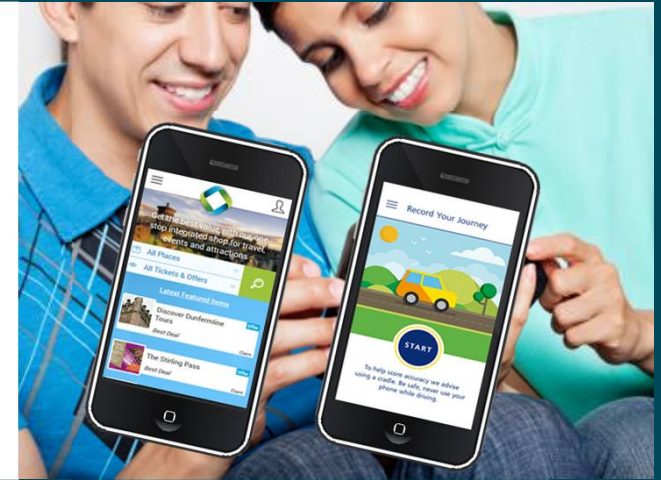
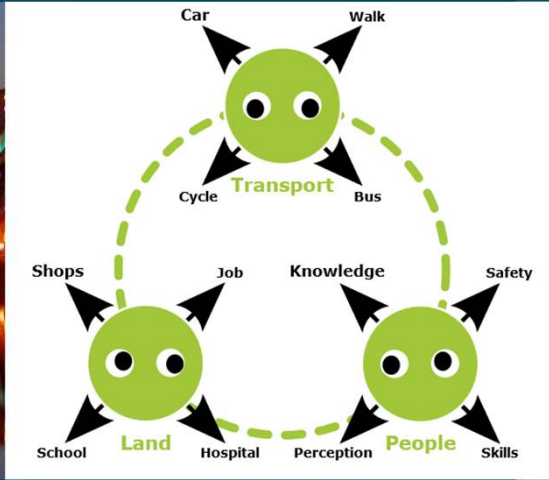


# The Use of Accessibility Indicators in Planning and Investment



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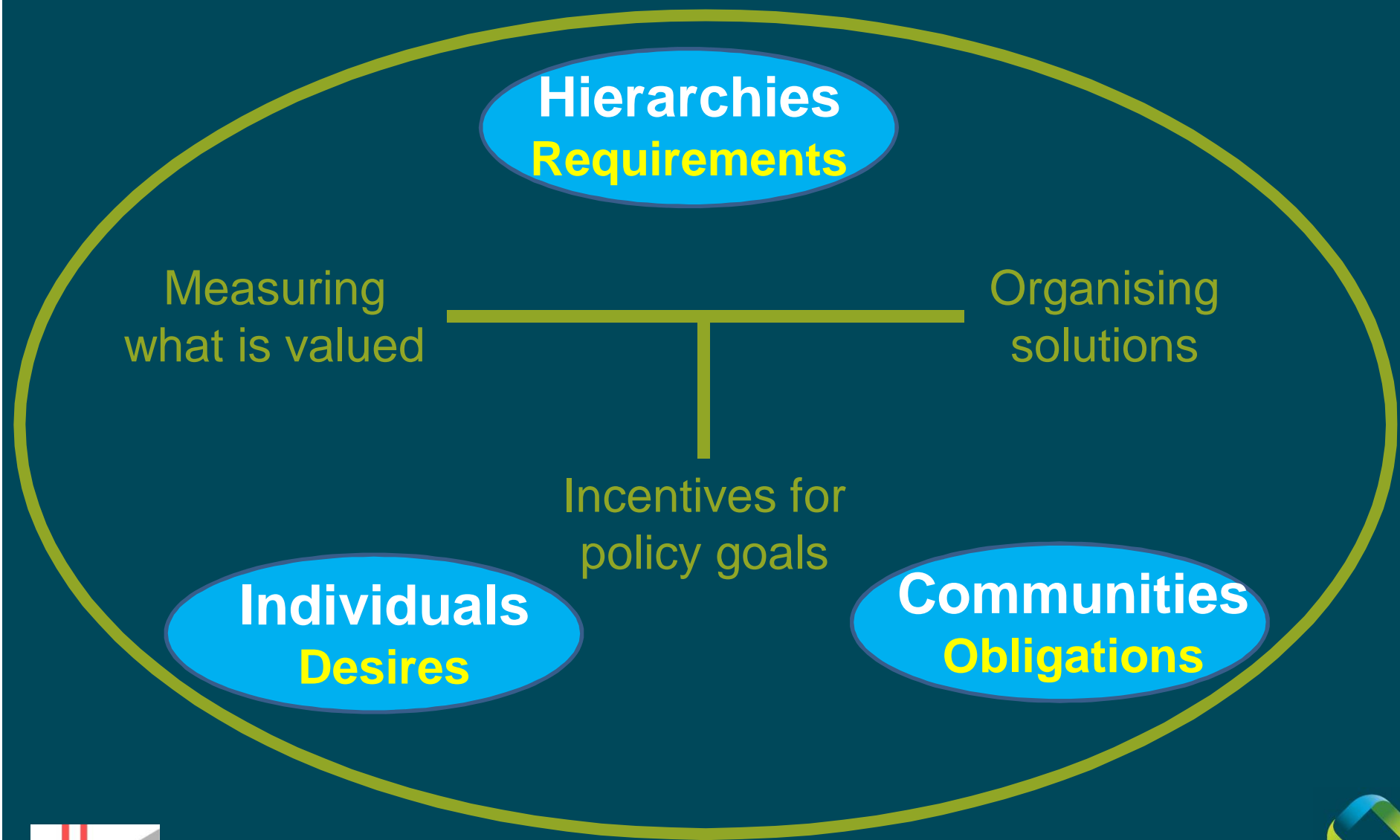
# Accessibility Measures as Dashboard for Progress

GDP was contrived in a time of deep crisis....an answer to the great challenges of the 1930s..... we need an array of indicators to track things that **make life worthwhile**..... the scarcest good of all "**time**"

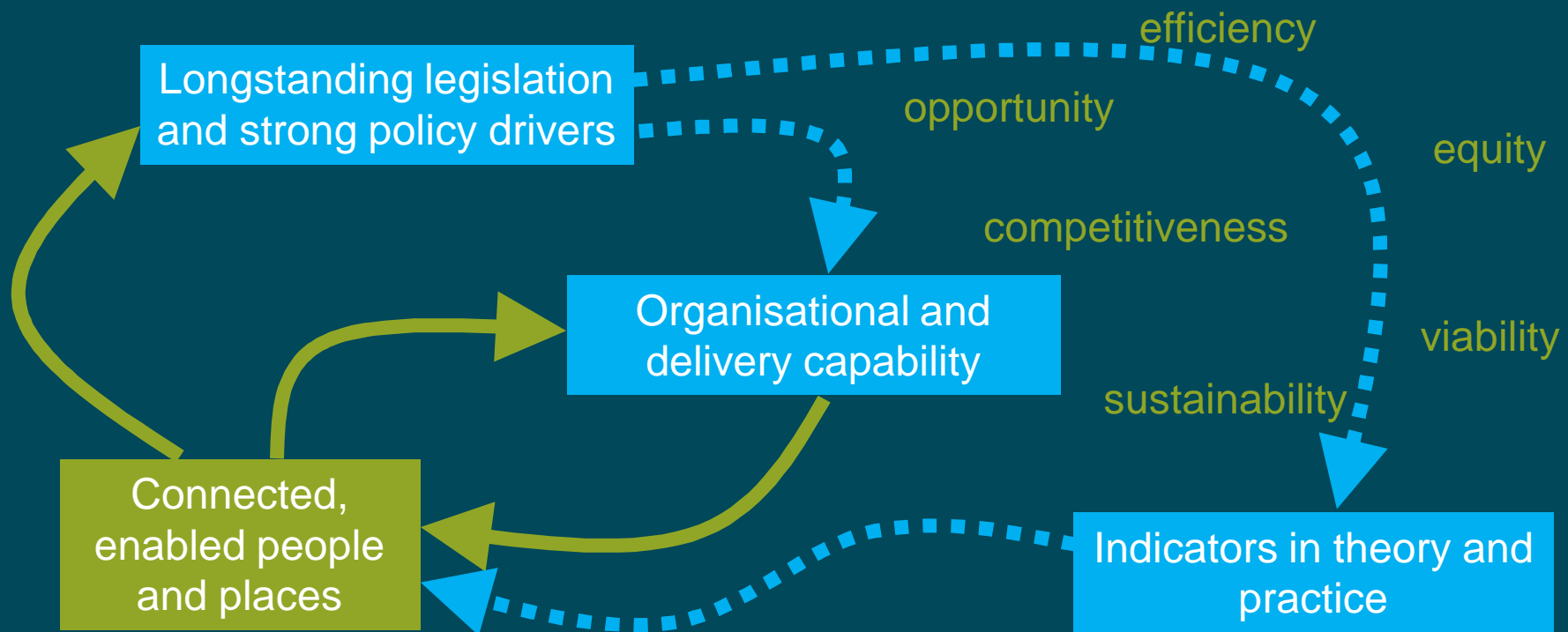
Utopia for Realists pp122/123 Rutger Bregman 2017 (or 2014 in the Netherlands)



# A Social Model of Accessibility

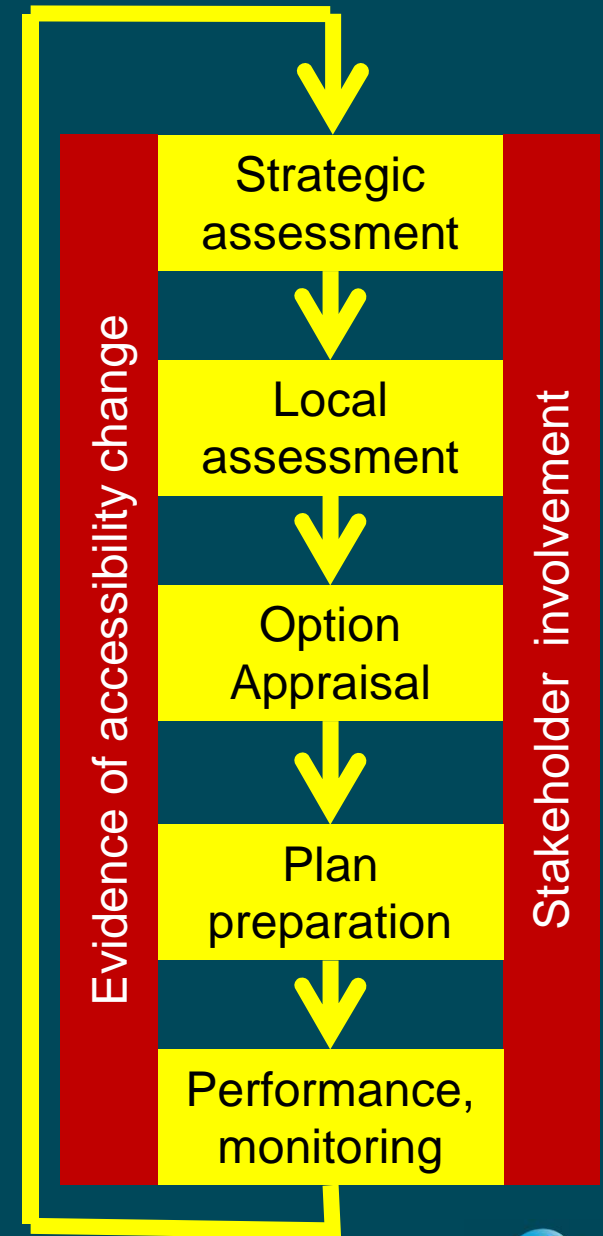


# Resolving Accessibility – Mapping Policy and Organising Delivery



# Local Authority Transport Plans in a National Policy Context

- Approach
  - **Strategic** national indicators based on travel time (2003-2017) [www.accesstoservices.info](http://www.accesstoservices.info)
  - Several hundred **local indicators** based on cost, time/scheduling, information/training, safety/security, physical/infrastructure, environment/quality (rarely followed through)
- Planning and Investment
  - Financial incentives through **investment programmes** (LTP, LSTF, access fund, smart)
  - Transport **appraisal** – social opportunity, equity/distribution, stated/acceptability, expressed/business case (used tactically)



# National GB Indicators

- Trip purposes
  - Jobs, GP/health centres, hospitals (by service offered and number of patients), education (primary, secondary, further, higher), shop, post office, bank, leisure, park, pharmacy, legal services, pub, transport nodes (bus , rail, junctions)
- Opportunity measure  $A_i = \sum_{j=1}^{j=J} O_j \exp(-\lambda .c_{ij})$ 
  - Number of opportunities within time thresholds appropriate for the trip purpose
  - Continuous measure with  $\lambda$  calibrated using NTS
- Catchments by population  $A_i = \sum_{j=1}^{j=J} P_j \exp(-\lambda .c_{ij})$ 
  - Segments - Car/non car available, educational attainment, poverty, employment status

# National GB Indicators – Learning from Practice

- Sensitivity to change
  - Accessibility changes more rapidly due to people and places than transport
- Keep it simple
  - Why composite indicators of opportunities, utilities, total travel time, etc did not get far
- Investing in capabilities
  - Evidence linked with accountability - e.g. equity
  - Investors and funders - **follow the money**



# Linking Measures of Access to a Delivery Objective

- All accessibility measures are imperfect and context specific
  - There are many variables that can be measured – and many that can be ignored – so accessibility analysis can produce almost any result by **choosing what to measure** and what to ignore
  - However most measures are informative and multiple measures can be used in combination
  - Some measures enable successful business models and these are the most useful ones in practice





# Delivery Aims and Types of Indicator

- **Utilising opportunity** - Time, cost, safety, comfort, and quality of access to opportunities (jobs, education, leisure, etc)
- **Securing Equity** - Ratio of access to opportunity for social groups (incl. car/non car)
- **Enabling people and places** - Walk access to local facilities, local connections, skills etc.
- **System level connections** – Expanding scope, organising sharing (e.g. freight consolidation, shared DRT)



Halden 1999 - Accessibility Analysis Concepts and their Application to transport Policy. Transport projects, Programmes and Policies  
Halden, D; Jones, P; Wixey, S; 2005 . Measuring accessibility as experienced by different socially disadvantage groups,

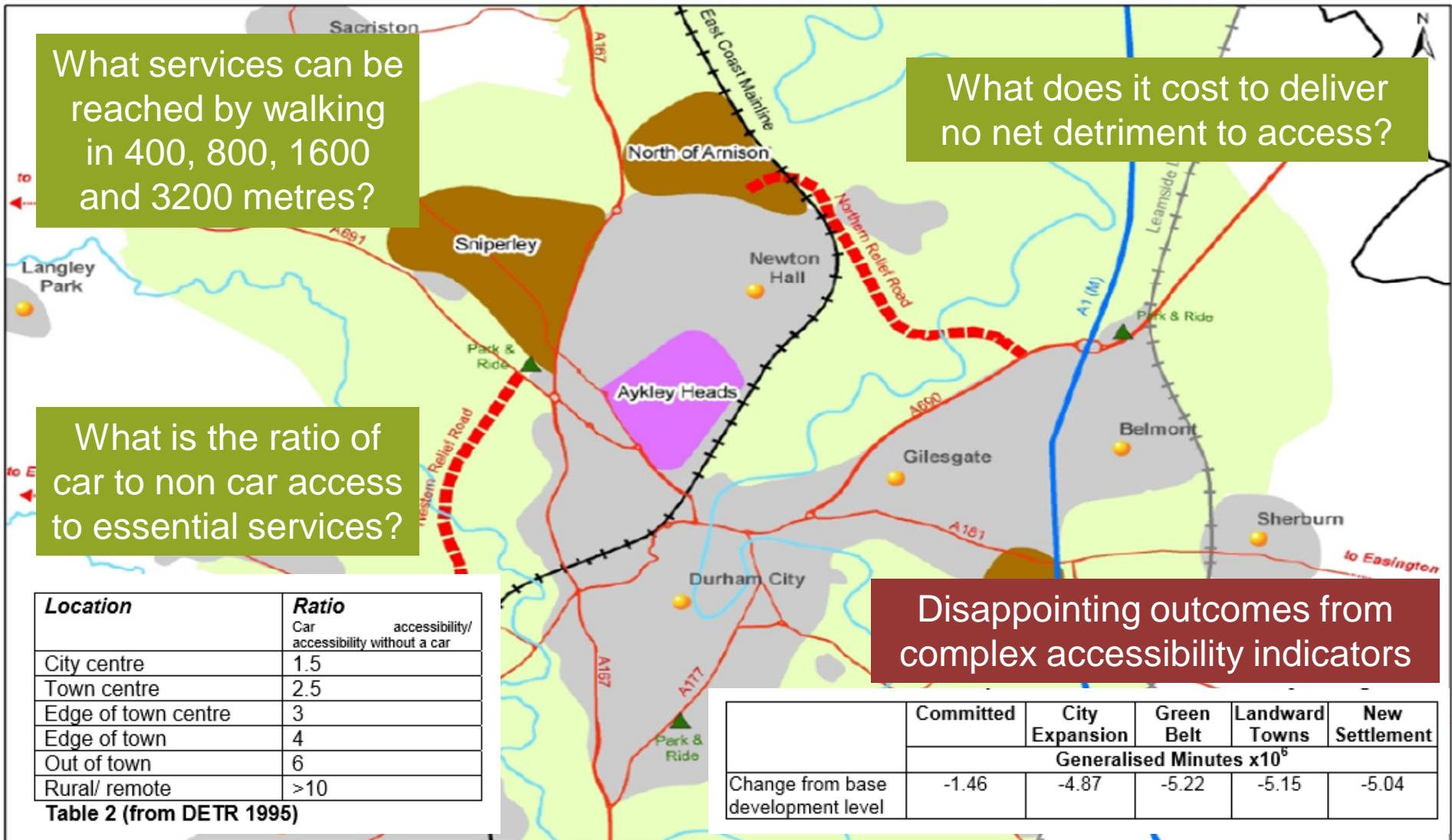


# Growing the Access Economy

- Case studies in **measuring what is valued** and delivering successful **business models**
  - Value from **abundance** – not just scarcity - through case studies in access by walking
  - A stronger focus for government in wealth **distribution** through case studies in incentives for equitable access to opportunity
  - Where a **social** model of delivery is driven by enforcing regulatory requirements, organising communities, and enabling individuals – from case studies in auditing and enabling access



# Land Use Planning Business Model



# Access as an Indicator of a Sustainable Place

- Walk/Journey times to a basket of services
  - Sustainable Cities Index - FFTF
  - State of the Countryside
- Travel time/cost factored by frequency of trip

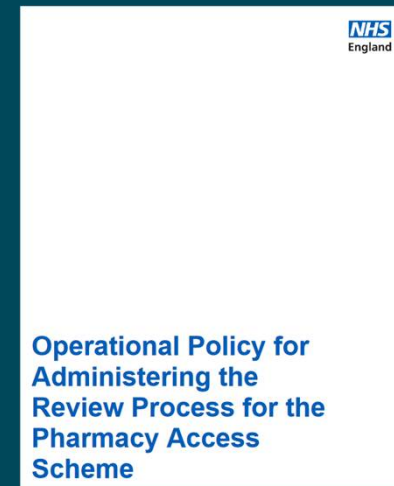
ranking for Quality of Life

City	Employment	Transport	Education	Green space	Healthy life expectancy	Weighted ranking for second basket
1 Brighton and Hove	15	20	19	19	19	74.4
2 Edinburgh	20	10	20	9.5	19	62.8
3 Bristol	18.5	1	15	20	16	56.4
4 Cardiff	18.5	15	18	5	13	55.6
5 Plymouth	17	5	19	16	17	55.2
6 London	13	13.5	10	1	18	51.8
7 Leeds	14	5	16	13	12	49.6
8 Manchester	12	12.5	14	11	4	45.2
9 Newcastle	11	11	17	15	6	44.8
10 Wolverhampton	14	14	1	18	13.5	38.8
11 Leicester	5	18.5	2	12	10	38
12 Nottingham	6	18	7	8	7	37.2
13 Sheffield	16	8	11	4	8	36
14 Bradford	12	6	15	3	11.5	32.4
15 Birmingham	1	11	4	14	9	30.4
16 Coventry	2	2	2	1	15	30
17 Glasgow	8	3	12.5	9.5	1	27.2
18 Liverpool	3	16	6	7	2	27.2
19 Sunderland	10	5	8	6	3	25.6
20 Hull	2	17	3	3	5	24

*Leicester has undergone a transformation from 14th place four years ago to second. Edinburgh was ninth and Glasgow was 19th.*

# Who Pays for Accessible Services?

- The travel time and cost of access is valued when **accountabilities** of service providers are clear
  - Successful delivery for employability, pharmacies, hospitals/medical centres, legal services/courts, retail centres....
- Indicators in practice
  - Times, costs, distances, turnover, activity
  - Provider willingness to pay for access
  - Customers willingness to accept



# Reframing the Personal, Social and Commercial Value of Access

- Resolving the value of accessibility through personal accounts
  - Everybody is an expert in their own access
  - Link personal preferences with social goals to make the most of capabilities
  - Alternative currencies to secure social benefits – “access points”

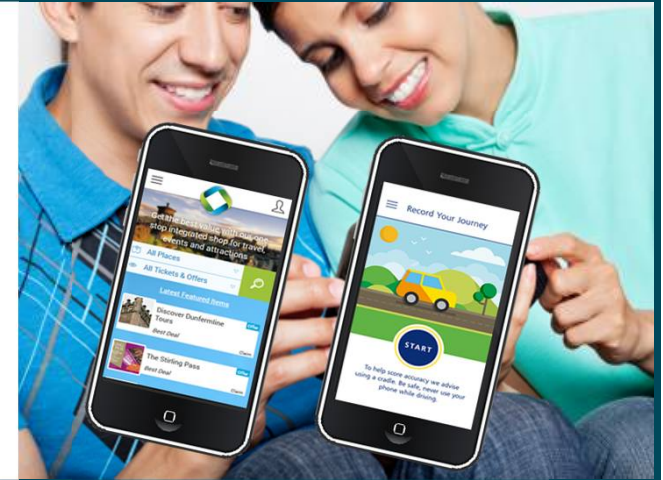
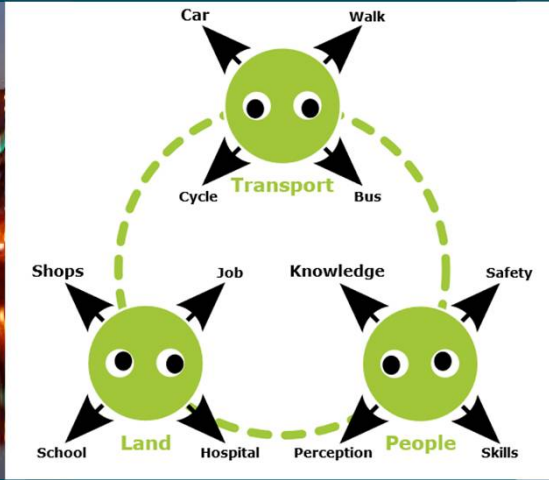


# Expanding Successful Business Models

- Measure what is valued
- Identify who is responsible for **incentives** for success and **penalties** for failure
- Indicators and measures to date:
  - Largely cost and time for target people groups and categories of service provision
  - Social choices resolved by budget holder
  - Personal choices resolved through accounts
- Towards **trust** in accessibility indicators?



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