

BBC R&D 2017+

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BBC R&D

Confidential



BBC | Research & Development



Our vision on a page



OUR MISSION:

To inform, educate and entertain all audiences,
to deliver our public purposes

OUR AIM:

To reinvent the BBC for a new generation

We'll do this through... **OUR AMBITIONS:**

Making sure
everyone gets
value from
the BBC

World-class
creativity

Global reach

Financial
stability

Making the BBC
an even greater
place to work

We'll support these ambitions through our content plan.

We also need... **12 PAN-BBC PRIORITIES:**

1
Grow
iPlayer
and Live

2
Reach 20m
members

3
Review
of brands

4
Younger
audiences

5
Reinvent
and grow
audio

6
Newstream
and
slow news

7
Revitalise
our
education
mission

8
Reflect the
diversity
of the UK

9
Britain's
creative
partner

10
Grow
Studios

11
Grow
Worldwide

12
Grow the
World
Service

BBC Design & Engineering SMT Objectives

Build a world-class BBC technology division

1. People

Make D&E among the best places to work in the industry, where people feel enabled to do their best work

2. Communication

Increase understanding within the Division and throughout the BBC of D&E's role in the transformation of the BBC and ensure we have the tools in place to track delivery of our objectives

3. Capacity & Capability

Build the Division's capacity and ability to deliver digital transformation by developing skills, expertise and enabling technologies

Drive the digital transformation of the BBC, today

4. Personalisation

Increase the personalisation of BBC's online services, to reach more people and offer more integrated benefits to audiences

5. World-class products & services

Develop products and services that allow the BBC both to serve audiences through traditional means and to realise its aim of reinvention for a new generation by increasing the ability of D&E to innovate online

6. Transformative initiatives for audiences

Enable D&E to support existing products and deliver a range of new and innovative tech-led services or features that have a measureable, positive impact on BBC audience targets

7. Transformative initiatives for the BBC

Increase the support D&E gives to colleagues across the BBC by improving and developing production and business support systems

Be the catalyst for the BBC of the future

8. Vision for 2020

Inform the debate about the reinvention of the BBC in two main ways: strategic intelligence about how changing technology will shape our world in 2022 and a set of public service-driven future-state projects

9. World class BBC technology division IP Glidepath

Lay the foundations for a future IP distribution environment that is affordable, universal, un-gatekept and better for audiences, through specific interventions and alignment of wider business decisions to this goal

R&D Measures of Success

Impact

Are all of our actions sufficiently clear, focused and measurable to deliver significant positive change to BBC?

Responsibility (or authority)

Are we placing sufficient trust and authority in our key staff to deliver the impact expected from a department of 230 staff?

Resources

Do we have the appropriate talent (and the services to support them) to ensure a critical mass around R&D major objectives?

Balance (or equilibrium)

Are we organized and focused in such a way to maintain a balanced portfolio of work and resources?

Flexibility (or agility)

Have we made the department sufficiently simple in our management approach to create a truly agile culture?

Collaboration

Have we empowered our teams to embrace the right opportunities to collaborate internally and externally to deliver impact?

R&D Areas of focus

- Data Science (Research Partnership+own experiments)
- Working with production and architecture teams
- Object based media
- Public service internet ecosystem
- VR/ AR
- Voice
- BBC in year 2022 (our century) – hybrid broadcast+IP
- Trials of ‘distributed’ or networked BBC – production and output
- Sustainability research activities

R&D Areas of focus

Data Science (Research Partnership)

- DSRP – BBC+8 universities
- Builds on previous Audio Research Partnership, UX Research Partnership
- Magnify problems+amplify outputs
- Keep universities co-operating not competing
- Aggregate list of research challenges and partners internally
- Internal partners – News, iPlayer, Platform, Marketing, (etc)

R&D Areas of focus

Data Science (Own experiments)

- ML in production
- Huge archive search
- TTS and STT – scaling clusters across output
- Programmatic scheduling
- Topic search
- News in realtime

R&D Areas of focus

ML & AI

extraction and meaning from data (understanding content – automated production, fully linked data)

using data to create output (synthesis /onscreen graphics etc (Future audience experiences – object based media) +accessibility

deducing or validating facts/ truths/ events (Curation and personalisation – media decision making)

using data to create recommendations (understanding audiences, curation and personalisation)

R&D Areas of focus

Working with production and architecture teams

- Realtime data lab
- Across our transmission, playout suite
- Scheduling conflicts, programme information, audiences
- Large-scale collaboration with new departments
- How to collaborate without competing?
- How to assign responsibility without doing matrix?

R&D Areas of focus

Object based media

- Send content as objects, assemble in browser
- AV material (radio trial), text/ images (Newsbeat explorer)
- Test at General Election 2017
- Test as trial (Sep 2017)
- Challenge for production, distribution, consumption
- Educating audiences

R&D Areas of focus

Public service internet ecosystem

- Non-commercial Internet usage
- Museums, libraries, other broadcasters
- Challenge in assembling content; metadata, QoS, latency, CDN
- What is the endpoint? Client/ browser/ other provider's GUI?
- How to enhance other services without replacing them?
- Much of the challenge is deciding what to do and why, not how
- But that is still a challenge

R&D Areas of focus

VR/ AR

- >2 years of hatching
- Large scale experiments
- Large number of formats and genres
- Now VR-Hub (commissioning) and VR-Focus (near-term delivery)
- AR further away
- Common challenges around authoring and stitching
- Huge gap in consumption and experience

R&D Areas of focus

Voice

- 18 month tyre-kicking
- Sudden explosion in devices
- Diverse landscape – 2x market leaders but field wide open
- Basic BAU work (news, sports, weather) – supported by RD
- Longer term work (>3 years) carried out by RD
- mid-term innovation team examining possible formats
- Edit/ playback/test still tricky

R&D Areas of focus

BBC in year 2022 (our century) – hybrid broadcast+IP

- Ensuring the BBC still innovates
- Still no clear assumption of TX switch off
- Hybrid model still useful
- How to celebrate best of broadcast alongside best of IP?

R&D Areas of focus

'Distributed' or networked BBC – production and output

- Contribution networks everywhere
- Edit anywhere
- Playout anywhere
- Audience RX anywhere

R&D Areas of focus

Sustainability

- Running through everything we do
- How to make it measurable+non-negotiable?