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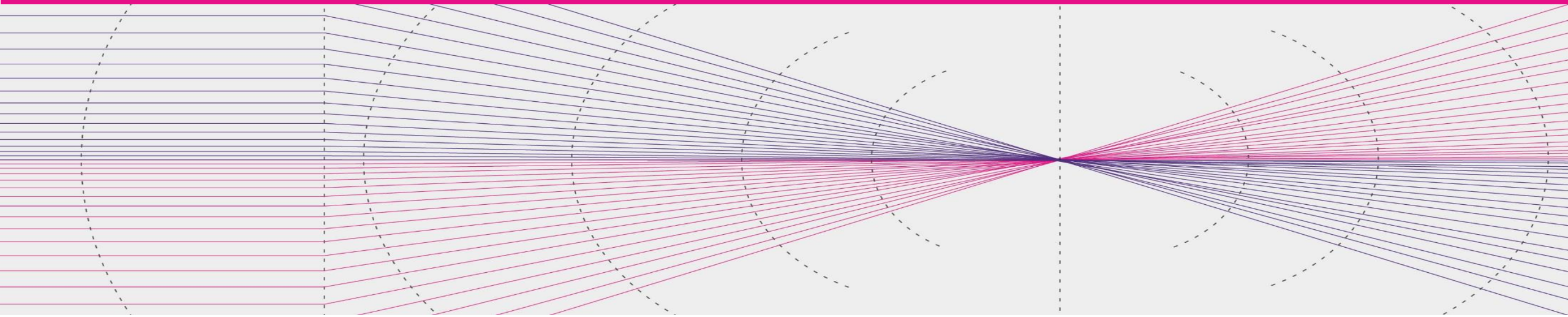
Understanding barriers to digital connectivity and engagement

Plum Consulting



Who we are

About Plum

Founded in 2007, Plum is an independent consulting firm, focused on the telecommunications, media, technology, and adjacent sectors

Plum's team consists of economists, data analysts, engineers and regulatory and policy experts

Context

- Digital connectivity and usage are considered important by policy makers around the World. For example
  - An ITU priority is *"Ensuring inclusive, equal access and use of ICTs for all"*
  - The World Bank says *"Digital technologies are at the forefront of development and provide a unique opportunity for countries to accelerate economic growth and connect citizens to services and jobs"*

- Why? Because access to and effective use of digital services are significant contributors to economic wellbeing and social cohesion

- "Digital divides" therefore create disadvantages for nations, communities and individuals

Our agenda

We will look at:

1. Why it matters
2. Typology of digital divides
3. Barriers to digital inclusion
4. Addressing the barriers
   - Our case study – addressing barriers to digital connectivity in Cheshire and Warrington (in the North West of England)
   - Legal and regulatory reform
5. Wrap up

Why it matters

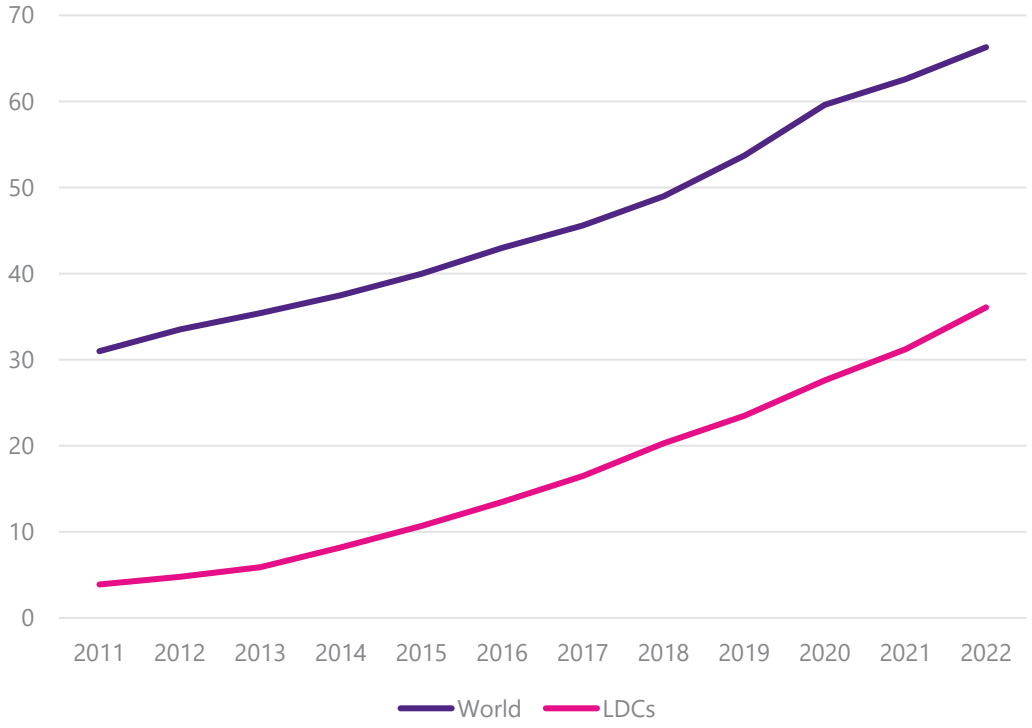
- *"People and communities that are connected and possess digital skills are empowered to access information, online health services and life-saving disaster warnings. They can pay for goods and services … stay in touch with loved ones, increase productivity or perform better-paid jobs"* (ITU)
- Digital services deliver private benefits to individuals, and public benefits to us all. For example …

Use case	Type of benefit	Examples of benefits
Online healthcare	Private	Easier and quicker access to services, including 24/7
	Public	Improved outcomes for public health, education, employment etc Public finance cost efficiencies
Online education	Private	Distance learning Learn at your own pace Learn when you like, including 24/7 access
	Public	Improved outcomes for public health, education, employment etc Public finance cost efficiencies
Online public services	Private	More convenient touchpoints 24/7 quicker and easier access
	Public	Easier reach for most citizens, broadening inclusion Public finance cost efficiencies

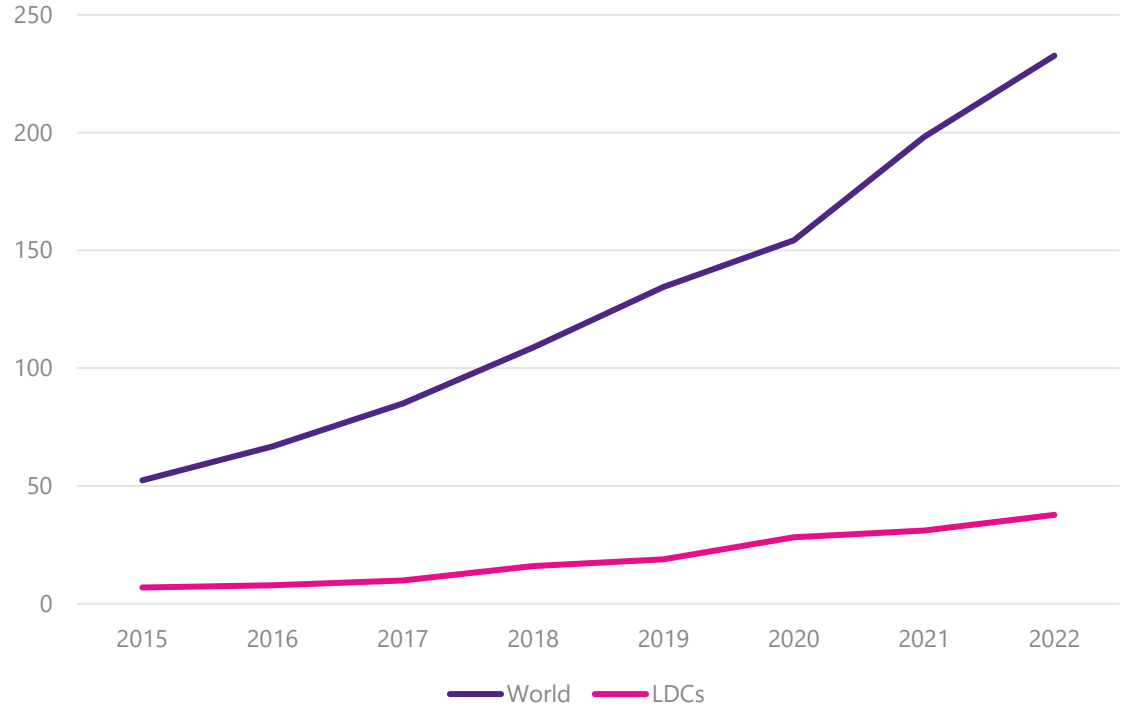
Typology 1 – developed and developing countries

- The digital divide is stark between developed and less developed economies. As connectivity improves in developing countries, the quality gap is widening

Percentage of individuals using the Internet (source: ITU)



International bandwidth consumption per individual (kbit/s) (source: ITU)



Typology 2

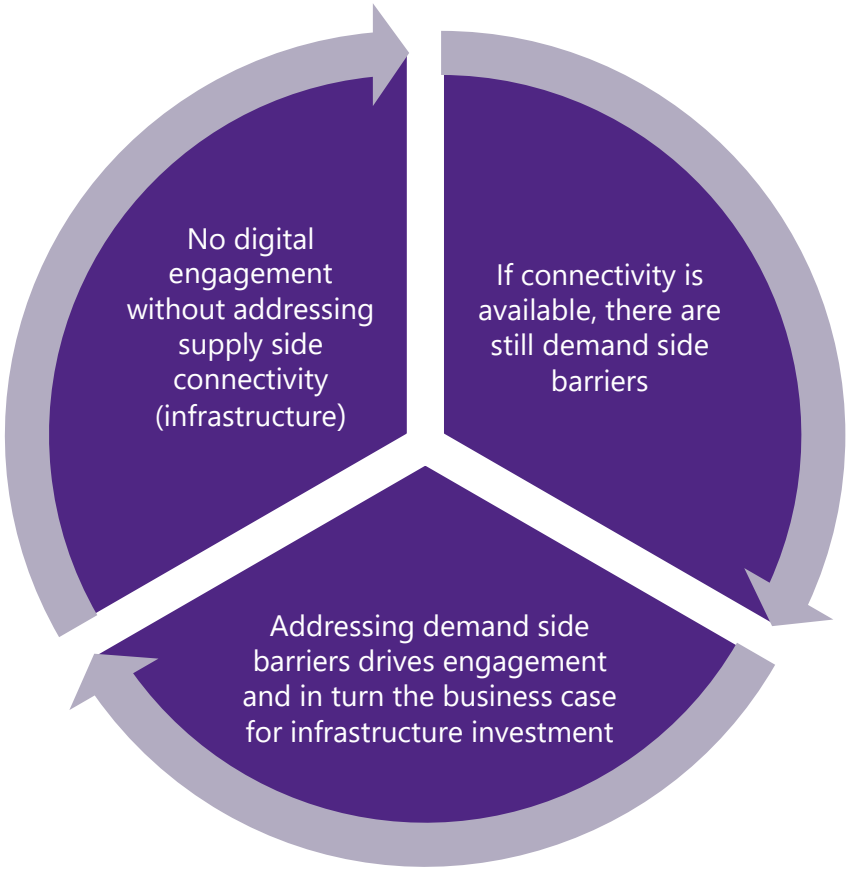
- The digital divide is multi-dimensional and can be identified by a number of factors including:
  - Geography
  - Age
  - Income
  - Employment status
  - Gender – more pronounced in developing countries
  - Disability

Drivers of digital exclusion

- Digital exclusion can be driven by both supply side and demand side constraints:
  - Supply side gaps in connectivity
  - Demand side barriers to take-up and/or use

Connectivity gaps	Usage gaps
Supply side barriers driven by lack of available infrastructure, or poor connectivity	Demand side barriers driven by non-usage or low usage of connectivity and services, causes include: • connectivity gaps • low digital skills • affordability of connectivity, services, devices • attitudinal factors e.g. fear of personal data loss

Addressing the barriers



- Connectivity is the cornerstone …
- … but an effective strategy to improve digital engagement must address connectivity gaps and usage gaps
- Barriers are different in each market
- Therefore, interventions are also different - for example between developing and developed markets

Case study: addressing the barriers to digital connectivity and engagement in Cheshire and Warrington - introduction

- The Cheshire and Warrington Local Enterprise Partnership (LEP) commissioned Plum for a study of barriers to digital connectivity. Plum carried out the study in partnership with i2 Media Research
- This was a two-stage project:
  - Stage 1: understanding of barriers (residents and businesses)
  - Stage 2: strategy recommendations

Stage 1

- Review of evidence
- Identification of drivers and barriers
- Review of existing strategy and plans
- Initial indicators for future strategy

Stage 2

Recommendations:
- Reframe and refresh strategic approach
- Development of measurable KPIs

Case study: addressing the barriers to digital connectivity and engagement in Cheshire and Warrington – methodology and data

- Infrastructure data available at local authority level from Ofcom, supplemented by
  - Provider coverage checkers
  - Independent third party independent sources
- Covering
  - Broadband connectivity (“superfast” “ultrafast” “USO”)
  - 4G mobile coverage (5G data available but less granular)
- There was insufficient demand side data at local level, so we developed proxy methodology – see next slide
- Primary research by i2 Media Research
- Literature review

Case study: addressing the barriers to digital connectivity and engagement in Cheshire and Warrington – methodology and data

Proxy methodology for demand side analysis

- Demand side digital engagement data available at national and North West region level from a variety of sources (e.g. ONS, Lloyds Consumer Digital Index)
- We cross-referenced this to demographic data for the sub-region to map barriers to digital engagement by Lower layer Super Output Areas (LSOAs) We looked at:
  - Internet User Classification (IUC) per LSOA
  - Index of Multiple Deprivation (IMD) income deprivation per LSOA
  - IMD skills deprivation per LSOA
  - Data on digital and paper census returns

Total number of LSOAs	573
LSOAs with IUC profile 7, 8, 9 or 10	199
% LSOAs with IUC profile 7, 8, 9 or 10	34.7%
of which	
LSOAs with skills and/or income deprivation	89
% with potential skills or affordability barriers	44.7%
% without obvious barriers	55.3%

Case study: addressing the barriers to digital connectivity and engagement in Cheshire and Warrington – summary of findings and outcomes

- There are reasonable levels of coverage for fixed broadband and 4G
- There are some gaps in coverage, and qualitative evidence from our primary research indicates differences between reported data and consumer experience
- We found some evidence of dissatisfaction with connectivity by SME customers
- Demographic data indicate that demand side barriers to digital engagement are similar at national and sub-regional. The barriers fall in 3 categories:
  - Low digital skills
  - Affordability of connectivity, services and devices
  - Attitudinal factors
- The LSOA analysis enables identification of barriers and hence also targeting of remedies at neighbourhood level
- We recommended 9 actions and 12 KPIs to progress work to address barriers to digital connectivity and engagement

Legal and regulatory reform

- Regulation of digital markets is nascent

- Legislative and regulatory reform currently underway, e.g.
  - European Union: Markets Act, Digital Services Act, Gigabit Infrastructure Act
  - UK: Online Safety Bill, Digital Markets Consumer and Competition Bill
  - Australia: ACCC digital services platform enquiry

- Opportunities to improve both connectivity and demand side engagement

Wrap up

- Barriers to digital engagement are multidimensional and affected by various supply and demand side factors
- There are stark differences between developing and developed markets, and hence approaches to addressing barriers is also different
- Our case study from Plum's project in Cheshire and Warrington produced conclusions on barriers to connectivity and engagement, and a framework to address them
- Current initiatives to create or reform regulation for digital infrastructure and services can provide opportunities to improve engagement in a number of jurisdictions

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