G20 GERMANY 2017
HAMBURG

2017
GROWTH STRATEGY

United Kingdom

United Kingdom 2017 Hamburg Growth Strategy

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A. Economic Objective and Context

The UK was the second fastest growing major advanced economy in 2016, with GDP growth of 1.8%. The IMF's latest projection is for GDP growth of 2% for 2017. The deficit is down by three quarters from its 2009-10 peak of around 9.9% of GDP, falling to 2.4% of GDP in 2016-17.

Employment stands over 31.95m and the employment rate is at 74.8%, both are at record highs. The unemployment rate is 4.6%, its lowest level since 1975. Inequality is at its lowest in 30 years, and the poorest households have seen their wages rise more since 2010 than in any other country in the G7. Whole economy total pay was up 2.1% on the year in the 3 months to the end of April 2017.

Consumer spending growth slowed in the first quarter of 2017, growing 0.3% compared to 0.7% in Q4 2017, and GDP growth slowed to 0.2%. UK productivity, as measured by output per hour, grew by 0.3% in 2016, with productivity increasing in both the services and production sectors. GDP per capita was 9.1% higher in Q1 2017 compared to the start of 2010. However, GDP per capita is only 1.7% higher than its pre-crisis peak.

CPI inflation was 2.9% in May 2017, the highest rate since June 2013. Inflation has increased as a result of higher fuel prices and the depreciation of sterling since mid-2016. Inflation rose above the Bank of England's target of 2.0% in February 2017 for the first time since December 2013.

In 2016, the current account deficit widened to -4.4%, from -4.3% in 2015. More recently, the current account deficit narrowed to -2.4% of GDP in Q4 2016 from a revised -5.3% in Q3.

The UK and EU recently began the formal negotiations under the Article 50 process. The UK wishes to maintain our strong trade links with European markets after we leave the EU, as well as seeking out new opportunities for trade and investment with old friends and fast growing emerging economies alike. The strength of the economy as the UK enters this period means it is well-placed to deal with any challenges. The UK economy is highly flexible and dynamic, which will help it move to a new equilibrium over the longer term. The UK's fundamental strengths will allow it to take advantage of the opportunities it has as it forges a new relationship with the EU.

B. Implementation of Past Growth Strategies

The UK has made good progress since the Hangzhou Summit in implementing structural reforms to raise productivity, enhance resilience and build a modern economy that works for all sections of society and all regions of the country. Alongside policies to boost productivity and living standards over the long term, the government is taking action to reduce living costs for families in the short term.

The government is rolling out Tax-Free Childcare for working families with children under 12, providing up to £2,000 a year for each child to help increase the affordability of childcare, whilst also supporting parents making decisions about returning to work or increasing the number of hours they work. From

September 2017, the free childcare offer will double, from 15 to 30 hours a week for working families with 3 and 4 year olds in England, in total worth up to £5,000 for each child.

In April 2017, the government reduced the Corporation Tax rate from 20% to 19%, benefitting over 1 million businesses and supporting investment. The rate is legislated to fall further to 17% in 2020.

The tax-free personal allowance increased to £11,500 from April 2017, cutting income tax bills for 31 million individuals in 2017-18, and the National Living Wage was raised to £7.50 to support jobs and earnings across the UK.

The Apprenticeship Levy, implemented in April 2017, will support productivity growth by increasing the quantity and quality of apprenticeship training. The government is committed to reaching 3 million apprenticeship starts in England by 2020. In April 2017, the government introduced the Youth Obligation for 18-21 year olds who make a new claim to Universal Credit, providing intensive work focused support for new claimants to give them the skills they need to move into sustainable employment.

The government continues to implement its ambitious infrastructure investment programme. At the end of February, the parliamentary Hybrid Bill for phase 1 of the High Speed 2 rail link gained Royal Assent, providing the formal legal authorisation for construction.

C. Major New Policy Actions Supporting Growth - Hamburg Summit

C1. Macroeconomic Policies

The government has been clear that more needs to be done to support and sustain economic growth. Given the high levels of overall debt, the deficit remains too high and productivity too low. In addition, the government wants to see more people sharing in the UK's prosperity and ensure that the tax system is one where everyone plays by the same rules.

To ensure debt as a share of GDP is on a sustainable path, the government will maintain discipline on public spending. This responsible approach to setting fiscal policy improves the sustainability of the public finances and provides certainty and security to businesses and households. The UK set out new fiscal rules in November 2016, which commit the government to reducing the cyclically adjusted deficit to below 2% of GDP by 2020-21, and ensuring that public sector net debt is falling as a share of GDP in 2020-21. The fiscal rules also include a longer-term objective to return the public finances to balance. The government's fiscal rules combine the flexibility to support the economy if necessary in the near term, with a long-term objective of returning the public finances to a sustainable position.

Monetary policy remains accommodative following the package of measures first announced in August 2016. These were designed to provide additional support to growth and to achieve a sustainable return of inflation to the target. The package included: a 25 basis point cut in Bank Rate to 0.25%; a new Term Funding Scheme (TFS) to reinforce the transmission of the cut in the Bank Rate; the purchase of up to

£10 billion of UK corporate bonds; and an expansion of the asset purchase scheme for UK government bonds of £60 billion, taking the total stock of these asset purchases to £435 billion, with the last three elements financed by the issuance of central bank reserves.

At its June 2017 meeting, the MPC said that the Committee stands ready to respond to changes in the economic outlook as they unfold, in order to ensure a sustainable return of inflation to the 2% target. The minutes reported that while the majority of MPC members felt the current policy stance was appropriate, three members voted for a 25 basis point increase in Bank Rate to 0.5%. These members argued that withdrawing part of the stimulus the Committee had injected in August 2016 would help to moderate the inflation overshoot while leaving monetary policy very supportive.

C2. Structural Reform and Other Actions to Foster Strong, Sustainable, Balanced, and Inclusive Growth

Raising productivity and living standards

Stronger growth is the only sustainable way to deliver better public services, higher real wages and increased living standards. In the UK, raising productivity remains a longstanding challenge and the government has taken, and will continue to take, measures to promote productivity growth by supporting enterprise, investing in infrastructure and improving education. Lifting productivity growth by 0.25% a year, on a sustained basis over 10 years would add £67 billion to GDP.

In line with G20 Resilience Principle to promote productivity growth, the National Productivity Investment Fund, announced at the Autumn Statement in November 2016, will be well-targeted and focussed on areas that are critical to boosting UK productivity over the long-term:

- £7.2bn on supporting the construction of new homes – including £1.4bn extra government grant to deliver 40,000 affordable homes and £2.3bn on a Housing Infrastructure Fund to unlock land for housing in high demand areas. (The £7.2bn includes £1.8bn of Housing Associations spending from sources other than central government).
- £2.6bn to improve transport networks – including a £1.3bn cash injection for roads and local transport, and £390m on driverless cars and low emission vehicles (ULEVs) to future proof Britain's transport.
- £740m on digital communications. On top of this the government is investing £400m in a Digital Infrastructure Investment Fund providing access to finance for new fibre network investment, bringing total extra digital communications investment to over £1bn.
- £4.7bn on Research and Development (R&D). This is the largest increase by any UK government since 1979. As a result, the government will spend an additional £2bn per year by 2020-21, around a 20% increase in total annual government R&D spending.

The NPIF will also boost the living standards of ordinary people in the short run, by helping ensure people can travel quickly and reliably, communicate with each other easily, and afford to live where they want. This investment will raise the stock of infrastructure in the UK, a priority highlighted in the OECD Technical Report on Progress on Structural Reform under the G20 Enhanced Structural Reform Agenda.

The government is also creating 'T-Levels', introducing a new framework of fifteen routes to skilled employment, with a high quality industry work placement during the programme. These will help to ensure young people in technical education will receive over 50% more training than they do now (600 to over 900 hours per year, on average), including a high-quality industry work placement, so that they can develop the skills they need to succeed in the world of work and secure better paid jobs, or to progress.

Annexes

Annex 1. Key Economic Indicators

Key Indicators

	2016-17***	2017-18	2018-19	2019-20	2020-21	2021-22
I. Macroeconomic Indicators						
Real GDP (% yoy)	1.8	2.0	1.6	1.7	1.9	2.0
Nominal GDP (% yoy)	3.6	3.8	3.1	3.4	3.8	4.0
Output Gap (% of GDP)*	0.0	0.2	0.0	-0.1	-0.1	0.0
Inflation (%, yoy)	0.7	2.4	2.3	2.0	2.0	2.0
Fiscal Balance (% of GDP)**	-2.6	-2.9	-1.9	-1.0	-0.9	-0.7
Unemployment (%)	4.9	4.9	5.1	5.2	5.2	5.1
Savings (% of GDP)	12.6	13.3	13.8	14.6	15.3	15.7
Investment (% of GDP)	17.0	16.7	17.0	17.2	17.5	17.7
Public Fixed Capital Investment (% GDP)	2.6	2.5	2.5	2.5	2.6	2.7
Private Fixed Capital Investment (% GDP)	9.4	9.2	9.4	9.6	9.8	9.9
Total Fixed Capital Investment (% GDP)	16.6	16.4	16.7	16.9	17.3	17.5

Key Indicators

	2016-17***	2017-18	2018-19	2019-20	2020-21	2021-22
Current Account Balance (% of GDP)	-4.0	-3.5	-3.1	-2.5	-2.1	-2.0

*A positive (negative) gap indicates an economy above (below) its potential.

**A positive (negative) balance indicates a fiscal surplus (deficit). Fiscal balance is defined as Public Sector Net Borrowing.
*** Indicators can be presented on a fiscal year basis, should they be unavailable for the calendar year.

Notes: Based on OBR's March 2017 Economic and fiscal outlook (EFO)

Annex 2. Implementation of Past Growth Strategies – Hangzhou, Antalya and Brisbane commitments

Key Commitments

List of key commitments already fully implemented at the time of Hangzhou Summit

1. Introduction of the new National Living Wage
2. Increasing the Annual Investment Allowance
3. Abolition of employer National Insurance contributions for individuals under the age of 21 earning less than £866 a week (previously £827 a week)
4. Abolition of employer National Insurance contributions for apprentices under the age of 25 earning less than £866 a week
5. Increase to the Employment Allowance
6. Increase to the apprentice National Minimum Wage
7. Cutting Red Tape programme
8. Planning courts
9. Apprenticeship Grants for Employers (AGE)
10. Help to Work
11. Childcare (Universal Credit)
12. Small and Micro Business Assessment
13. Extending Help to Buy
14. The Business Impact Target
15. Removal of the cap on student numbers
16. One-in Two-out
17. Red Tape Challenge

Key Commitments for Monitoring Purposes

Increasing labour market participation	**Increasing the tax-free personal allowance to £11,500, and the higher rate threshold to £45,000 in 2017-18; a new Apprenticeship Levy to fund an uplift in apprenticeship starts and quality by 2020; and introducing the Youth Obligation for most 18-21s on Universal Credit from April 2017.**	
Inclusion of the commitment in growth strategies	This measure was initially included in the Antalya growth strategy.	
Detailed implementation path and status	Interim Steps for Implementation	Status
	1. To support and reward those in work by cutting taxes, the government has increased the income tax personal allowance to £11,500 and the higher rate threshold (the point at which the 40% begins to be paid) to £45,000. 2. The Apprenticeship Levy was implemented in April 2017. The levy is set at a rate of 0.5% of an employer's paybill. Each employer has an allowance to offset the first £15,000 of their levy liability, which means in practice, only employers with a paybill greater than £3 million will pay the levy. The levy is charged on employers across the UK. Employers in England can access their levy funds through a digital account from which they can choose and purchase apprenticeship training and assessment. 3. The Youth Obligation was implemented in April 2017. The government introduced the Youth Obligation for 18-21 year olds who make a new claim to Universal Credit full service and are in the All Work Related Requirements Conditionality group.	1. Implemented. The Finance Act 2016 confirmed the increase. 2. The levy was legislated for in Finance Act 2016, which received Royal Assent on 15 September 2016. The Levy was introduced in April 2017. 3. Implemented April 2017.
Impact of Measure	1. Following these changes, 31 million taxpayers will pay less income tax in 2017-18 than in 2015-16, with 1.3 million of the lowest paid taken out of	

	paying income tax altogether. As a result, a typical taxpayer will pay over £1,000 less income tax in 2017-18, than in 2010-11, when the Government first began to increase the personal allowance. 2. The Apprenticeship Levy is supporting productivity growth by increasing the quantity and quality of apprenticeship training. It may have a near-term impact in reducing earnings growth, although by supporting increased productivity, it is expected that the levy will lead to increased profitability for businesses, and increased wages over the long-term. The government publishes data on apprenticeships as part of a further education and skills release. In addition, a new Institute for Apprenticeships is being established to monitor and oversee the quality of apprenticeships. 3. Youth Obligation recipients will receive intensive work focused support from day one of their claim. If they are still unemployed and claiming Universal Credit after 6 months they will be referred to work-related training or guaranteed work experience.

Increasing female labour participation: Childcare measures	**Tax-Free Childcare providing up to £2,000 childcare support for working parents with children under 12 years old; and 30 hours a week of free childcare for working parents of 3 and 4 year olds**	
Inclusion of the commitment in growth strategies	This measure was initially included in the Antalya growth strategy.	
Detailed implementation path and status	Interim Steps for Implementation	Status
	1. Tax free childcare: This measure has partially come into effect. Tax-Free Childcare was introduced to parents of children aged under 4 years old in April 2017. It will continue to be rolled out gradually to parents of children aged under 12 years old. All eligible parents will be able to apply by the end of the year. 2. 30 hours free childcare From September all 3 and 4 year olds with eligible working parents will receive 30 hours a week of free childcare.	1. Partially implemented. Tax-free childcare was legislated for in the Childcare Payments Act, which received Royal Assent on 17 December 2014. In April 2017, the government launched Tax-Free Childcare to parents of children aged under 4 years old.

		Parents with older children will be able to apply for Tax-Free Childcare in cohorts over the course of 2017. 2. The Childcare Act 2016 has received Royal Assent and the policy will be fully implemented from September 2017
Impact of Measure	1. Tax-Free Childcare will help increase the affordability of childcare for working parents, whilst also supporting them to make decisions about returning to work or increasing the number of hours they work. Working parents will be able to receive up to £2,000 childcare support per child under the age of 12, per year. The introduction of Tax-Free Childcare will allow many self-employed parents to benefit from support with childcare costs for the first time. 2. The government has committed to doubling the existing free entitlement of 15 hours free childcare for all 3 and 4 year olds, to 30 hours for working parents of 3 and 4 year olds, worth £5,000 a year per child. This will help working parents with their childcare costs and support parents who want to return to work or increase their hours, to do so.	

Increasing investment	**Corporation tax reduction to 19 percent from 2017-18 and 17 percent from 2020-21; continuing with major infrastructure projects; and, devolving powers over transport, planning and skills, as well as control over investment funds to boost economic growth, to areas which choose to have elected mayors.**	
Inclusion of the commitment in growth strategies	This measure was initially included in the Antalya growth strategy.	
Detailed implementation path and status	Interim Steps for Implementation	Status
	1. On 1 April 2017, the corporation tax rate was reduced to 19%. From 1 April 2020, the corporation tax rate	1. Implemented and future rate changes are on track. 2. HS2 Phase 1 (London to

	will be reduced further to 17%. The cut to 17%, announced at Budget 2016, was legislated for in Finance Act 2016 which received Royal Assent in September 2016. 2. On 30 November 2015, the government announced a proposed way forward on Phase Two of HS2, between West Midlands and Crewe, with planned opening in 2027, six years ahead of the rest of Phase 2, so that the North and Scotland will realise the benefits of HS2 to people and places sooner. This will be subject to its own hybrid bill, which the government hopes to deposit in parliament in 2017. 3. Parliamentary Orders have been laid for areas receiving a mayoral devolution deal, to establish new local governance mechanisms where necessary, and to formally devolve powers to them.	Birmingham) received Royal Assent on the 23rd February 2017, allowing construction to start on schedule. 3. London has had an elected mayor since 2000. Outside of London, six regional Mayors were elected on 5th May 2017.
Impact of Measure	1. Corporation tax has been cut from 28% in 2010 to 19% today. At Budget 16, the government went even further and announced a cut to 17% in 2020. OECD analysis has found corporation taxes to be the most harmful taxes for growth. Reducing the rate of corporation tax increases the return companies receive on their investment. In this way corporation tax cuts will support investment and economic growth, which in turn supports and creates jobs. Government modelling in 2016 estimated that cuts announced since 2010 could increase GDP by up to 1.3% in the long run. 2. High Speed 2 will link 8 of Britain's 10 largest cities, directly serving 1 in 5 of the UK population. It will deliver improved rail services to more than 100 cities and towns and will cut journey times between major cities – the journey from Leeds to Manchester will be cut from nearly 2 hours to under 1 hour. Over 90 million passengers are expected to use High Speed 2 every year. The full network will generate benefits to transport users of approximately £60 billion and wider benefits of over £13 billion. 3. The deals will boost economic growth by giving control of transport,	

	planning, skills and giving local areas new powers and funds for transforming and improving local services. Devolution deals promote economic growth across a core city or place of strategic importance by bringing together policy and decision-making across a wider strategic economic area.

Non-key Commitments

The policy action	Status of Implementation	Impact of the policy
Strengthening the UK Resolution Regime for Banks and Investment Firms	Implemented. The UK's special resolution regime was updated on 1st January 2015 to transpose the Bank Recovery and Resolution Directive.	The United Kingdom's special resolution regime was put in place in 2009, and has been enhanced subsequently, to ensure that the failure of a bank can be managed in a way that protects the wider economy and financial sector, without relying on taxpayer bail-outs. The BRRD establishes a common approach across the EU to the recovery and resolution of banks and investment firms
Ring-fencing of core retail services	All legislation needed to implement the ring-fencing regime has been passed. The regime is supplemented by rules made by the Prudential Regulation Authority (PRA) and Financial Conduct Authority (FCA). The deadline for banks to implement ring-fencing is 1 January 2019.	Ring-fencing supports financial stability by insulating retail and small business deposits and payments services from shocks originating elsewhere in the global financial system; and by making ring-fenced banks (which provide those essential services) simpler and more resolvable. Ring-fencing should lead to fewer and less severe financial crises in the future, which will benefit the whole UK economy.
UK Guarantees Scheme	Implemented.	The scheme incentivises private investors to contribute further to financing the UK's infrastructure and helping to

		reduce cost to taxpayers. To date the UK Guarantees Scheme has approved £3.7 billion of guarantees for 10 projects with a combined capital value of £23 billion.
Contracts for Difference (CFDs) – Energy Strike Price	Implemented.	The purpose of Contracts for Difference (CFDs) is to incentivise investments in new low-carbon electricity generation in the UK in a way that brings forward the most cost effective renewables projects. The first CFD auction was held in February 2015, and saw £315m p.a. worth of contracts allocated to over 2.1 GW of renewable projects. Competition in the round led to an offshore wind price that cleared 20% below the auction's administrative strike price. In 2016 the Government announced that it will auction CFDs of up to £730 million for up to 4 GW of offshore wind and other less established renewables, with a first auction of £290 million. The process for this first auction of £290 million commenced in April 2017; results are expected later this year.
British Business Bank	The British Business Bank has been fully operational since	Its programmes are already delivering significant results,

	November 2014.	supporting £3.5 billion of finance to over 56,000 small businesses with a further £5.5 billion of finance to mid-caps.
Venture Capital Catalyst Fund (British Business Bank programme)	The programme has been funded with £83.8m from the British Business Bank. These are invested alongside private investors meaning, since inception, funds committed through the Catalyst programme total £1,084m. At Autumn Statement 2016, the government provided BBB with £400m of new funding to support venture capital.	The programme is currently supporting 60 SMEs through 9 venture capital funds where a total of £258m has been drawn down.
Enable Funding (formally known as the Asset Finance Funding Vehicle) (British Business Bank programme)	Implemented, with four transactions agreed so far. These are with Henry Howard (a £51m facility), LDF (also £51m), Hitachi Capital UK (£100m) and Shire Leasing (£37.4m).	Since the first transaction in September 2015, the ENABLE Funding programme has supported lending to over 5,890 enterprises.
Investment Programmes, including the Business Finance Partnership (British Business Bank programme)	Implemented. To date £574m has been allocated to the Investment Programme which is supporting more than 11,350 SMEs. These figures do not include the historic investments made through the Business Finance Partnership (BFP), which is facilitating £125m of funding to over 1657 SMEs; and further £5.6bn of funding to 81 mid-cap businesses.	The programme supports non-bank and challenger bank lenders in order to increase the supply of finance and diversity in the financial marketplace for smaller businesses and mid-caps.
SME credit data	The policy has been implemented through secondary legislation. Banks and Credit Reference Agencies (CRAs) have been designated under that legislation, and data is expected to start flowing over the summer.	Improved data transparency would lead to a more diverse credit market for SMEs by increasing competition. Better-informed SME credit scoring will lead to increased availability of credit and more competitive pricing of credit for SMEs. This will improve economic efficiency and could raise benefits from additional investment and economic

		growth in the UK.
Extending ISA-qualifying investments to include peer-to-peer loans	Implemented. The programme was extended in November 2016 to allow certain debt securities issued by companies and offered via a crowdfunding platform to be held in the Innovative Finance ISA.	Change ISA regulations to increase the choice of investments available to consumers, support alternative finance providers and diversify the available sources of finance to businesses.
R&D Tax Credit	Implemented. This was legislated for in Finance Act 2014, and took effect from 1 April 2014.	In 2014-15, R&D tax credits provided £2.45bn of relief to almost 21,000 companies, supporting around £21.8bn of innovative expenditure.
Social investment tax relief	Social Investment Tax Relief (SITR) was announced in Budget 2014 and was enacted in the Finance Act 2014.	In Autumn Statement 2016, the government announced that the amount of investment social enterprises aged up to 7 years old can raise through SITR will increase to £1.5 million.
Seed enterprise investment scheme	The Seed Enterprise Investment Scheme (SEIS) was made permanent in the Finance Act 2014.	The SEIS was launched in April 2012 and has so far helped more than 6,500 companies raise over £420 million. In 2015/16, 2,225 companies raised £170 million of investment.
Creation of the new Competition and Markets Authority (CMA).	The CMA became fully operational in April 2014 to promote competition, both within and outside the UK, for the benefit of consumers.	The CMA's 2015-16 impact assessment states that the CMA generated £10.60 of direct benefit to consumers for every £1 spent. The CMA will continue to report on progress against this target annually.
Creation of the UK Competition Network	Implemented.	The UK Competition Network (UKCN) aims to promote stronger competition for the benefit of consumers and to prevent anti-competitive behaviour in the regulated industries. In the last year there has been an increase in the number of secondments between the regulators to promote greater sharing of

		skills, expertise and resource. The UKCN has also taken forward a series of actions to increase the volume and effectiveness of competition enforcement cases in regulated sectors.
Formation of the UK Regulators Network	Implemented. The UKRN was established in March 2014.	The UKRN is leading work to help regulators work more closely together and share resources. It has recently published a report on consumer engagement in regulatory decisions, and will shortly be publishing a review of its own effectiveness.

Annex 3. Major New Policy Actions Supporting Growth - Hamburg Summit

T-Levels	**A new framework of fifteen routes to skilled employment, with a high quality industry work placement during the programme**
Objective(s) of policy	Improving the skills base is one of the best long-term strategies for improving productivity. Employers consistently cite a lack of skills as a major concern. The government is introducing 'T-Levels' to ensure young people in technical education will receive over 50% more training than they do now (600 to over 900 hours per year, on average), including a high-quality industry work placement, so that they can develop the skills they need to succeed in the world of work and secure better paid jobs, or to progress. These courses will be developed by industry, to ensure that employers have access to the skills they need to compete in the global economy.
Implementation path and expected date of implementation	The policy will have a phased rollout from 2019-20 to 2022-23. The Department for Education are engaging with industry and stakeholders to develop 15 T-Level routes that will be implemented from 2019-20.
What indicator(s) will be used to measure progress?	Timetable is on plan for implementation of scheme during 2019-20. Full rollout by 2022-23, within agreed budgets.

Transport

Improve transport infrastructure	Tackle congestion on the roads and ensure the UK's transport networks are fit for the future
Objective(s) of policy	At Spending Review November 2015, the government announced it would increase transport spending by 50% to invest £61 billion by 2020. At Autumn Statement November 2016, government announced over £2 billion of additional funding for transport from the National Productivity Investment Fund (NPIF). Roads and local transport – The NPIF will provide an additional £1.1 billion by 2020-21 in new funding to relieve congestion and deliver much-needed upgrades on local roads and public transport networks. On strategic roads, an extra £220 million will be invested to tackle key pinch-points. Future transport – The NPIF will invest a further £390 million by 2020-21 to support ultra-low emission vehicles (ULEVs), renewable fuels, and connected and autonomous vehicles (CAVs). This includes £80 million for ULEV charging infrastructure, £150 million in support for low emission buses and taxis, £20 million for the development of alternative aviation and heavy goods vehicle fuels, and £100 million for new UK CAV testing infrastructure. In addition to tax incentives for ULEVs in company tax and salary schemes, until the end of March 2019 the government will also offer 100% first-year tax allowances to companies investing in charge-points for electric vehicles. Rail: capacity and smart ticketing – From 2018-19 to 2020-21, the NPIF will allocate an additional £450 million to trial digital signalling technology, to expand capacity and improve reliability. Around £80 million will be allocated to accelerate the roll out of smart ticketing including season tickets for commuters in the UK's major cities. Early construction works on High Speed 2 Phase 1 have started and the government has announced its preferred route for Phase 2b of High Speed 2.
Implementation path and expected date of implementation	So far, £210m of funding has been allocated to local authorities for small improvements to local transport networks for 17/18. £110m of funding for the strategic road network has been allocated to individual small and medium-sized projects. Competitions have been launched to allocate new funding for Connected and Autonomous Vehicle research (£100m) and local authority spend in future years (£490m). Additional competitions have been launched on other areas of spend. Further allocations of funding and progress on projects will be announced in due course.
What indicator(s) will be used	Transport spending under the National Productivity Investment

to measure progress?	Fund is tracked through the UK's OSCAR integrated whole of government financial management system, with annual publicly available outturn statements.
Explanation of additionality or adjustment (where relevant)	This commitment builds on the Brisbane key commitment to improve infrastructure with the High Speed 2 project.

Innovation/R&D

Enhance the UK's position as a world leader in science and innovation	**Provide an additional £4.7 billion by 2020-21 in R&D funding**
Objective(s) of policy	Investment in science and innovation is vital for a thriving, productive and competitive economy. From discovering and manufacturing new drugs to developing cleaner technologies that reduce air-pollution, innovation improves and enhances people's lives and unlocks growth, including leveraging private sector R&D investment. The government will invest an additional £4.7bn in R&D by 2021 through the NPIF. We will be investing an extra £2 billion a year in R&D by the end of this Parliament. This is an increase of around 20% to total government R&D spending, and more than any increase in any Parliament since 1979. Funding will cover a range of programmes including: Industrial Strategy Challenge Fund – a new cross-disciplinary fund to support collaborations between business and the UK's science base, which will set identifiable challenges for UK researchers to tackle. £1 billion of potential spending has been announced on programmes in the following priority areas: healthcare and medicine; robotics and artificial intelligence; batteries for clean and flexible energy storage; self-driving vehicles; manufacturing and materials of the future; and satellites and space technology. Talent funding – The government will invest £300 million over the next four years to continue to build the pipeline of high-skilled research talent. This includes £90m to fund 1,000 additional PhD places, and £210m to support new fellowships for early and mid-career researchers, both in areas aligned to the Industrial Strategy. Global research talent – The government will invest over £100 million over the next 4 years to attract the brightest minds to the UK, to help maintain the UK's position as a world‑leader in science and research.
Implementation path and	Spending will occur over the following profile:

expected date of implementation	2017-18: £425 million 2018-19: £820 million 2019-20: £1,500 million 2020-21: £2,000 million
What indicator(s) will be used to measure progress?	UK Government Expenditure on Research and Development
Explanation of additionality or adjustment (where relevant)	The government currently invests around £10 billion a year in research and development, ensuring that the UK retains its world leading status in science and innovation. This additional investment will enable the government to do more to commercialise the world-leading ideas and discoveries made in Britain, and put the UK and British companies and the forefront of innovation, developing new products and addressing the challenges of the future. For every £1 that government spends, we secure an average of £1.36 of private investment across the economy, helping to boost prosperity and growth.

Housing

Accelerate new housing supply	**Funding to support the construction of new homes.**
Objective(s) of policy	Accelerated Construction – In Autumn Statement 2016, the government announced that it would pilot Accelerated Construction on public sector land, backed by investment of £1.7 billion by 2020-21. The programme seeks to speed up house building on public sector land in England through partnerships with private sector developers. It aims to drive growth by stimulating an increase in the use of the use of modern methods of construction, helping new participants, contractors and medium/low volume builders enter the market. Housing Infrastructure Fund – a new Housing Infrastructure Fund of £2.3 billion by 2020-21, funded by the NPIF and allocated to local authorities on a competitive basis will provide infrastructure to unlock new homes in areas where housing need is greatest. The unavailability of housing in areas of high demand is likely to act as a constraint on growth and the fund will address this by delivering up to 100,000 homes. The government will also examine options to ensure that other government transport funding better supports housing. Affordable homes – the government will relax restrictions on grant funding to allow providers to deliver a mix of homes for affordable rent and low cost ownership, to meet the housing needs of people

	in different circumstances and at different stages of their lives. The NPIF will provide an additional £1.4 billion to deliver an additional 40,000 housing starts by 2020-21. The government will continue to support home ownership through continuing both the Help to Buy: Equity Loan scheme and the Help to Buy: ISA.
Implementation path and expected date of implementation	Accelerated Construction: the programme is currently in planning and set up phase. Implementation is expected to commence in Autumn 2017, following formal clearances of business case and finalisation of governance and management arrangements. Housing Infrastructure Fund: The Housing Infrastructure Fund is still being finalised. However, the Autumn Statement 2016 profiled £50m for 2017/18, £250m for 18/19, £800m for 19/20, and £1.2bn for 20/21 in England. Affordable homes: in January, the government published an addendum to the Affordable Homes Programme prospectus, opening up the additional affordable homes funding to bids. The Homes and Communities Agency, who deliver the programme, are now in the process of contracting, making grant allocations and reviewing new bids through a process of Continuous Market Engagement.
What indicator(s) will be used to measure progress?	Accelerated Construction: the programme is still being finalised and the indicators used to assess progress are part of this process. Progress measures will be determined in due course. Housing Infrastructure Fund: the monitoring and reporting requirements for the fund are still being finalised.
Explanation of additionality or adjustment (where relevant)	In 2015, the government announced that it would invest over £8bn in housing until 2021. The £5.3bn committed at Autumn Statement 2016 for the Housing Infrastructure Fund, the Affordable Homes Programme and Accelerated Construction builds on these previous government housing commitments.

Digital

Improve digital communications	**Support the market to roll out full-fibre connections and future 5G communications**
Objective(s) of policy	The government will invest over £1 billion by 2020-21, including £740 million through the NPIF, targeted at supporting the market to roll out full-fibre connections and future 5G communications. This will bring faster and more reliable broadband for homes and businesses across the UK, boost the next generation of mobile connectivity and keep the UK in the forefront of the development

	of the Internet of Things. This will be delivered through: £400 million for a new Digital Infrastructure Investment Fund, at least matched by private finance, to invest in new fibre networks over the next 4 years, helping to boost market ambitions to deploy full-fibre access to millions more premises by 2020. A new 100% business rates relief for new full-fibre infrastructure for a 5 year period from 1 April 2017; this is designed to support roll out to more homes and businesses. Providing funding to local areas to support investment in a much bigger fibre 'spine' across the UK, prioritising full-fibre connections for businesses and bringing together public sector demand. The government will work in partnership with local areas to deliver this, and a call for evidence on delivery approaches was published at the end of 2016. Providing funding for a coordinated programme of integrated fibre and 5G trials, to keep the UK at the forefront of the global 5G revolution. This includes a new national 5G Innovation Network to trial and demonstrate 5G applications. The Local Full Fibre Networks programme is designed to future-proof the UK's broadband networks and is part of a comprehensive approach on fixed broadband delivery, building on existing policies to deliver a Universal Service Obligation for broadband, and roll out superfast broadband availability to 95% of UK premises by the end of 2017.
Implementation path and expected date of implementation	Starting in 2017, the government will invest £200 million to fund a programme of local projects to test ways to accelerate market delivery of new full-fibre broadband networks. These will combine the following approaches: • bringing together local public sector customers, to create enough broadband demand to reduce the financial risk of building new full-fibre networks • offering full-fibre broadband connection vouchers for businesses, to increase take-up of services where new networks are built through the programme • directly connecting public sector buildings, such as schools and hospitals. This will bring fibre closer to more homes and businesses, allowing them to be connected • opening up public sector assets, such as existing ducts, to allow fibre to be laid more cheaply The first phase of the 5G programme will invest up to £16 million in a cutting edge 5G facility with the technology to run the trials, delivered through cooperation between leading 5G research

	institutions. A new centre of 5G expertise within government will oversee this programme, working with public and private sector partners. Funding for future trials will be awarded on a competitive basis. The new Digital Infrastructure Investment Fund will be launched in spring 2017. Government investment of £400 million will be at least matched by private sector investors, and will accelerate the deployment of full-fibre networks by providing developers with greater access to commercial finance.
What indicator(s) will be used to measure progress?	Increase in UK Full Fibre premises passed as a result of the Local Full Fibre Network programme (including indirect market stimulation). Creation of new UK 5G Innovation Network including set up of new test beds. Commercial investment in digital infrastructure through the DIIF.

Annex 4. Past commitment – St. Petersburg fiscal commitment

			Estimate Projections				
	2014-15*	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
Gross Debt	87.4	87.6	87.5	87.7	87.7	86.5	84.8
ppt change	0	-1.3	-0.8	+0.6	+2.1	+3.5	+4.5
Net Debt**	83.6	83.7	86.6	88.8	88.5	86.9	83.0
ppt change	+0.3	0	+4.0	+7.5	+8.6	+9.7	+8.3
Deficit	5.2	3.8	2.6	2.9	1.9	1.0	0.9
ppt change	+0.2	0	-0.4	+1.0	+0.9	+1.5	+1.4
Primary Balance	-3.5	-2.2	-0.9	-0.9	-0.2	0.7	0.7
ppt change	-0.1	0	+0.2	-0.8	-1.1	-1.5	-1.4
CAPB	-2.8	-1.9	-0.9	-1.0	-0.2	0.7	0.7
ppt change	-0.2	0	+0.1	-0.9	-1.0	-1.6	-1.4

* Figures can be presented on a fiscal year basis, should they be unavailable for the calendar year.
** *How does your country measure net debt?* Net Debt is a measure of liabilities minus liquid assets, measured on a cash basis.
Notes: The ppt change compares the March 2017 OBR EFO estimate projections with the March 2016 OBR EFO estimate projections (the last submission). Figures before 16/17 represent latest outturn data.

The debt-to-GDP ratio and deficit projections are contingent on the following assumptions for growth:

Estimate Projections

	2014-15*	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Real GDP growth	3.1	1.9	2.0	1.8	1.6	1.8	1.9
ppt change	0.3	-0.2	0.0	-0.5	-0.5	-0.3	-0.2
Nominal GDP growth	4.6	2.6	4.1	3.4	3.2	3.5	3.9
ppt change	0.3	0.3	0.5	-0.6	-1.0	-0.5	-0.4

* Figures can be presented on a fiscal year basis, should they be unavailable for the calendar year.