



Disruptive Analysis

Don't Assume

Technological Unemployment? We can work through it...

Dean Bublely, Disruptive Analysis

TransPolitica Conference, December 2016

dean.bublely@disruptive-analysis.com

@disruptivedean



Dean Bublely & Disruptive Analysis

- Tech/telecom analyst & strategic consulting since 1991
- Futurism, Forecasting, Anti-Forecasting, Policy
- Cross-silo, contrarian, independent
- *Often provocative. Sometimes obscure. Occasionally wrong.*



**Network Tech, Policy
& Business Models**



**Communications
Apps & Services**



Telecom-Futurism



Disruptive Analysis

Don't Assume

It's all about nuance (1)

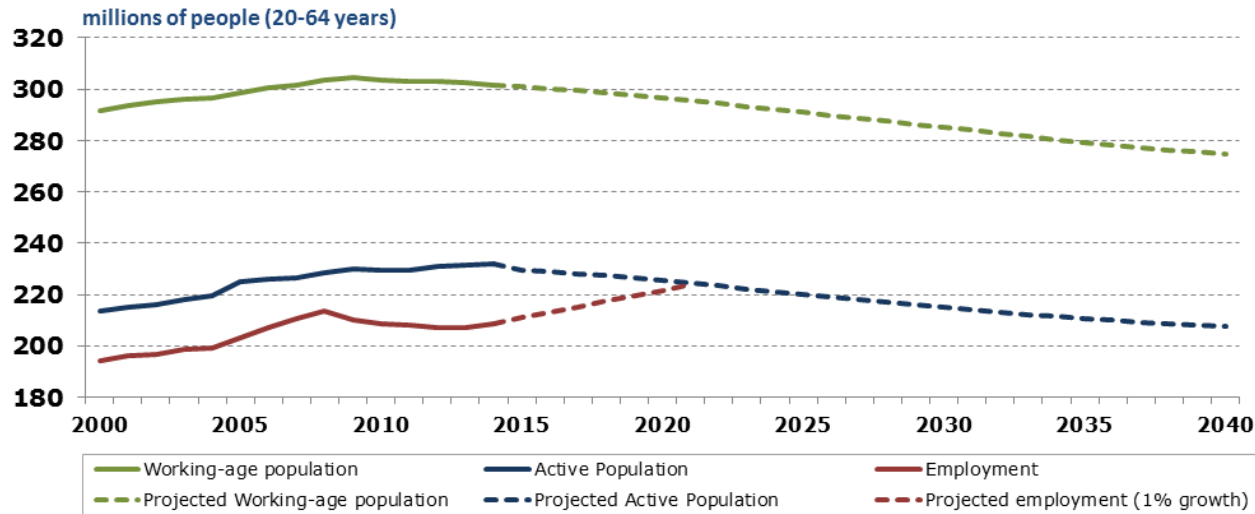
While automation will eliminate very few occupations entirely in the next decade, it will affect portions of almost all jobs”

Michael Chui, McKinsey Global Institute



Ageing population means a shrinking workforce

Potential employment growth, EU28



Source: DG Empl calculations
Note: Active population projected at constant activity rate

#evidenceinfocus

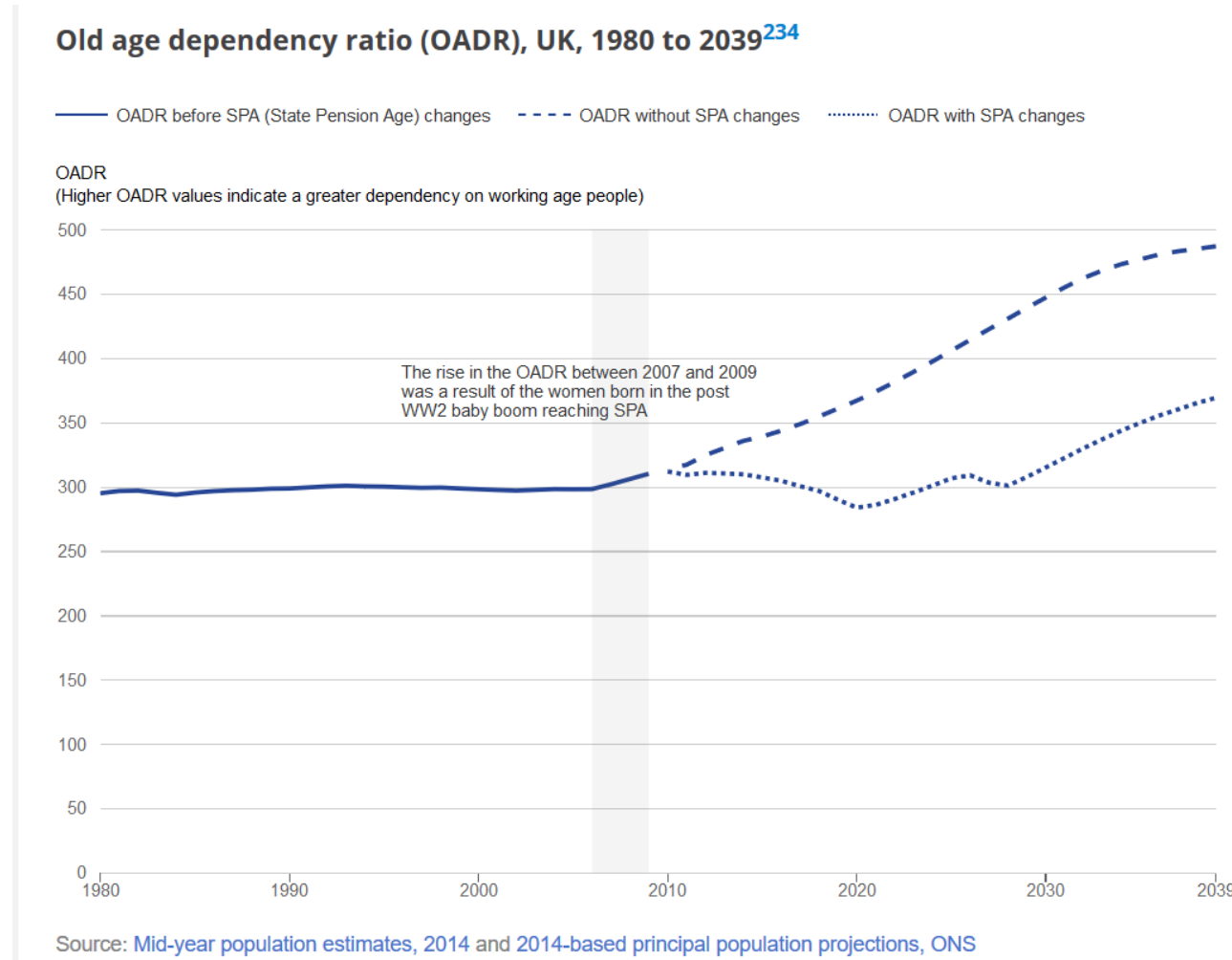
“UK faces 3.1m shortage of workers by 2050”

Profession	Projected Shortfall (2050)
Teachers	128,000
Construction	66,800
Nurses	61,200
Qualified Engineers	36,800
IT and Tech	33,300
Social Workers	10,600
Qualified Accountants	10,200
Solicitors/Lawyers	9,500

Source: Randstad, 2014



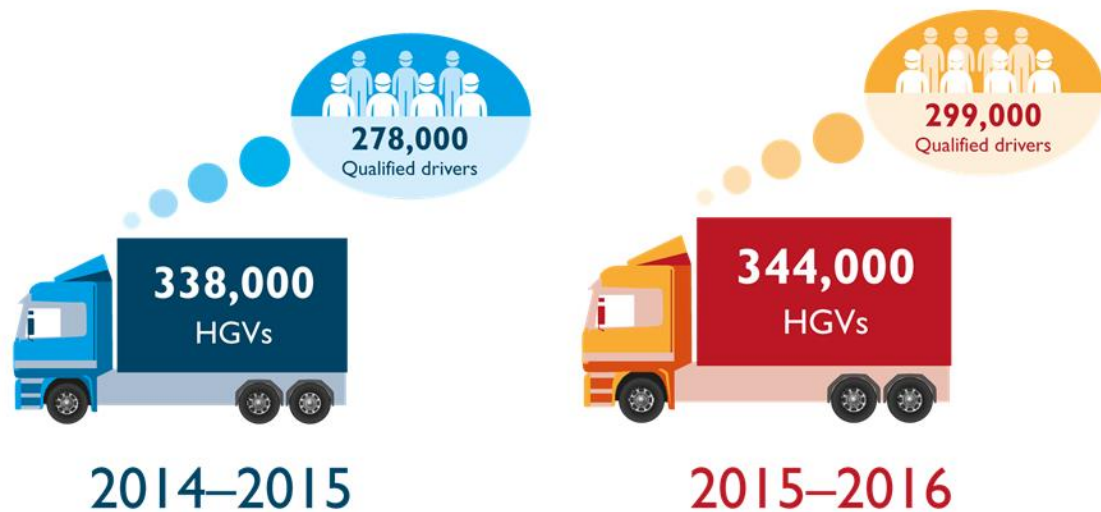
... and it becomes harder to fund pensions



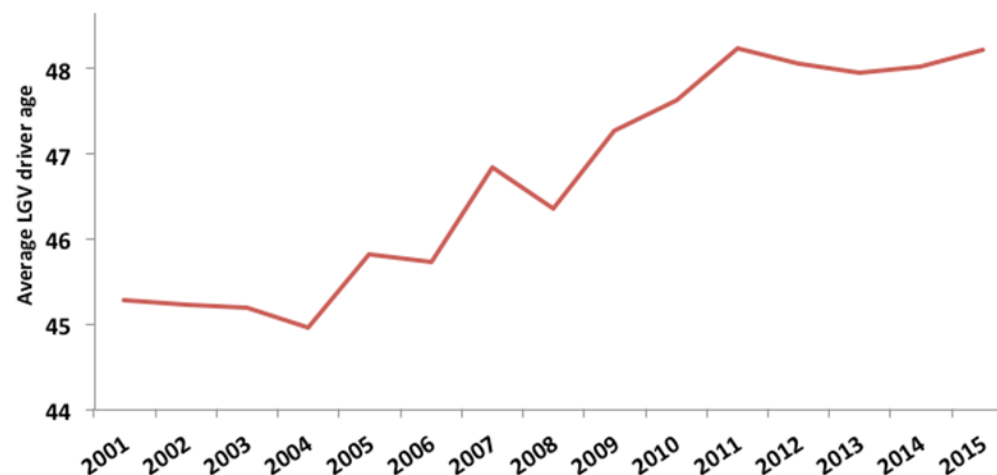


Robots & AI are *needed* to fill employment gaps near-term

LGV vs Drivers



Ageing driver population



Source: Quarterly Labour Force Surveys, 2001-2015 (Q2 for each year)

UK shortage is 50-60000 drivers belong market need
Estimates for US driver shortage between 40,000-1 million
Also holds in other sectors, eg social care & nuclear power workers



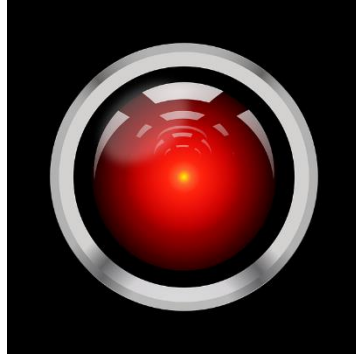
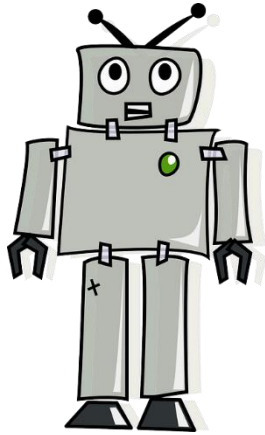
It's all about nuance (2)

“Technical feasibility is a necessary precondition for automation, but not a complete predictor that an activity will be automated”

Michael Chui, McKinsey Global Institute



Employment balances driven by many factors



Automation



Supply & Demand



Regulation & Policy



International Trade



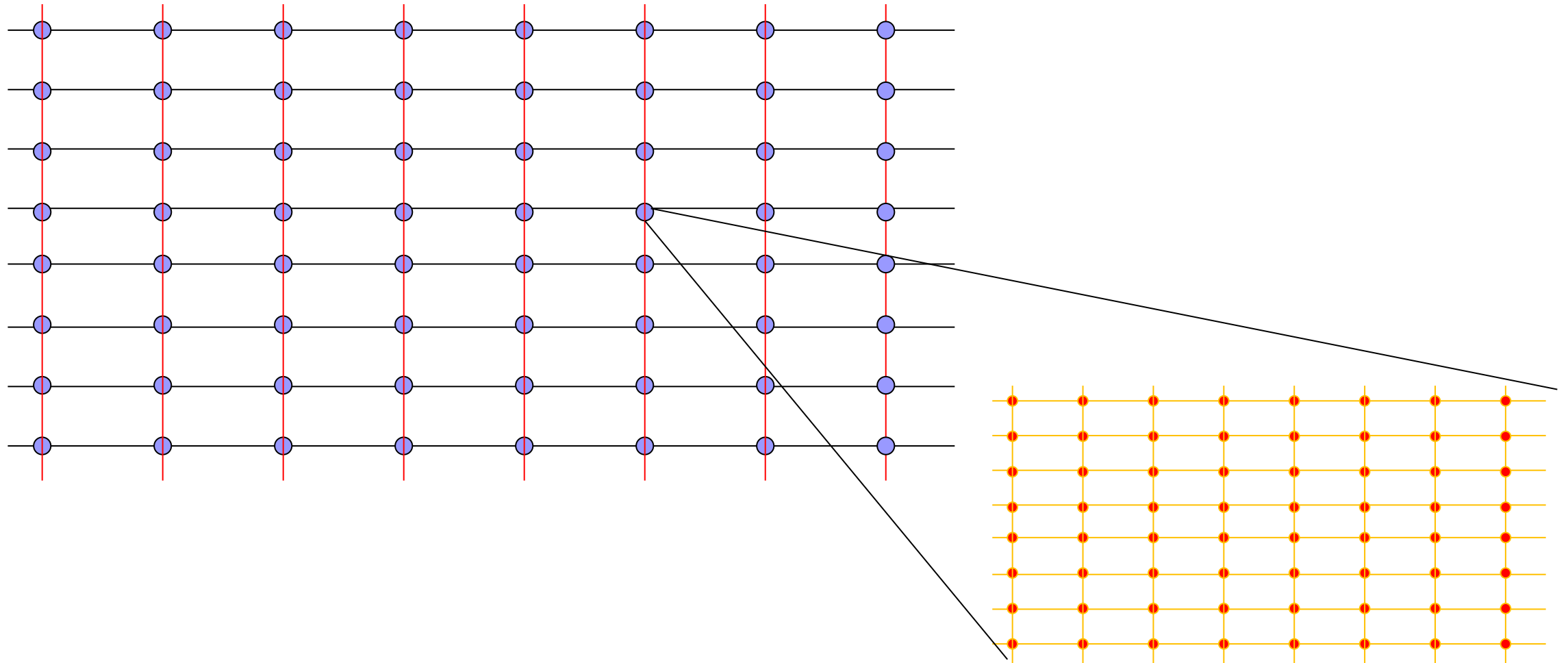
It's all about nuance (3)

“Over 60% of occupations have >30% of activities that could be automated. But <5% of current occupations could be completely automated with today's technology”

Michael Chui, McKinsey Global Institute



Employment, tasks, jobs & sources of value are fractal





Disruptive Analysis

Don't Assume

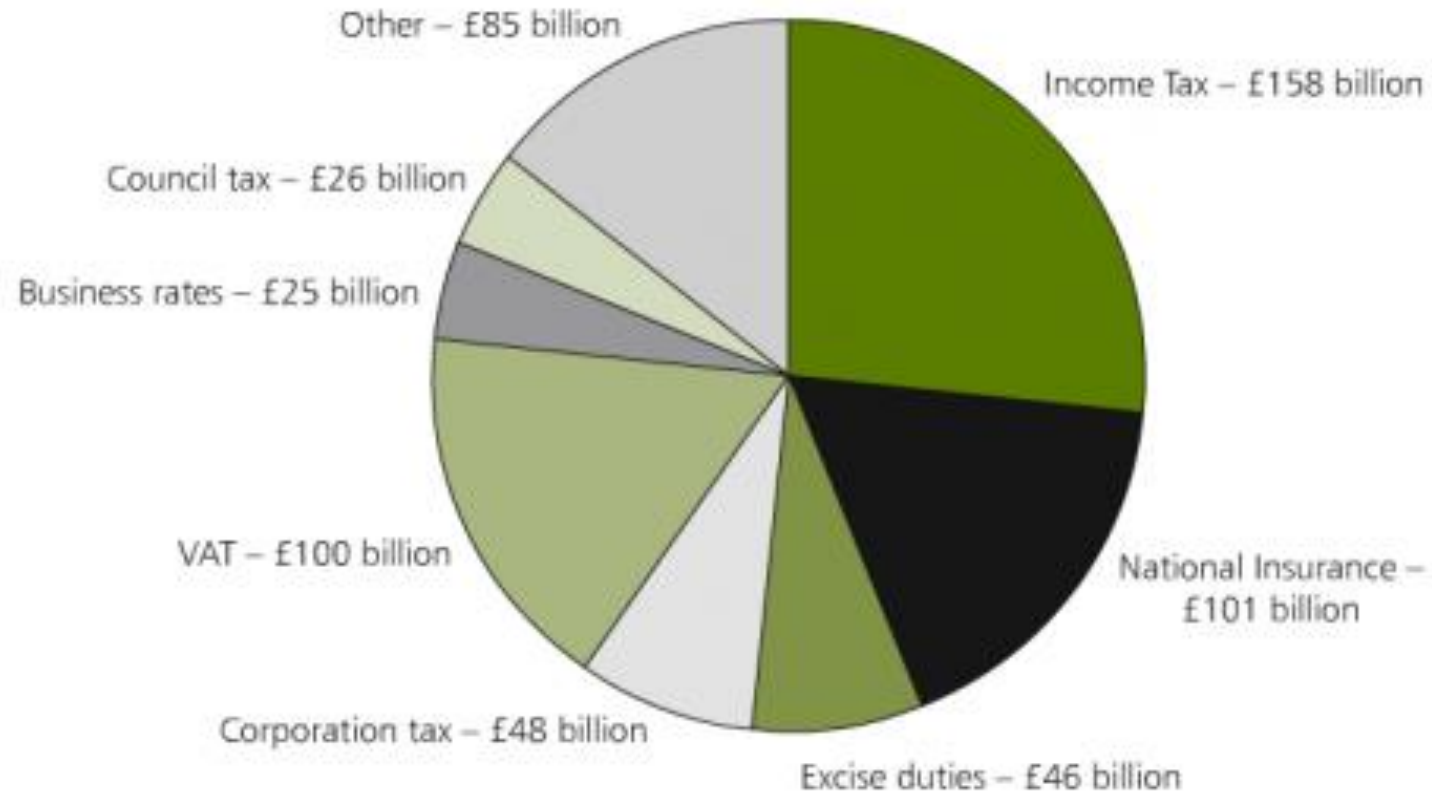
Timing matters....





Tax matters

Chart 2: Government receipts 2011-12



Source: Office for Budget Responsibility, 2011-12 estimates. Other receipts include capital taxes, stamp duties, vehicle excise duties and some other tax and non-tax receipts – for example, interest and dividends. Figures may not sum due to rounding.



Taxation issues

	Income Tax & NI	Consumption: VAT & Duty	Corporation Tax & Rates	Other Taxes (Council, CGT etc)
Employed & Employers			Private sector	
Unemployed / low-waged				
Pensioners				
Robots, AIs & owners				?



Is automation “threat” just a means to an ideological end?





Polycymaking considerations

- Treat automation forecasts with caution: other things are *not* equal
 - Demographics, demand, descriptions, timing of adoption
- Analyse how automation of basic inputs can increase demand
 - Products, services and new hybrids
- Automation-aware training & tools for career advisers
 - Need to be more active than passive, for unskilled unemployed
- Promote culture change: acceptance & mgmt of uncertainty
- Pensions policy must factor-in costs, tax, workforce & technology
- If automated companies are to pay more tax, they need profit
 - Near-impossible to tax automation *per-se*



Disruptive Analysis

Don't Assume

www.disruptive-analysis.com

disruptivewireless.blogspot.com

@disruptivedean

information@disruptive-analysis.com

Skype:disruptiveanalysis