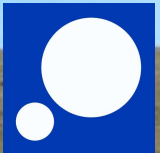
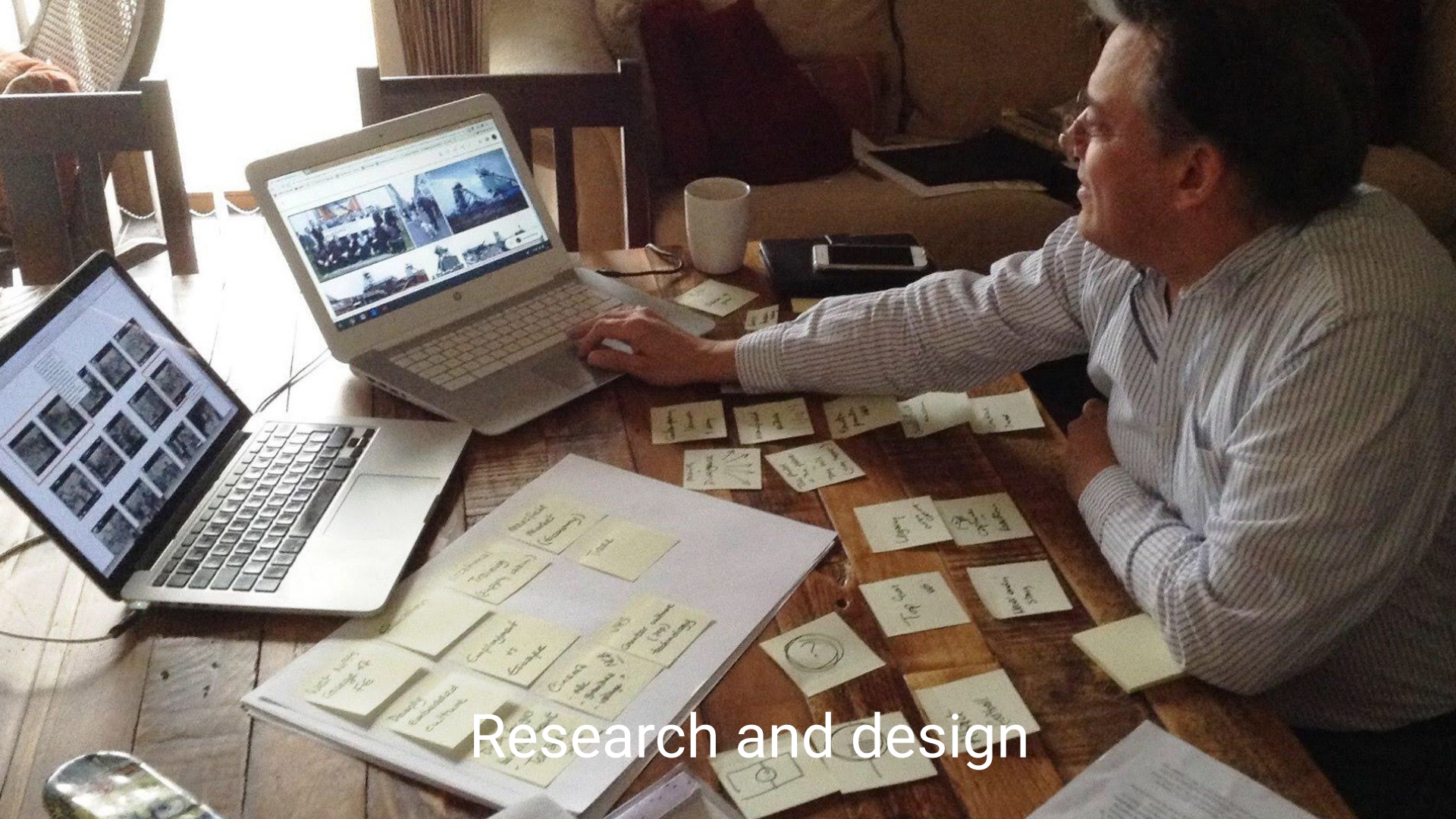


# From eco-anxiety to an inspiring future

Part 2 - Paul Fillingham  
Design thinking

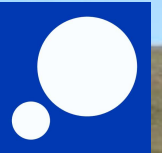




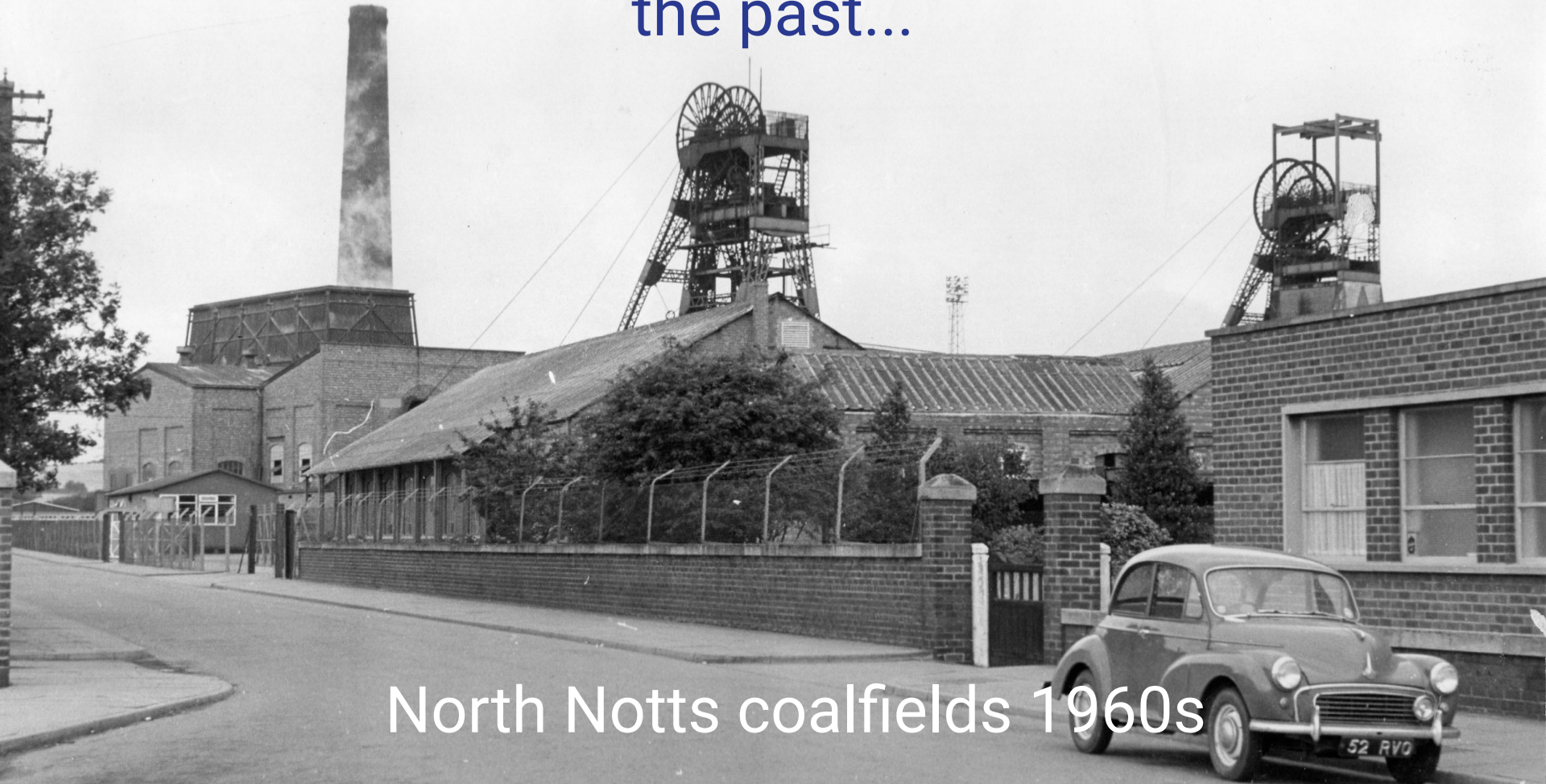
Research and design



the present...

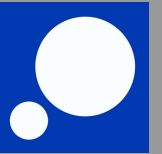


the past...



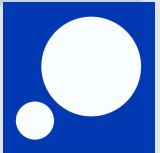
North Notts coalfields 1960s

the future...



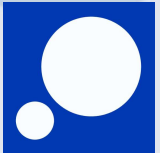
# the future I was promised...

- Informed by science fiction on TV, comics and books
- In the world of Steve Zodiac or Thunderbirds - the future involves riding hover scooters, battling against natural disasters and technological adversity
- Parallel universes of Lost in Space and Dr Who
- Futuristic factual programmes like Horizon and Tomorrow's World
- My first experience of watching colour TV involved an episode of Star Trek



# 1968 - a great year for film...

- Kubrick released his cinematic masterpiece '2001 a Space Odyssey'
- Roger Vadim released 'Barbarella' starring political activist Jane Fonda
- Apollo 8 Astronaut, William Anders aimed a camera at the Earth



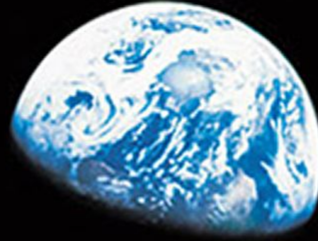


earthrise...





earthrise...

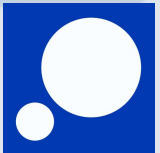


'The most influential environmental photograph ever taken'

Galen Rowell

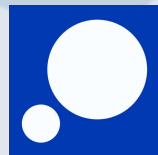
# paradigm shift...

- Earthrise image obliterates all of the sci-fi futures
- Fundamental change in underlying assumptions and patterns
- But not enough to bring about fundamental change in my academic bias!
- Studied fine art at Leeds Polytechnic
- Followed Bauhaus tradition of multidisciplinary art practice
- Provocative, politicised, avant garde artwork
- Lecturer Jeff Nuttall - author of Bombculture (1968) introduced the work of William Burrows and Edward De Bono
- Re-patterning and provocation fundamental to design innovation

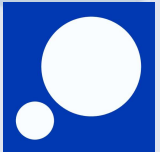


# fast forward to the future...

- Home computing 1984
- Desktop publishing 1988
- Digital art direction 1990s - Raleigh and Boots plc
- Noughties - eCommerce web development - Retail and financial sectors
- 2010 est. thinkamigo - to develop digital projects for creative sector
- UNESCO, AHRC, Arts Council England, BBC, Heritage Lottery Fund
- Learned about audiences and experience mediated by technology
- Digital lit collaboration - Guardian Award, Teaching Excellence 2015
- Mobile and social technology ever pervasive - extends into real world



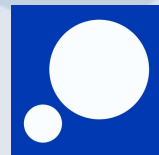
# digital lit collaboration



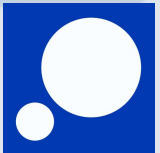
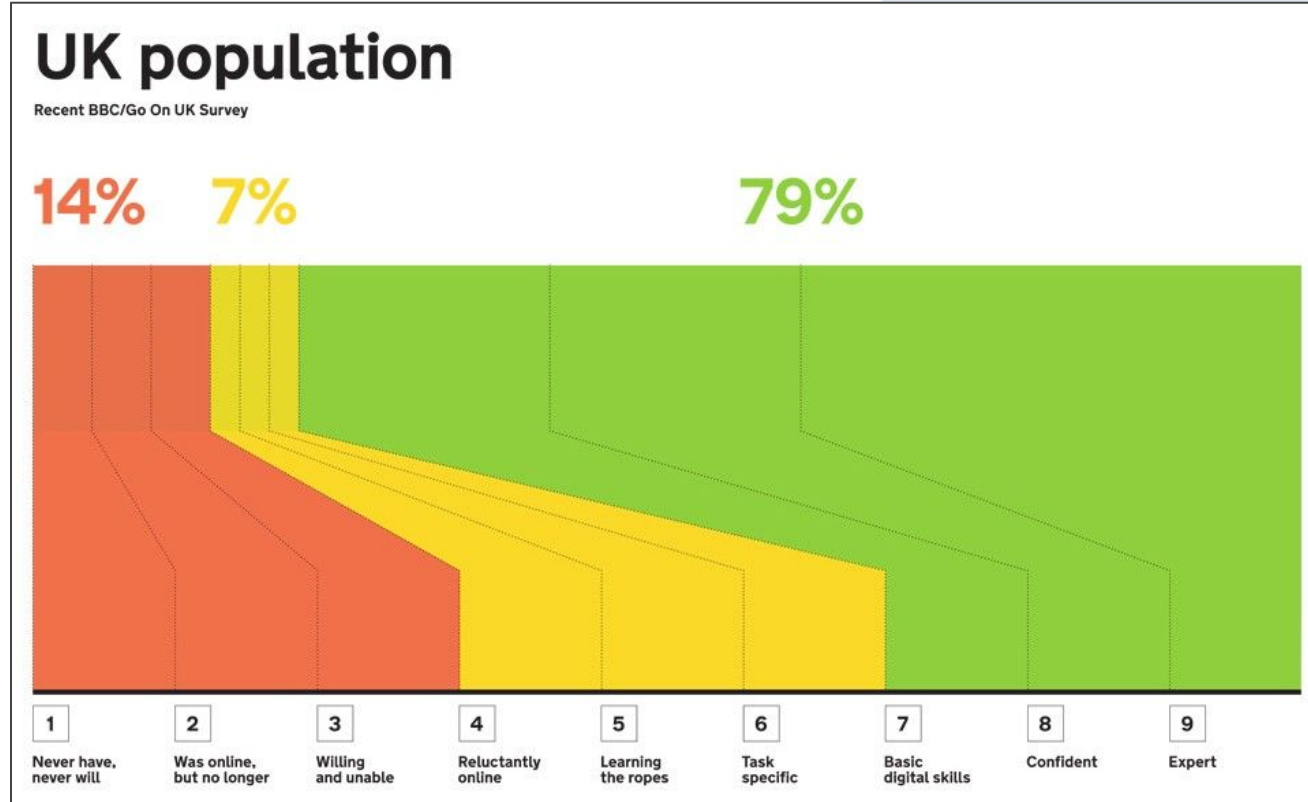


# the present...

- User research and service design
- Supporting unified service provision across digital.GOV estate:
- Department for Education
- Driver and Vehicle Standards Agency
- Nuclear Decommissioning Authority
- Her Majesty's Revenue and Customs
- Also; digital pensions, fin-tech, legal and professional service sector
- Graduate, Post-grad and staff portal research for UEA



# digital inclusion scale...





# Driver & Vehicle Standards Agency

The channel ratio of DVSA Vehicle Operator Licence (VOL) applications stands at 55:45 (Online to Paper).

Over the next year, DVSA need to increase this ratio to 70:30 and progress to full Online and Assisted Digital channels with subsequent phasing-out of paper forms by the end of 2021. This is in line with the strategic goals of both the DVSA and Vehicle Operator Licensing.

40:60 2017-  
70:30 2018-  
85:15 2019-  
100:0 2020-

Strategic goals

Safe, fair, efficient and reliable passenger and goods transport

x100



DVSA sample data is based on 100 successful VOL applications who used paper-based forms between August 2017 and December 2017.

VOL applications can be new applications, a licence update or a combination of an existing licence every five years at the end of the service cycle.

21:21 34%  
movingon.blog.gov.uk

## Vehicle operator licensing: a digital future

Ian Atkinson, 27 March 2018 - Features



In another of our guest blogs from the Traffic Commissioners, they explain why they're moving away from paper licensing applications.



Sector Specific Business Groups



Start-up vs Existing Business



Haulage



Construction



Nomadic



Office based

The incorporation date provides a measure of whether a limited company is a start-up or established business, with different levels of business experience and domain knowledge. Unincorporated operators are typically made up of independent owner-drivers.

These attributes shape the behaviour and attitudes of operators towards vehicle licensing and influence their preferred method of engagement.



Mobile vs Landline



Aggregated data reveals that registered addresses are distributed throughout the UK, clustering around major roadways and conurbations.

The main variant number for site visitors is mobile rather than office based, suggesting that a significant proportion of our customer segment commutes independently as a nomadic workforce without office support staff to assist them. Telephone interviews revealed this user segment as extremely time poor, heavily reliant upon mobile phones and familiar with instant messaging services and web-based transactions.



Activity

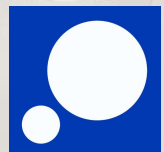


another application online...

It should be quicker as we are opening new operating centres soon which will involve lots of licence changes and applications...

The Road Haulage Association website was helpful. Haven't used any government sites. They need to get up to date for mobiles...

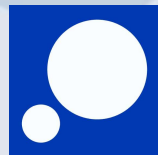
I use my mobile phone for absolutely everything. It's a lifeline when you are away from home, driving



Online communications

# design principles...

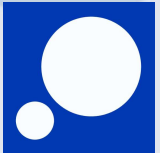
- Agile production, user research, conceptual models
- Government Design Guidelines (GDS) and pattern libraries
- Focus on digital inclusion and accessibility
- Supporting channel shift between digital and physical domains
- Holistic, user-centred approach to design
- Consider the needs of different cohorts - today, tomorrow and distant future





# tools and methodologies...

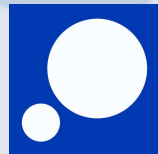
- Practical exercises to help you develop a design roadmap
- Split into 3x teams
- Work through the exercises
- Opportunity to 'show and tell' your work and ideas to the wider group



# defining a problem statement...

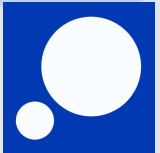
- Each team select an idea from this morning's session
- Think about the core problem that your idea will resolve
- Write this as a single sentence
- This 'problem statement' will form an overarching objective for our other exercises

10 min design, 10 min show



# thinking hats...

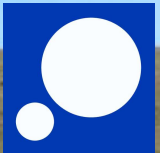
- Introduction to Edward De Bono's 'six thinking hats'
- Lateral thinking involves different modes of thought (mindsets)
- Aligning thinking hats with six stages of agile workflow
- Agile - collaborative design methodology commonly used in software development and service design





## A framework for design thinking

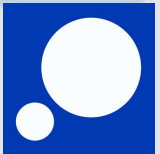
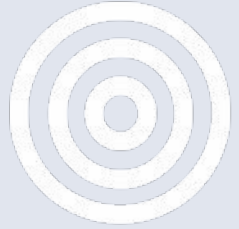
- Blue sky - strategic goals and vision
- White paper - current landscape, legacy data
- Red heart - user experience, motivation
- Green leaf - creative growth, ideation
- Black cloud - future trends, risks, opportunities
- Yellow gold - measuring success





# blue hat...

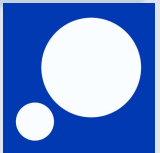
- Represents blue sky, strategic thinking
- Provides focus
- Encompasses our problem statement and the goal of our key stakeholders



# stakeholder map...

- We know WHAT your overarching objectives are
- Now it's time to map out WHO your stakeholders are
- These can be individuals, groups, clients, owners, producers, third parties, anyone with some sort of influence over a product, service or community
- The stakeholder map is a method for defining and discussing the operating environment for your 'design'

15 min design, 10 min show

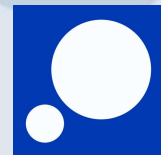


# personas...



- Getting to know your users, members and affiliates involves various research methods, ie; face-to-face interviews, surveys, contextual enquiry
- Useful to define user types as personas - these are anonymised stereotypes that have attributes of real people - what are their interests, motivations, fears, personalities, social connections, etc...
- Wearing your red hat - create three realistic personas who might experience your design, product, service, environment, etc

15 min design, 10 min show

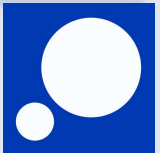


# user experience lifecycle...



- The length of a service lifecycle is variable vary - eg; a passport application may last a few weeks whereas a pension product may last a lifetime
- Draw a horizontal (time)line and mark key touch-points where your personas come into contact with your service
- Think about the context in which these interactions take place (WHERE and HOW)

15 min design, 10 min show

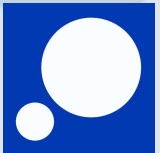




# moments of truth...



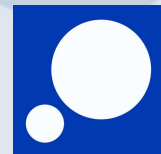
- Optimising the user experience (UX) involves reducing pain-points and friction within the product lifecycle, whilst increasing positive engagement
- Procter and Gamble describe the various stages of brand engagement as 'moments-of-truth' - this model has been appended by Google and Amazon
- ZMOT (Zero moment refers to the search phase - Google)
- FMOT - first moment is conversion
- MOT Gap (a critical inflection point described and mastered by Amazon)
- SMOT - second moment represents the experience of using the service
- TMOT - third moment describes how a user becomes an influencer



# moments of truth...

- Annotate your lifecycle with 'moments of truth' - remember that the user experience may be different for each of your personas
- ZMOT
- FMOT
- MOT Gap
- SMOT
- TMOT

15 min design 10 min show

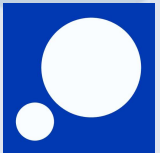


# sketching and stories...



- We use sketching and prototyping exercises to develop and validate design ideas.
- Iterative design involves zooming-in on a small section of the user journey rather than the wider perspective - it's how incremental gains are made
- Lateral thinking involves generating many ideas - even if they are outlandish
- To increase the number of design options we can reframe the design problem by thinking how it might be resolved in the future
- Putting ALL practical/ physical constraints to one side, how would a design problem be resolved if you could do ANYTHING you wanted

15 min design 10 min show

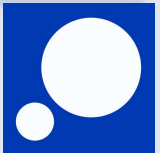


# future trends and risks...



- The black hat involves framing the service in terms future trends and risks
- You can use SWOT (Strengths, Weakness, Opportunities, Threats) analysis to map the things that might influence your design
- Do an analysis for what might happen in 5 years, then again for what might happen in 25 years
- This exercise will help us create a design that is future-proof and sustainable

10 min design 10 min show

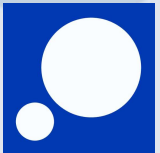


# design iteration...



- Agile workflow is based on a virtuous design cycle which makes iterative improvements through process optimisation and increased engagement
- The yellow (or golden) hat represents the goals and analytics that we use to measure success
- The criteria for success is a balance between meeting the needs of the key stakeholder (usually the product owner) and meeting the needs of the user (client, citizen, etc). We also align output with our strategic goals
- How would you measure success for your design?

10 min design 10 min show

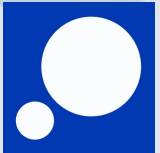




# design thinking framework - summary...

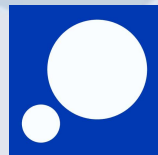
- Problem statement
- Stakeholder map
- Thinking hats
- Personas
- Lifecycle
- Moments of truth
- Design variants
- Trends and risks
- Value driven design iteration

10 min present



## useful links...

Virtual whiteboard with templates for user research and design conceptual models. Free and paid service available; [www.miro.com](https://www.miro.com)



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