundation to research and innovation. Conservative and UKIP voters are more likely to value innovation and progress over ethics and human rights:

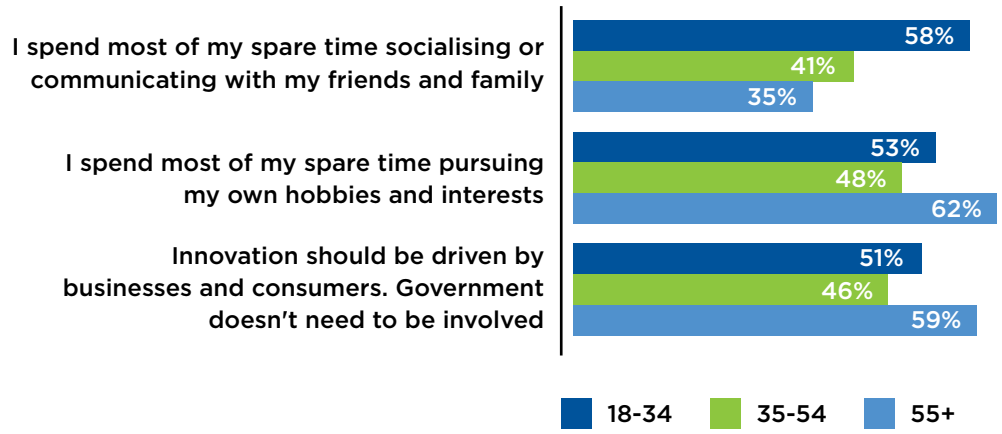
SOCIAL/INDIVIDUAL

	Personal	Sociopolitical
Social/Government-led	*"I spend most of my spare time socialising or communicating with my friends and family."*	*"Governments should be the main driving force behind innovation – by funding initiatives and regulating it carefully."*
Individual/Market-led	*"I spend most of my spare time pursuing my own hobbies and interests."*	*"Innovation should be driven by businesses and consumers. Government doesn't need to be involved."*

These statements aim at the personal level to explore the level of importance of social or individual activity to respondents. At the sociopolitical level, they aim to determine perceptions of whether innovation should be driven and regulated by government, or by businesses and consumers.

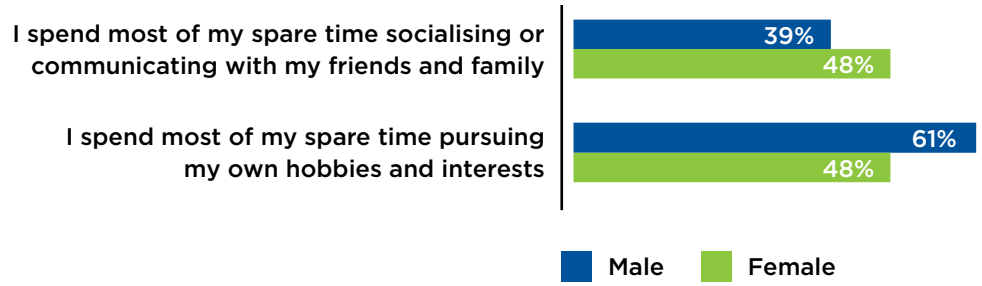
Younger people (aged 18–34) are more likely than older people to have social, rather than individual priority in their personal life. Older people (aged 55+) are more likely to feel that there is no role for government in driving innovation.

Percentage agreeing (by age group)



Women are more likely than men to emphasise the social rather than individual priorities in their personal lives:

Percentage agreeing (by gender)



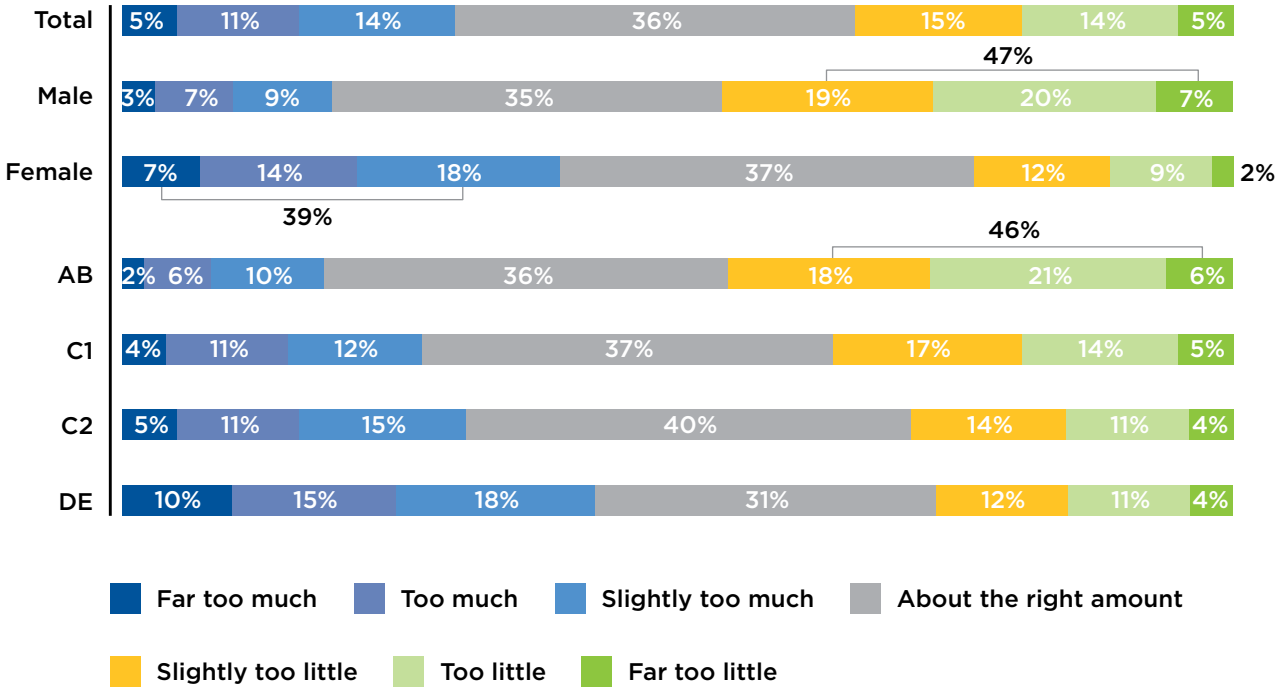
Bases: Age 18–34 (1,102), Age 35–54 (1,432), Age 55+ (1,587).
Bases: Male (1,893), Female (2,228).

INNOVATION SPENDING

Investment in research and development (R&D) drives innovation, but the impact of R&D spending is difficult to quantify. Global economic recession has made both businesses and governments more reluctant to make 'intangible' investments, and a key project objective was to understand how the general public felt about this problem.

Respondents were asked whether they thought current levels of spending on R&D by the Government and businesses in the UK were too high or too low.

Q. Together the UK government and UK businesses spent £25 billion (1.8 per cent of GDP) on research and development in 2011. Research and development means spending aimed at discovering or developing new technologies and ways of doing things. In your opinion, is this too much, too little, or about the right amount?



The strongest support for higher R&D spending is among men and those from **higher social grades,** with nearly half of each group (47 per cent and 46 per cent respectively) thinking that R&D spending levels should be higher. **Women** and those from **lower social grades** are significantly less supportive.

INTERESTS, PRIORITIES AND BEHAVIOURS

In addition to attitudinal questions, respondents were also asked about interests, policy priorities and behaviours relating to innovation, in order to build a clearer picture of how the public engage with innovation in the round.

Current affairs interests

Innovation is a broad, abstract concept that relates to many different policy areas. Respondents' interest in different topics in the news was tested in order to understand which areas of innovation policy might have the greatest salience.

Q. How interested or uninterested are you in news coverage of the following issues?

	Issue	% interested	Mean score*	Key audiences (% positive)
1.	Healthcare/the NHS	78%	5.47	Age 55+ (86%), Women (82%)
2.	The Economy	75%	5.30	Age 55+ (83%)
3.	Energy	65%	4.93	Age 55+ (74%)
4.	Education	62%	4.87	London (73%), Women (68%)
5.	The Environment	61%	4.80	–
6.	Housing	54%	4.61	London (67%)
7.	Defence/Military/Security	55%	4.58	–
8.	Transport	51%	4.48	London (70%)

Base: Total (4,121) * 1–7 scale, where 1 = lowest interest and 7 = highest interest

Issues like Healthcare and the Economy are of interest to a broad spread of the population, particularly older people (aged 55 and over) – who generally show greater interest in news coverage of all issues.

Innovation interests

Respondents were asked to indicate their interest in hearing about new ideas and innovations in a wide range of areas: science and technology in general, politics and economics, the arts, sport, medicine, food, cosmetics, engineering, architecture, neuroscience and psychology, household goods, communications, business and management, education, social care, and vehicles and transport.

Along with the question on current affairs interests, this was designed to explore which areas of innovation might be interesting to people who are otherwise sceptical about the benefits of innovation.

Q. In which of the following areas, if any, would you be interested in hearing about new ideas and innovations? Please select all that apply.

	Area	% interested	Key audiences (% positive)
1.	Medicine/healthcare	72%	Age 55+ (83%)
2.	Science and technology	59%	Men (68%)
3.	Food	46%	–
4.	Education	43%	Public sector (52%)
5.	Neuroscience and psychology	40%	–
6.	Social care	38%	Women (49%), Age 55+ (48%)
7.	Vehicles and transport	37%	Men (48%)
8.	Household goods	36%	Women (41%)
9.	Engineering	36%	Men (50%), Age 55+ (46%)
10.	Communications	35%	Men (42%), Social grade AB (42%)
11.	Politics and economics	22%	Social grade AB (28%), Age 55+ (27%)
12.	The Arts	21%	London (26%), Social grade ABC1 (25%)
13.	Sport	19%	Men (29%)
14.	Architecture	19%	London (23%)
15.	Business and management	14%	Social grade AB (21%), London (19%)
16.	Cosmetics	11%	Women (20%), Age 18–24 (18%)

Base: Total (4,121)

The natural association between innovation and everyday life is clearly strongest in **medicine** and **science and technology.** Innovation in areas like **education** (public sector workers and Labour voters) and **social care** (older people, women, and Labour voters) tends to be of interest to specific audiences.

Gender is also a strong predictor, with men more interested in innovations in **science and technology, vehicles and transport, engineering, communications,** and **sport,** while women are more likely to express interest in new ideas in **social care, household goods,** and **cosmetics.**

Some areas show a metropolitan bias – **the arts, architecture,** and **business and management.** Similarly, people from more affluent social grades are more likely to express interest in **communications, politics and economics, the arts,** and **business and management.**

Innovation priorities

Looking specifically at innovation, respondents were also asked to judge how important it was – for the future of the human race – to innovate in different areas.

Q. How important or unimportant is it for the future of the human race that we continue to innovate in the following areas?

	Area	% interested	Mean score*	Key audiences (% positive)
1.	Healthcare	93%	6.21	Age 55+ (96%)
2.	Energy	87%	5.92	Age 55+ (91%)
3.	Agriculture	83%	5.66	–
4.	Education	82%	5.66	Women (86%), Public sector (86%)
5.	Communications	67%	5.04	London (74%), Men (71%)
6.	Public transport	59%	4.74	London (71%)
7.	Military/defence	50%	4.42	–
8.	Space exploration	34%	3.64	London (47%), Age 18–34 (46%)

Base: Total (4,121) * 1–7 scale, where 1 = lowest importance and 7 = highest importance

There are obvious areas of overlap with the previous question on current affairs interests. **Healthcare** is again the area of principal importance to the general public, with almost universal agreement that innovations in healthcare, such as new medicines and medical technologies, are important to the future prospects of humanity.

London again over–indexes on areas like **communications** (e.g. high–speed broadband, mobile phone technology), **public transport** (e.g. high–speed trains, more efficient buses), and **space exploration** (e.g. a mission to Mars) – the latter also performing better among younger audiences.

Overall, these figures reflect widespread agreement that innovation is important to the future of the human race for the majority of the British public, with only **space exploration** seen to be of low importance.

Controversial innovations

Moving beyond broad policy and innovation areas, respondents were then asked for their opinions on specific innovations that have been controversial or have the potential to be controversial, in terms of their impact on the quality of life of current and future generations.

Q. For each of the following innovations, do you think they will have a mainly positive or mainly negative effect on the quality of life on current and future generations?

	Innovation	% interested	Mean score*	Key audiences (% positive)
1.	Human stem cell research	71%	5.27	Age 55+ (76%), Social grade AB (76%)
2.	Bionics	61%	4.84	London (70%), Men (65%)
3.	Online shopping	57%	4.81	London (65%), Age 18–34 (63%)
4.	Smartphones	52%	4.58	Age 18–34 (66%), London (64%)
5.	Nuclear energy	47%	4.37	Men (59%), Age 55+ (57%)
6.	Robots	39%	4.10	London (52%), Men (48%)
7.	Space exploration	37%	4.04	London (51%), Age 18–34 (48%)
8.	GM foods	33%	3.81	Men (43%)

Base: Total (4,121) * 1–7 scale, where 1 = completely negative and 7 = completely positive

Strong patterns emerge when people are asked to think about specific innovations. Men, London residents and younger people (aged 18–34) tend to have positive views towards everyday technological innovations (**online shopping** and **smartphones**), as well as **space exploration.**

Human stem cell research is generally well regarded, particularly among older, more affluent audiences. A similar demographic profile emerges for **nuclear energy.**

The least popular innovation is **genetically modified (GM) foods,** with more people viewing it as having a negative impact (37 per cent) than a positive impact (33 per cent).

Activities

As well as profiling the public's attitudes towards innovation, a key objective of this research was to understand how an abstract concept like innovation can be related to people's everyday lives.

Respondents were asked to indicate whether they had ever taken part in a list of 'innovative' activities, ranging from commonplace activities like creating or modifying a recipe, to programming computer software or conducting a scientific experiment.

Q. Which, if any, of the following activities have you taken part in?

	Activity	%	Key audiences (% positive)
NET	Any	78%	Social grade AB (85%)
1.	Created or modified a recipe	55%	Women (64%), Social grade AB (60%)
2.	Created or modified an item of clothing	37%	Women (53%)
3.	Made or built a physical object from scratch	33%	Men (41%), Social grade AB (39%)
4.	Taken apart and reassembled a mechanical/ electronic device	28%	Men (43%), Age 55+ (33%)
5.	Used a smartphone app for e–banking	28%	Age 18–34 (47%)
6.	Created and uploaded your own original content to the internet	23%	–
7.	Programmed computer software	18%	Men (28%)
8.	Conducted a scientific research experiment	13%	Social grade AB (19%)
	None of these	22%	Social grade DE (27%)

Base: Total (4,121)

The results show that **creating or modifying a recipe** and **creating or modifying an item of clothing** are the most widespread innovative activities, particularly among women. Four–fifths (78 per cent) of the population have taken part in at least one of the activities listed, rising to 85 per cent among the most affluent AB social grade. More than a quarter (27 per cent) of the least affluent DE social grade say they have never taken part in any of these activities.

One of the most striking demographic differences is in **using a smartphone app for e–banking** with nearly half (47 per cent) of young people (aged 18–34) having done this, while only 13 per cent of older people (aged 55 and over) can say the same.

Nesta...

Nesta

1 Plough Place
London EC4A 1DE

research@nesta.org.uk
www.twitter.com/nesta_uk
www.facebook.com/nesta.uk

www.nesta.org.uk

April 2014