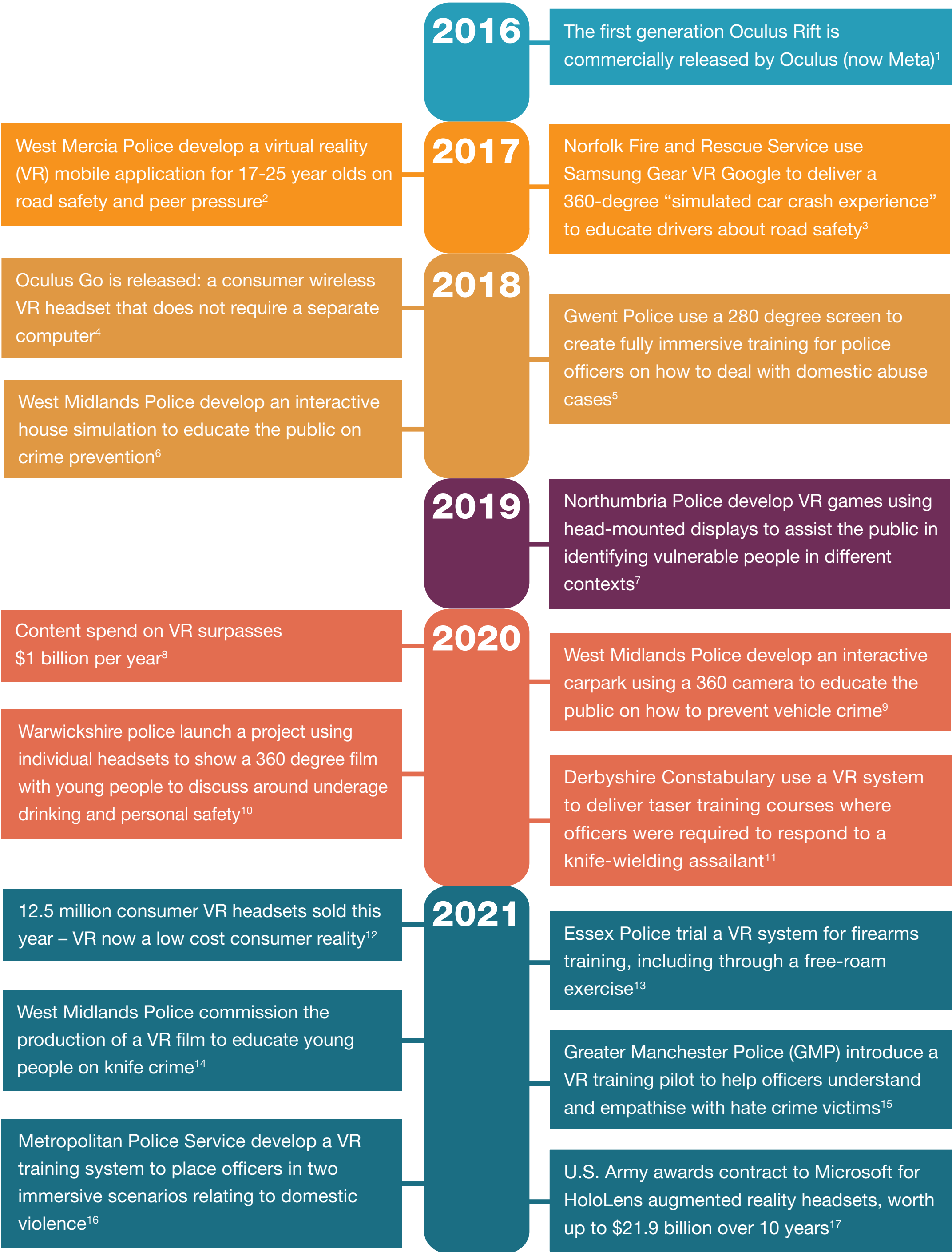


Timeline of XR use by Police in England and Wales



First RespondXR

Digital vulnerability of immersive training for first responders

Our Research

In their role as first responders, police services in England provide immediate assistance to individuals at a scene of emergency and/or potential criminal event. However, the significant reduction in policing resources since 2010 has demanded officers to work more broadly in response to the diverse range of incidents. Therefore, training needs and settings must be not only varied, but efficient as well as effective.

Extended Reality (XR), including both virtual and augmented reality, is becoming prominent in many sectors for training and operations. Yet, in the rush to exploit the benefits of XR for immersive training, the potential digital vulnerabilities that may be exposed have yet to be properly examined.

First RespondXR is a research project funded by SPRITE+ which, for the first time, mapped the vulnerability space (i.e., its social, technical, legal, ethical risks and impacts), from the perspective of (a) those delivering the training, (b) the first responders who will be undertaking this training, and (c) the technical teams bringing forward new training methodologies in XR. The project explores the socio-technical challenges posed by the adoption of this technology, providing the foundations for further research on the safe, secure, and ethical use of immersive training technology for enhancing the response of policing in England.

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Citations

- 1 'Virtual Becomes Reality as Oculus Rift Arrives in the UK', The Guardian, 20 September 2016 <<https://www.theguardian.com/technology/2016/sep/20/virtual-becomes-reality-as-oculus-rift-arrives-in-the-uk>>.
- 2 'Green Light Safety App (Drive VR)' (The Road Safety Trust) <<https://www.roadsafetytrust.org.uk/projects-option-2/west-mercia-police>>; 'DriveVR', DriveVR <<https://drivevr.co.uk/>>.
- 3 Paul Jacques, 'Virtual Reality Drives Home Crash Consequences', Police Professional, 12 July 2017 <<https://www.policeprofessional.com/news/virtual-reality-drives-home-%C2%91crash-consequences%C2%92-2/>>.
- 4 'Facebook Unveils New VR Headset "Oculus Quest" for \$399', Reuters, 26 September 2018 <<https://www.reuters.com/article/us-facebook-tech-virtualreality-idUSKCN1M62N1>>.
- 5 'Police Use Virtual Reality to Help Tackle Domestic Abuse', BBC News, 19 February 2018 <<https://www.bbc.co.uk/news/av-uk-wales-43121253>>; 'UK Police Force Launches The First Virtual Reality Training Program' (AR Post, 2018) <<https://web.archive.org/web/20210505211618/https://arpost.co/2018/03/08/uk-police-force-launches-first-virtual-reality-training-program/>>.
- 6 'House Discloses Crime Prevention Tips as Part of West Midlands Police Anti-Burglary Campaign' (Secured By Design, 2019) <<https://www.securedbydesign.com/about-us/news/house-discloses-crime-prevention-tips-as-part-of-west-midlands-police-anti-burglary-campaign>>; Kelly Harris, 'Virtual Reality Crime Scene Launched to Help Residents Beat Burglars', Dudley News, 1 October 2018 <<https://www.dudleynews.co.uk/news/16952737.virtual-reality-crime-scene-launched-help-residents-beat-burglars/>>.
- 7 'Force to Use State-of-the-Art Technology to Teach Public about Vulnerability' (Northumbria Police, 2019) <<https://beta.northumbria.police.uk/latest-news/2019/august/force-to-use-state-of-the-art-technology-to-teach-public-about-vulnerability/>>; 'It Could Be Important' (Pocket Sized Hands, 2019) <<https://pocketsizedhands.com/our-work/itcouldbeimportant/>>.
- 8 Tim Dams, '2020 in Review: Virtual Reality Gets Real', IBC, 10 December 2020 <<https://www.ibc.org/trends/2020-in-review-virtual-reality-gets-real/7106.article>>.
- 9 'Interactive Car Park Helps Combat Vehicle Crime' (West Midlands Police, 2021) <<https://west-midlands.police.uk/news/interactive-car-park-helps-combat-vehicle-crime>>.
- 10 Warwickshire Police, 'New Virtual Reality Headsets Launched to Help Young People Understand Issues Affecting Them' (Warwickshire Police, 2020) <<https://www.warwickshire.police.uk/news/warwickshire/news/2020/march/new-virtual-reality-headsets-launched-to-help-young-people-understand-issues-affecting-them/>>.
- 11 BBC Click, AVRT BBC Click Episode, YouTube, 2021 <https://www.youtube.com/watch?v=59B5Z0rTBDU&ab_channel=AVRTTraining>; Mark Dugdale, 'AVRT Platform Takes Training to a Whole New Level', Virtual Reality World Tech, 19 August 2020 <<https://vrworldtech.com/2020/08/19/avrt-platform-takes-training-to-a-whole-new-level/>>; Derbyshire Constabulary, 'Derbyshire Police Trialling Cutting Edge Virtual Reality Training Tool' (Derbyshire Constabulary, 2020) <<https://www.derbyshire.police.uk/news/derbyshire/news/news/forcewide/2020/august/derbyshire-police-trialling-cutting-edge-virtual-reality-training-tool/>>.
- 12 George Jijashvili, 'Omdia Research Reveals 12.5 Million Consumer VR Headsets Sold in 2021 with Content Spend Exceeding \$2bn', Game Developer, 10 December 2021 <<https://www.gamedeveloper.com/blogs/omdia-research-reveals-12-5-million-consumer-vr-headsets-sold-in-2021-with-content-spend-exceeding-2bn>>.
- 13 'AVRT Set up Possibly the Largest Free-Roam VR Training System in the UK' (AVRT, 2021) <<https://avrt.training/avrt-set-up-possibly-the-largest-free-roam-vr-training-system-in-the-uk/>>.
- 14 Mark Dugdale, 'VR Proves Impactful in Educating Young People about Dangers of Knife Crime', Virtual Reality World Tech, 19 July 2021 <<https://vrworldtech.com/2021/07/19/vr-proves-impactful-in-educating-young-people-about-dangers-of-knife-crime/>>; Taylor Rooke, 'West Midlands Police Using Virtual Reality to Tackle Gang Violence', Birmingham Updates, 21 September 2020 <<https://www.birminghamupdates.com/west-midlands-police-using-virtual-reality-to-tackle-gang-violence/>>.
- 15 Josie Le Vay, 'We Tried on the VR Goggles Manchester Police Are Using to Train 2,000 Officers in Tackling Hate Crime', Manchester Evening News, 18 August 2021 <<https://www.manchestereveningnews.co.uk/news/greater-manchester-news/tried-vr-goggles-manchester-police-21335451>>; 'Greater Manchester Police Officers given Virtual Reality Training around Hate Crime', ITV News, 18 August 2021 <<https://www.itv.com/news/granada/2021-08-18/gmp-officers-to-virtual-reality-training-around-hate-crime>>.
- 16 Antser, 'Antser Partners with Met Police to Increase Responsiveness to Domestic Abuse Incidents through the Use of Innovative VR Technology', 2021 <<https://www.antser.com/antser-partners-with-met-police-to-increase-responsiveness-to-domestic-abuse-incidents-through-the-use-of-innovative-vr-technology/>>; Paul Jacques, 'Virtual Insight into Domestic Abuse', Police Professional, 16 December 2021 <<https://www.policeprofessional.com/feature/virtual-insight-into-domestic-abuse/>>.
- 17 Jordan Novet, 'Microsoft Wins U.S. Army Contract for Augmented Reality Headsets, Worth up to \$21.9 Billion over 10 Years', CNBC, 31 March 2021 <<https://www.cnbc.com/2021/03/31/microsoft-wins-contract-to-make-modified-hololens-for-us-army.html>>.