



Measuring Success – review of indicators and recommendations

Date: 22nd May 2018



Contacts

The following details identify the staff contributing to the preparation of this document. All enquiries regarding the document should be directed towards the Lead Author– Rebecca Riley, in the first instance:

Rebecca Riley
City-REDI – Business Development Director
Birmingham Business School
University of Birmingham
Ash House
Tel: 0121 414 4366 (Ext: 44366)
Mob: 0785 5245 638

Co Authors

Prof Anne Green
Dr Tasos Kitsos
Kieran Collinson

Copyright - Ideas, solutions, suggestions, hints and procedures from this document are the intellectual property of The University of Birmingham and the West Midlands Combined Authority as commissioning body thus protected by copyright. They may not be reproduced, transmitted to third parties or used in any form for commercial purposes without the express permission of The University of Birmingham and West Midlands Combined Authority.

Contents

Background.....	4
Summary Recommendations.....	6
What does success look like for the West Midlands?	7
What do we mean by “best available data?”	11
Moving from the Micro to the Macro	11
Reflections on wider measurement.....	12
GVA driven strategy and its trade offs.....	19
Exploring Different Approaches and Focus for Action	22
Viewing the West Midlands as a person not a company	22
Balancing Growth	24
Skills and Productivity Indicators.....	25
Industrial Strategy Indicators	25
Indicators and Place Building.....	25
Why culture of place matters	26
Measure of Success – Overview of the WMCA approach	27
Value driven future	28
What might be outside the WMCA’s gift?	28
Mapping outputs to outcomes.....	28
Logic Chain Approach.....	34
Conclusion	38
Additional References	39

Background

The following report has been developed based on an assessment of the performance review indicators in the WMCA Annual Economic Review carried out by City-REDI.

The Strategic Economic Plan (SEP) sets out bold economic ambitions for the region, and a shared determination that all our citizens will feel the benefits of that success. The balance outcomes developed in the Performance Management Framework ensure that success is defined and pursued in broad social and economic terms that feel real to the people living and working here.

WMCA is building on the SEP in pursuing these ambitions. Working with government, WMCA are developing a Local Industrial Strategy that identifies how we will make the most of our strengths and succeed in future industries. We have established an Inclusive Growth Unit that will ensure those communities left behind can play a full part. We are pursuing a devolution agenda with government to join up big investments in housing, skills, transport and public services in ways that are game changing for communities and life changing for our citizens. There is a powerful coalition for change in the region: to fulfil our economic potential, and play a pivotal role in the rebalancing of the UK economy.

The Annual Economic Review is therefore an important moment to take stock. It's an opportunity to ensure key indicators pick up on the latest building blocks as well as the foundations of the SEP. A publication not just to assess the region's track record, but also to signal its future trajectory. The WMCA approach can never be too ambitious for our region, and we should constantly question ourselves on whether we can do more. We need a review process that encourages and recognises that agility, not a process that creates tablets of stone.

This work has looked at whether the indicators we have reflect the vision we want to deliver and the success we want to create for the future. It has been commissioned by the West Midlands Combined Authority on behalf of the Skills and Productivity Commission.

- The Productivity & Skills Commission has been set the task of understanding the true extent of the productivity challenge in the West Midlands, identifying the component causes and making recommendations to address the issues identified.
- The Commission's work will help the WMCA to strategically target areas where there is potential to boost productivity and re-ignite under-performing industry, helping to reduce unemployment and underemployment and ultimately tackle a widening skills gap. The result will be a more prosperous, inclusive and thriving economy that works to meet the needs of the people of the West Midlands.
- The Commission is led by Dr Andy Palmer, Chief Executive and President of Aston Martin Lagonda Ltd, has brought together business leaders, productivity experts and senior academics to ensure our plans to drive productivity are designed by and for local businesses.

This review has been designed to support the development of clear thinking about the indicators we use to measure the impact of the Skills and Productivity Commission's recommendations; to posit a logic chain from intervention to outcome which will help inform activities going forward.

As part of this review we have also reviewed the use of indicators in terms of inclusive growth. Some of the key questions posed at the beginning of this work were:

- What do the **outcome measures mean** – For instance, in the case of GVA what does it measure and how is it constructed? How can we use them? How accountable can we be?
- Developing our **logic chain** - How we create change in the measures? How do micro level actions impact on macro level indicators? What can we do to improve the position of the indicators?
- **Output to outcome** - Are there better ways to measure our progress? This involves a review of other data sources and suggestions for short, medium and long term development of better indicators

More detailed objectives were also part of a Business and Professional Services Sector 'deep dive' and examples are reflected in this report:

- Understand the sectoral contribution to indicators (focus on Professional Services as a pilot)
- Assessment of evidence on output indicators and impact on outcomes – understanding 'the micro to the macro'
- Review of evidence on multiplier effects of interventions on outcome measures

The findings of this review were presented to the Commission on the 20th April 2018 and this report represents a written record of that presentation and subsequent discussion. It is important to note that this has been a collaborative piece of work with Black Country Consortium and the review process was a dynamic research in action process. With interim presentations and review points which were implemented by BCC/WMCA. This work has been built on iteratively and continues to do so with the development of dashboards being an ongoing process.

Summary Recommendations

Overall the indicators presented so far by Black Country Consortium for the WMCA Performance Monitoring Framework are appropriate for a growth based approach, and they are consistently used across a wide set of organisations and delivery bodies. However as a result of the review, our recommended changes would be to add two core outcome indicators:

- **Business survival rates;** to ensure we develop interventions that focus not just on start-up but also the strength and vitality of businesses, growing businesses provide jobs and opportunities. A thriving local business base provides for the local community (of all recommendations this is essential).
- **Median wage levels;** this is one measure which would go some way to allowing us to track the quality of jobs, and the local population's ability to afford the necessities of life, increased wages allow individuals to invest in homes, skills, leisure and their future. You may want to consider a threshold which brings people above poverty levels.

Broader Issues and reflections:

- Prioritised indicator set – as a basket, the focus is more skewed to public sector delivery than productivity
- A mix of real and modelled indicators is unavoidable
- One should be wary of targets over which we have little control; even a straight linear projection of the GVA at GBSLEP level takes the region to about £58bn which is some way short of £72bn by 2030. This linear projection already includes high GVA growth rates in the early 2000s. On a linear projection one would expect to hit that GVA level later, at around 2043/44
- Targets should be ranked or indexed against other places, to provide context and relativity

Recommendations

- A productivity driven strategy should emphasise attracting and growing high value jobs and high value/growth companies - Measuring perceptions of place 'brand' become more important
- Therefore there needs to be some additions/elevations: Business Survival; FDI; exports and imports; competitiveness and innovation and high growth firms as proportion of all firms
- Inclusivity: employment rates for different groups; board mix; leadership diversity – explore establishing inclusive growth indicators against all policy areas and dashboards as they develop
- Supplement this with the development of new/co-ordinated micro data which allows us to diagnose problems at the company level as a baseline against outputs which can be measured
- Commission specific work on innovation, competition and investment, where national indicators are poor or non-existent
- Our recommendation would be to have a multi dashboard approach which has baskets indicators and priority indicators and rebalance the indicator set to meet wider objectives of offering life chances, health and wellbeing
- No organisation can really be accountable for outcome indicators and we therefore caution against presenting WMCA as accountable
- Focus on collecting and collating output indicators and setting targets on these, linking to change in outcomes in the long term
- Carry out a review of partner output measures to match them and priorities against WMCA outcomes, this will allow understanding of the delivery capacity and capability available to improve the overall performance of the region

What does success look like for the West Midlands?

The vision within the current WMCA Strategic Economic Plan (SEP)¹ starts by setting out that the West Midlands will be a place that “meets people’s needs and aspirations throughout their lives and where everyone’s life chances, health and wellbeing are improved”. This aspiration is however, somewhat constrained by our ability to monitor and target performance of places.

The first thing to state is that the performance measures used within the current SEP in broad terms, are both appropriate and the best fit; in terms of targeting economic development the best measures available have been used but we are constrained by access to data which is robust, longitudinal and comparative. The indicators chosen are based on availability and how well they fit the goals of the strategy. As is the norm in local economic development, the WMCA have prioritised Gross Value Added (GVA) as the key target, and the vision setting technical work is based on improving this measure.

Figure 1 The Problem with GVA

CITYREDI

Why GVA?

“GVA measures the contribution to the economy of each individual producer, industry or sector in the economy”.

- **Previously the PSA target DTI and Treasury used to measure regional economic performance this has been passed to LEPs and CAs**
- **At UK level there are 3 ways of measuring GVA – expenditure, production and incomes**
- **For monitoring purposes the incomes approach is the only one used at regional level because of availability of data but it is constrained to the National GVA Figure**

UNIVERSITY OF BIRMINGHAM | **BIRMINGHAM BUSINESS SCHOOL**


GVA has been used by successive governments to measure productivity performance, specifically narrowing the gap between the highest and lowest performing regional economies. Indicators are necessary for effective regional policy making. However the EU and OECD both say that GVA per head should not be used as either an indicator of regional productivity (or income) of residents, but it is a good measure of economic output². They promote the use of GVA per Hour worked and Gross Domestic Household Income (GDHI), and focus on the drivers of regional differences in a basket of indicators underpinning GVA, such as indicators relating to skills, labour market and income.

¹ <https://www.wmca.org.uk/what-we-do/strategy>

² National Statistician’s Article: measuring regional economic performance, Dunnell, K; Economic and Labour Market Review, ONS Jan 2009

So why is GVA not suitable? As a measure it is largely constructed from company profits and income levels³, data is gathered as described below. The indicator is modelled by looking at wage levels (including self-employment), company profits and taxes, through a process of allocating and modelling performance from national data sets and samples. It is more a reflection of macro-economic conditions, and the effects of regional price differences than of local improvement and change. GVA per head is the most common measure of economic growth. The inputs of GVA income approach are: compensation of employees, mixed income, rental income, gross trading profit and surplus, non-market capital consumption, holding gains, taxes less subsidies on production. It should be noted that GVA/head uses a workplace numerator and a residence based denominator, which does create some internal inconsistency.

Figure 2 The Income Approach



CITY
REDI

Income Approach

It is only about income generated through the output of goods and services:

- **Compensation of employees – WAGES**
- **Mixed incomes – INCOME FROM SELF EMPLOYMENT**
- **Gross operating surplus – COMPANY PROFITS**
- **Taxes less subsidies on production – BUSINESS RATES**

Earnings + Profits + Taxes – Subsidies

UNIVERSITY OF
BIRMINGHAM

BIRMINGHAM
BUSINESS
SCHOOL

Regional GVA does not account for inter-regional commuting to work; regional differences in labour market participation; different labour market structures (full/part time). Hence it should not be used as a measure of productivity or income⁴. It does not take account of voluntary or household activities; it struggles to reflect changes to traditional working practices such as the gig economy and surges in self-employment, portfolio working or the services economy; it does not reflect work-life balance and the ability to live fulfilling lives. It is a measure built for measuring traditional 'production', yet it is being used in an increasingly service based economy with a growing expectation for free services, such as music, advice, or information, zero hours contracts and lifestyle businesses. ONS is currently developing experimental statistics on a "Balanced" method of calculating GVA⁵. Comparison over time also requires deflating current prices to obtain real GVA/head.

³ ONS GVA methodology <https://www.ons.gov.uk/economy/grossvalueaddedgva/methodologies/regionalgrossvalueaddedincomeapproachqmi>

⁴ <https://link.springer.com/content/pdf/10.1057%2FElmr.2009.6.pdf>

⁵ https://consultations.ons.gov.uk/national-accounts/consultation-on-balanced-estimates-of-regional-gva/supporting_documents/Development%20of%20a%20balanced%20measure%20of%20regional%20gross%20value%20added.pdf), considering the best aspects of the income and production approaches. See more here - <https://www.ons.gov.uk/releases/regionalgrossvalueaddedbalanceduk1998to2016>

It is therefore important to bear in mind what GVA isn't:

Figure 3 What GVA isn't

**CITY
REDI**

What GVA isn't

- A measure of **prosperity** or **standard of living**, because it does not include taxes or benefit such as unemployment benefit, Working Families Tax Credit or pensions or other incomes.
- A measure of **how much is produced**, because it is measured in current prices - the cost of items can change!
- Nor may it be used to compare **standards of living** between different regions, not only because of different regional patterns in taxes and benefits received, but also price levels may be different.

**UNIVERSITY OF
BIRMINGHAM** | BIRMINGHAM
BUSINESS
SCHOOL

GVA is also not a measure of wealth, life chances, health or wellbeing and if we value these things it is problematic to prioritise GVA as the key measure. In fact to improve GVA one could adopt an approach focussed on bringing large companies into the region (i.e. Foreign Direct Investment), concentrating on R&D, attracting highly skilled people, and cutting employment in low value occupations. This drives economic growth, however if left unchecked and unfettered, it leads to a particular type of economy: one which favours a particular type of change, and is often in direct conflict with inclusivity, wider employment and local cohesion as inequality grows and some local communities are left behind.

The Business and Professional Services Deep dive has also shown that new business models which affect the location of service delivery are significantly changing, to reflect technology and client demand, and this affects geographical attribution of GVA. Currently GVA does not take account of allocation of activity across a business, such as having a client in Edinburgh, being based in Birmingham but the profits and wages being allocated to a head office in London; technology enables this activity, and profit generation and employment can take place anywhere. This has significant implications for where GVA is earned, *as the measure currently attributes wages where the employment location is, rather than where activity takes place*. The allocation process is also based on reviewing large employers but only a sample of smaller employers, this can reinforce perceptions of where work takes place and where value is added. This approach can also be based on old business models which are rapidly being changed by digital service delivery, supply chain systems and highly mobile workforce travelling to clients.

In the context of the Skills and Productivity Commission, GVA also does not measure skills; the assumption made within the measure, is that the higher skilled an individual is, the more they will be paid. However this is not always the case, and in a period of wage stagnation as we are experiencing nationally, improved skills do not always lead to wage increases. Macro productivity measures have also never really captured the human gains from advances in innovation or of the application of technology or the success of good leadership.

A better approach would be to use other variants of GVA, for instance GVA per employee. This accounts for 2 of the three drawbacks of GVA per Head. It addresses interregional commuting to work and differences in labour market participation since it measures the workplace based GVA and divides it by the number of employees.

In using them to measure productivity, GVA per employee is sub-optimal to GVA per hour worked or per job filled (published by ONS) since it does not account for the nature of employment (hours of work).

However, a significant advantage compared to the other two measures is that it allows for industry breakdown. Assuming that nature of employment is same across all industries (strong assumption) allows productivity comparisons across industries. Assuming nature of work across different years in same industry are stable (more likely assumption) allows comparison of within industry productivity in time (need to use real GVA)⁶.

Despite these issues however, GVA is currently the accepted measure of economic performance at the regional level, however we need to ensure a more balanced approach to growth priorities.

Therefore we need to bear in mind when using GVA:

- GVA per employee, and GVA per hour worked are better measures
- Large dependant population is generally bad for GVA for head, as ‘non-productive’ residents (in the sense of how GVA is measured do not contribute to productivity)
- Wealth is better measured by GDHI or wage levels, as this is real money going into people’s pockets
- GVA is allocated where profit and/or employment is reported – this creates a ‘Head Quarter effect’, for instance a supermarket chain may have their HQ in the West Midlands but they have stores everywhere and it is difficult to allocate wages and profits appropriately, without understanding the micro level business plan of these firms
- Commuting patterns affect GVA and wealth – where people earn their income can be very different to where they spend it
- No regional price deflators – so it takes no account of the price you pay in London versus other regions, or inter-regional differences
- To an extent, population drives GVA – the more people you have the greater your GVA, as there are more people to create it. Hence Cities naturally perform better, however increased populations can have negative impacts on cohesion, pollution, services and built environment
- It takes no account of the quality of the job to the individual or the meaning of work, or the contribution of a job to wider society
- It takes no account of market forces on wages, such as industries such as culture or arts, where most jobs are highly skilled but poorly paid
- It takes no account of the impact of regulation on behaviour, for instance setting up a small business and the trade-off between paying minimum wage and taking dividends, which can artificially deflate wage levels and over inflate profits

Technical caveats with the measure:

- GVA per head uses a workplace numerator and a residence based denominator;
- Significant time lags in data and when impact occurs
- The data is revised every year and can be revised for previous years
- Differences in regional employment/population trends
- The lower the geography (i.e. the more detailed the scale of spatial disaggregation) the less reliable it is, with wildly variable confidence levels which can change rankings and levels significantly
- Inflation impacts – is the growth in GVA real or inflationary growth?

⁶ ONS should be able to provide experimental/user requested statistics on GVA per hour or job filled by industry, but these would be on request

- Reliant on commercial modellers for lower detail – this raises a greater issue on assumptions within modelling and commercial sensitivities often mean these are not released or explained

What do we mean by “best available data?”

It is worth noting that no indicators are perfect and that often we need to use data developed for another purpose as a ‘best fit’ to what we want to monitor. Also national policy can affect and change indicators in ways beyond our control; a recent example of this is the impact of universal credit on claimant information, a move to one credit system has stripped out our ability to subdivide types of benefits and track over time. As these changes have still not been rolled out and guidance on interpretation has not been developed, we are left with an unclear picture of benefit claimants.

The main issue we face with monitoring indicators is that of timeliness and impact point; for instance GVA at a regional level is published 12 months after the end of the reference period and when initially published data are ‘provisional’ which means they can be subject to revision. This means tracing impact from intervention to GVA as a minimum would be a 2 year lag. In practice, real change can be many years later depending on the intervention. This also applies for datasets built from surveys, such as skills levels, wages and so on and this lag needs to be taken into account when looking at impact.

However it is always best to use official data sources and those which have been given Official National Statistic status, as we know these meet quality dimensions such as relevance, timeliness, accuracy, coherence and comparability, output quality trade-offs, user needs and perceptions, accessibility and clarity. They are also more likely to continue to be produced into the future and most likely to be used by other places for comparison reasons.

Appropriate monitoring should include feedback loops throughout strategy and programme delivery as part of monitoring and evaluation, and the WMCA has this built into the processes.

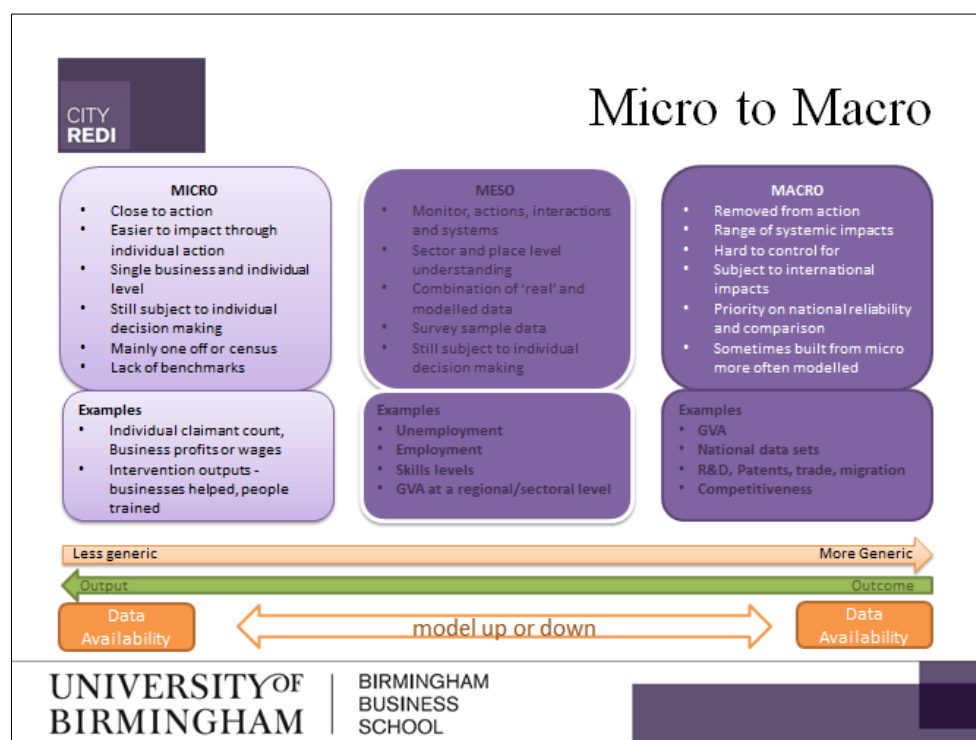
We would also support the WMCA ‘stacked approach’ to monitoring, with a wide set of indicators and dashboards, helping to define the place performance, with a few key indicators assessed as ones which are for targets and performance commitments, with other relevant indicators recorded below them in a ‘stack’ for those who want to see more detail.

Moving from the Micro to the Macro

Figure 4 overleaf reflects some of the issues and challenges with monitoring indicators. The most problematic being source of the data and how it is built. Some monitoring indicators are based on real time, individual or business data (ie claimant count) others are based on modelled sample surveys ie Labour Force Survey, both these approaches can appear at different geographic levels, but have implications for interpretation and use. For instance modelled data (such as GVA or skills) is affected by lower geographic scales, lower you go, the smaller the sample, the more likely the error in the data and confidence you can have in the number.

Micro level data is often project or programme specific and cannot easily be linked to macro level data and vice versa. There are often big gaps at the meso level which means links have to be made based on wider research and evidence. Ideally this should be done at a programme level.

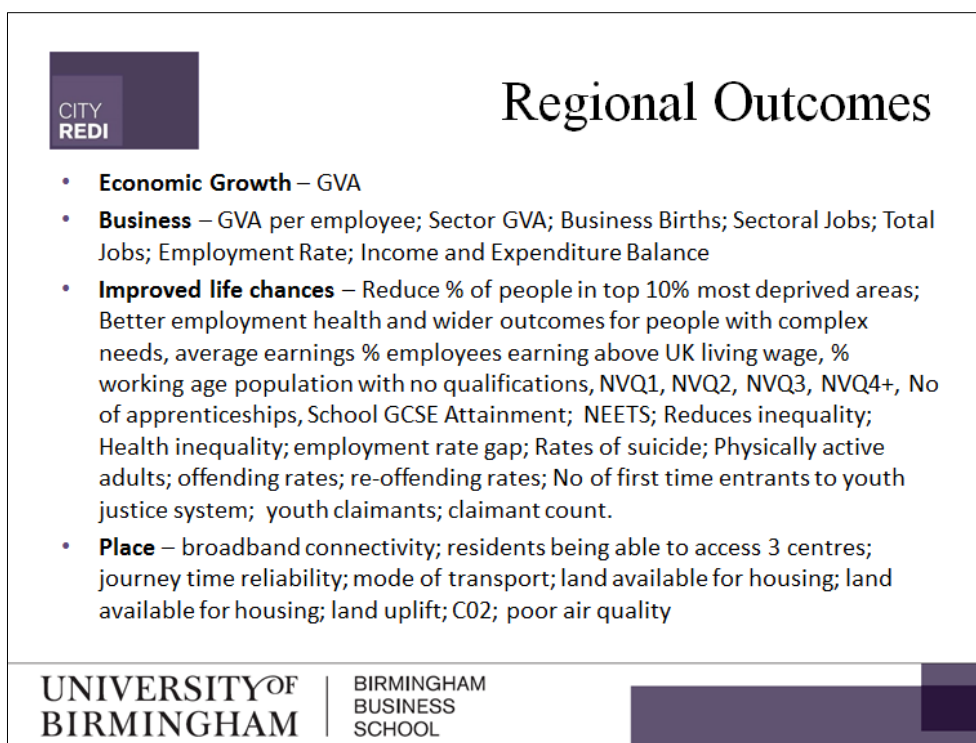
Figure 4 Micro to Macro



Reflections on wider measurement

As part of this work we also carried out a review of the indicators currently being used (more detail below) the purpose was to look at challenges and issues with using the indicators; whether the indicators were fit for purpose and make recommendations on changes/additions. High level regional outcomes are:

Figure 5 Regional Outcomes



Below is a summary of the review of current indicators:

GVA in transformational sectors - use with caution

- “Sectors” are not necessarily a helpful definition, but are often used to provide focus. However this simplifies the real functions of businesses down to one code representing all activity, for instance all businesses have a ‘professional services’ function in that they have people responsible for accountancy, marketing etc. This can underestimate or overestimate sector size.
- Transformational sectors are likely to change over time and involve a degree of arbitrariness as to what is and what isn't a transformational sector due to political change.
- GVA could be one of the measures of activity but unless it is weighted (by employment/number of firms etc) it may be misleading (i.e. increasing GVA by more "less productive firms" in a sector).
- GVA at sector level and geography often needs to be modelled by private providers, therefore assumptions are unknown and basis of change may not be clear
- Depending on provider, change can be due to employment or productivity⁷
- Unreliable and lagged data at low levels

Jobs in transformational Sectors – use with caution

- Ideally should be full time equivalents (FTE) jobs, not just numbers – but estimating FTEs is not necessarily straight forward given the heterogeneity of working hours
- Again may need to be modelled
- The definition can be problematic due to issues with sector as above
- Good availability of data through BRES⁸ (and there are some measurement breaks for self-employment)
- Weighting or indexing would give context to the importance of the jobs in the economy and relative value

Business Births – use but with deaths and survival rates

- Business Births measure the entrepreneurial activity in an area/industry. They can be weighted by population (most common), employees or firms in the sector. The three measures usually correlate.
- On their own, Business Births may mask numerous effects such as high death rates or a weak labour market (entrepreneurship of need). Therefore need net births or survival to have accurate picture
- UK Business demography details are available every year, but with a 2 year lag
- Ideally should be weighted by population or indexed
- In conjunction to business births one should either consider death rates or net business births to understand better business births.
- Survival rates and scale-ups and innovation activity could also provide more context

Total Jobs – use as proposed

- This is a useful to show expansion of the economy
- Good reliable metrics, however the smaller the scale the higher the margin of error

⁷ Potentially it would be possible to create measure of high-growth firms using IDBR and measure the number of high growth firms by industry

⁸ UK Business Register and Employment Survey

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/businessregisterandemploymentsurveybresprovisionalresults/previousReleases>

- Good practice to index for context, for instance some weighting against population, full-time equivalents and qualitative information (i.e. occupational breakdown) would add value to interpretation. Otherwise total jobs are expected to grow continuously.

Employment rate – use as proposed

- Good overall measure of labour market activity. It cannot rise continuously, and to some extent we are in peak employment, so most of its usefulness is in its fluctuations and change
- 5% is often said to be the ‘natural’ rate of unemployment⁹, rather than optimal level of employment, although this is debated in academic literature; however there needs to be some flex and capacity for a labour market to run smoothly and prevent inflation rises, and the current tight labour market is in fact causing issues for businesses
- Relatively reliable, although again the lower the geography the higher the margin of error
- The employment rate does not measure the quality of jobs - however this is difficult to monitor and to some extent subjective
- Participation measures (such as inactivity – and reasons for inactivity) are also useful and complementary for context

Income and Expenditure – use with caution

- Estimated metric based on logical assumptions rather than an established/agreed methodology. ONS has looked into providing guidance but as yet no definitive approach. Currently different city-regions/combined authorities are using different methodologies, this has significant implications for the UK government in monitoring this given the core target for devolution of predicated on achieving this
- Cross-authority comparisons require common methodology. If the metric is only used to be tracked in time for the WMCA, it requires consistency of calculation and occasional reviews to ensure it is not systematically influenced by specific characteristics. It should not be used to measure performance of local governance
- Benchmarking is difficult due to how spend and income is allocated, e.g. where VAT is collected, where income tax is collected (HQ or place of work) and imbalance of taxable assets ie road tolls, airports etc. Also highly influenced by demographics, a highly dependent, aging population with a large pension and benefit burden is often a geographic phenomena
- Changes in tax and benefits systems and different methodologies means this indicator cannot be tracked over time as too inconsistent and subject to political

% of population in 10% most deprived areas – use with caution

- Evidenced by the Index of Multiple Deprivation, this is a composite indicator and as such it has a number of pros and cons the most important of which are: Pros - It is one number that reflects a multi-faceted concept such as deprivation. Cons - It can mask improvements in some dimensions and worsening in others, therefore success may be due to failure elsewhere
- Less % of people in most deprived places does not necessarily mean improvement of these places or people, it may mean worsening of others, it may also mean demographic changes, or regeneration which displaces deprived communities
- The way the indices are constructed has changed over time, so you cannot necessarily compare directly version on version, however 2015 is largely comparable with 2010¹⁰. Previous versions in 2000,

⁹ <https://www.economist.com/economics-brief/2017/08/26/the-natural-rate-of-unemployment>

¹⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/464485/English_Indices_of_Deprivation_2015_-_Technical-Report.pdf

2004 and 2007 cannot be compared. This an indicator developed through universities and funded on an irregular basis the indicator therefore updates are nor regular or in time with other measures. It is a useful one off statistics but not reliably published for monitoring

- Number of people claiming certain benefits may be a more relevant, accurate, up to date statistic that reflects the conditions of individuals provided criteria and access to benefits is maintained

Health and complex needs – review indicators of bodies working in this policy area

- We would recommend reviewing the public health indicators¹¹ for options and alternatives
- Generally linked to real indicators at a local level, not modelled
- Should be indexed if possible
- Should be linked to delivery of other partners that have a remit in these areas

Average earnings – use as proposed

- Good metric of conditions at the bottom of the labour market in terms of earnings. Using the national living wage the assumption is that it is the same across different places (i.e. London, Plymouth, Edinburgh have the same cost of living). To improve this measure a price deflator or cost of living indicators could be applied, to reflect real earnings or wealth of the place
- Good for wealth measurement
- It is an input metric for GVA, with a reliable data source in the Annual Survey of Hours and Earnings
- Can indicate quality of job
- Wages are currently depressed
- Could expand and change with cost of living
- Real median wages and their differences between workplace and resident-based could add information on socio-economic conditions

% of Working Age Population with qualifications at different levels – use as proposed

- Qualifications are best available proxy for skills
- The Annual Population Survey provides annual estimates of the qualifications in different geographies (the smaller the geography the higher the margin of error).
- Ideally an estimate of skills demand would offer new insights into skills shortages and gaps and their influence on the WMCA's future prospects estimates of skills demands can be modelled
- A focus on no qualifications can distract from issues elsewhere in the qualification ladder, high numbers of people with no qualifications can also be a reflection of the age profile of a local population (e.g. a higher percentage of older people). No qualifications levels have been naturally decreasing for decades as the impact of education policies involving greater emphasis on certification of skills have filtered through the population. High numbers of no qualifications can also be a reflection of high migrant populations

No of apprenticeships – use with caution

- Reported numbers trained, not in the population
- No measures of quality at the moment or outcomes
- Significant issues with variability and quality

GCSE attainment

¹¹ <https://www.gov.uk/government/collections/public-health-outcomes-framework>

- Consistent and reported measure, although recent changes to exams, levels and grading may cause some fluctuations and reduction in pass rates due to policy impact not a change to underlying skills base
- Attainment is pinned to a performance curve and distribution which can create natural levels
- They are as a result highly impacted by national policy change

NEETS – use as proposed but validate not known levels

- Good measurement of for long term disengagement in labour market
- Data are published annually for local authorities
- Some data collection issues and some local authorities have high levels of ‘not known’
- Important to keep in mind the relationship between percentage and size as well as the not known figures since it can flag need for action on data collection. Not knowns can be an indicator of poor collection techniques or a highly transient population

Health life expectancy (Male & Female) and Health inequality gaps – use with caution

- Highly relevant and a significant statistic on wellbeing. However, it may be difficult to identify what actions affect it and what the WMCA can do about it. Probably the most direct action is increase the share of healthier people in the region if there is no devolution of the relevant powers. Therefore this indicator is hard to impact and there is a long lag between change and impact (tens of years to change)
- Inconsistent release dates, 2012-2014 data released March 2016 and next release is yet to be announced¹²
- Supplement with other more reliable and short term indicators
- Maybe it is worth considering the factors that affect Healthy Life Expectancy which can be affected by the WMCA such as air pollution, exercise and green space.

Employment rate gap (mental health) – use with caution

- Important to bear in mind the relationship between % and size
- Annual figures¹³
- Some issues with what is responsible for the change
- Public Health England provide dashboards which includes this measure¹⁴

Suicide rates – use with caution

- Similar comments to the Healthy Life Expectancy. The suicide rates are the outcome of other processes (mental health, wellbeing etc) which are more readily influenced
- However as a monitoring metric it is significant to track
- Specific groups more prone and local demographics can play a part in this and you may want to balance against demographics of those groups in the West Midlands

Physically active – use with caution

- Measures not consistent

¹²<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/healthylifeexpectancyatbirthandage65byupper-tier-local-authority-and-area-deprivation/england2012to2014>

¹³<https://fingertips.phe.org.uk/search/gap%20employment%20secondary#page/6/gid/1/pat/6/par/E12000005/ati/101/are/E08000025/iid/90635/age/208/sex/4>

¹⁴<https://fingertips.phe.org.uk/search/gap%20employment%20secondary#page/6/gid/1/pat/6/par/E12000005/ati/101/are/E08000025/iid/90635/age/208/sex/4>

- Reliant on surveys by Sport England carried out by Ipsos Mori
- Changes have broken longitudinal data - Switch from Active People Survey (latest Dec 2016) to Active Lives Survey. Indicators may not be comparable.
- Other potential measures to complement are "Inactive", "low activity" and "some activity". The transition between these categories is also significant.

Offending rates – use as proposed

- Reliant on other delivery bodies but relevant to the regional level
- Annual stats published by ONS and reliable over time
- Can be affected by reporting issues

Claimants (all types) – use as proposed

- Monthly reporting therefore a good real time measure
- Real numbers not estimated
- Subject to seasonal fluctuation
- Subject to policy change

Broadband – use with caution

- Measure is constantly changing and target shifts with technology gains
- Speed more problematic than access and this will increase over time
- Annual from 2015 but lack of historic data and lack of consistency across places
- May be useful to benchmark against a national average

Access to strategic centres – use as proposed

- Average speed and delay also important (available via LA)¹⁵
- No assessment of quality or frequency but no available data

Journey time – use as proposed

- Published regularly
- Quality and experience also an issue but no available data

Mode share – use as proposed

- Regular updates from Department for Transport
- Benchmarking places would be useful

Land for housing/employment/uplift – extreme caution with any measure

- No consistent and co-ordinated data nationally
- DCLG have a dataset but not shared widely and not considered a national statistic
- Information mainly from private providers and one of research activities
- Availability a contentious concept and difficult to agree, due to land banking and private ownership
- Value uplift is specific to a building/land parcel and difficult to assess at scale due to hyper local effects
- Could use rental and rates value measures as a proxy¹⁶¹⁷¹⁸

¹⁵ <https://www.gov.uk/government/statistical-data-sets/average-speed-and-delay-on-local-a-roads-cgn05>

¹⁶ <https://www.gov.uk/government/statistics/private-rental-market-summary-statistics-october-2015-to-september-2016>

¹⁷ <https://www.gov.uk/government/statistics/private-rental-market-summary-statistics-october-2016-to-september-2017>

¹⁸ <https://www.gov.uk/government/statistics/non-domestic-rating-stock-of-properties-and-update-of-2017-revaluation-statistics>

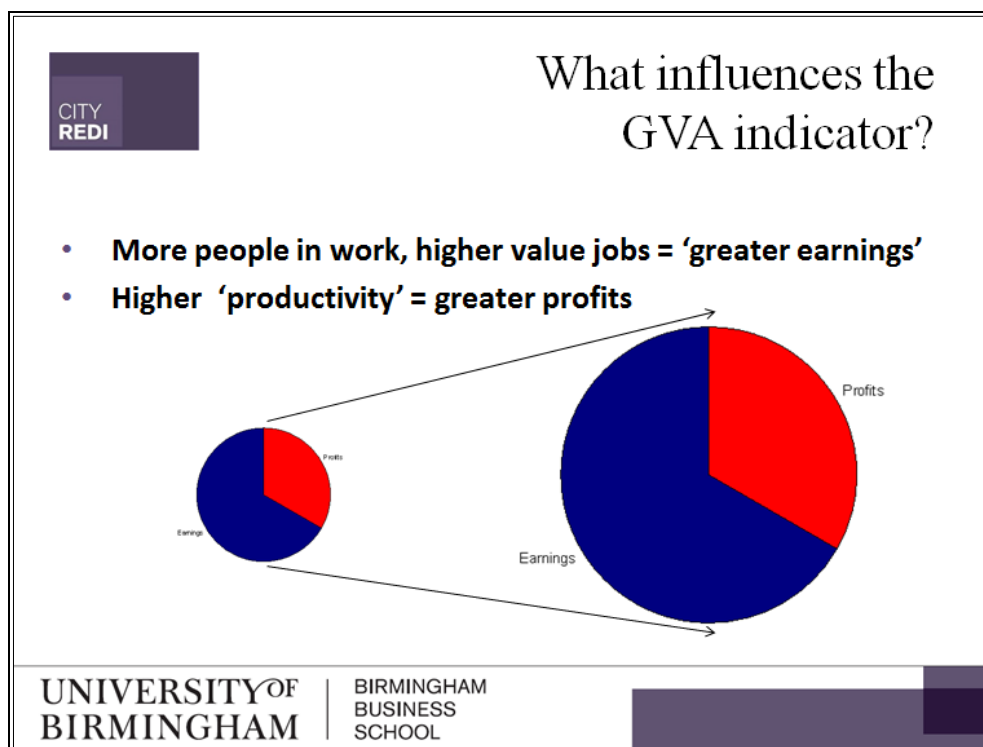
C02 and air quality – use as proposed

- Measured by stations
- Subject to weather
- Motorway infrastructure a significant issue
- Landscape also an issue

GVA driven strategy and its trade offs

The way that GVA is measured through earnings and profits means specific activities are favoured, namely increasing higher value jobs and increasing profits, influence GVA. The overall aim is to make the size of the economy bigger:

Figure 6 What Influences the GVA Indicator?



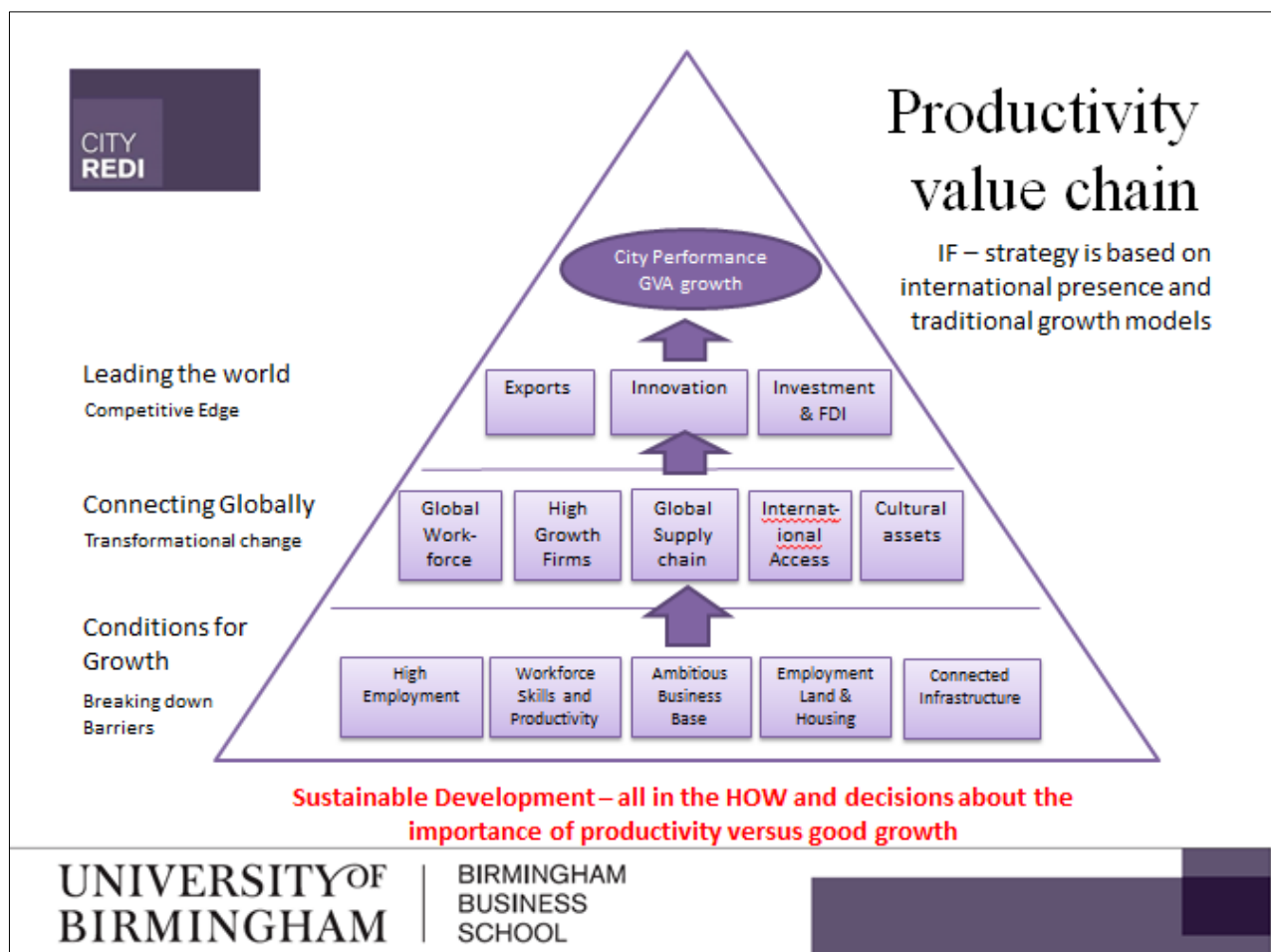
In the context of the WMCA's activities to improve GVA, activities should focus on:

- **High end, high wage job creation** increases wage levels, and money circulating in local economies, as well as creating a workforce that is more resilient and better able to cope with competition and change
- **High end, high profit business creation**, focussing on high tech, highly innovative firms increases profits
- **Overall increasing enterprise Levels**, a greater number of businesses again drives competition and improves the sustainability of businesses, as well as reducing the numbers of uncompetitive businesses. Business churn (i.e. high births and deaths leads to a more competitive economy and over the long term increased employment)
- **Increasing R&D** (especially as a % of GVA), higher levels of innovation improve profitability
- **Increasing trade and exports**, exposure to competition and new ways of doing things and new markets, drives innovation and product/process development to stay relevant
- **Improving skill levels** – higher level skills especially important, either attracting highly skilled or increasing the skill levels of local population, and training them and linking them with good jobs (but it should be noted that at firm level the mix of skills matters – e.g. intermediate as well as higher level skills)
- **Improving wages** – wages are a measure of how we value those contributing, higher wages creates greater investment in local economies through spending
- **Investment as % of GVA** – investment in the 'new' is vital for a vibrant growing economy

- **Labour productivity** – investing in people, improving the way they do things and creating environments in which they grow and thrive
- **Working Age Population** – increasing your local population, grows your capacity to create GVA, it increases the people resource accessible to employers. A greater working age population provides more opportunities for income growth, and reduces the impact of the nonworking age population
- **Employment** – increasing the number of those contributing to the economy, improves the amount of income moving around the local economy

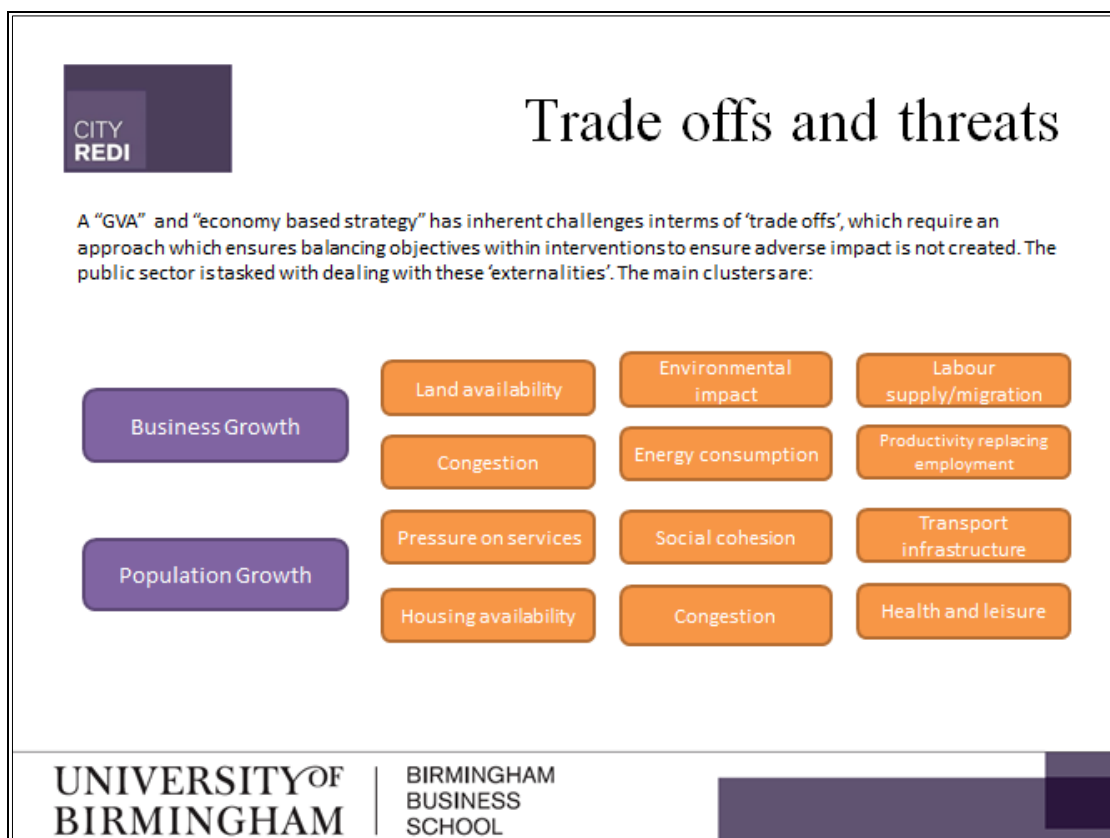
These priorities can be seen in the context of a productivity value chain, where activities which add to the economy, at the top of this sits exporting; innovation and FDI activity. And other activities support this priority.

Figure 7 Productivity Value Chain



This approach however leads to significant trade-offs issues described below:

Figure 8 Trade-offs and threats



- High end, high wage job creation can exclude the low skilled and make it difficult for them to access local jobs and lead to social exclusion
- High end, high profit business creation is often based on technology replacing jobs, streamlining workforces
- Overall increasing enterprise levels, a greater number of businesses can increase congestion, impact on the environment, tighten land availability and take it away from housing, increase energy consumption and increase transport demand
- Increasing R&D (especially as a % of GVA), higher levels of innovation can take jobs out of the workforce
- Increasing trade and exports – increases energy consumption, transport demand and stress on transport infrastructure
- Higher level skills can exclude parts of the local population if they don't have the skills or access to educational opportunities
- Wages are not always an indicator of value, some sectors are low wage but high value (creative industries, social care), and monetary value is not the only value. Many important jobs in the economy are not compensated through wages, such as care responsibilities, but as the cost of living increases there is an increased need for second wages, which puts the onus on services such as health and social care
- Investment can create growth which has the same effects as those above
- Labour productivity is the labour force because more productive it does not necessarily translate to employment growth it can lead to labour efficiency, cutting overall employment

- Increasing the working age population puts pressure on services, housing, land availability and transport infrastructure it can also create social cohesion issues at local levels through increased competition for jobs and housing
- Increasing employment again impacts on congestion, transport, services and the environment

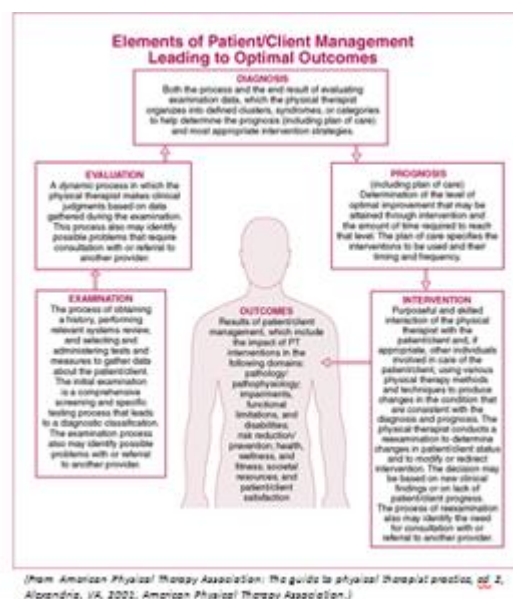
Exploring Different Approaches and Focus for Action

Viewing the West Midlands as a person not a company

Against this backdrop it is better to view a local economy as a person, where we examine a range of vital signs which show us how we are progressing. Places are complex and organic systems, this complexity means there are no simple answers to generating change, and as a doctor would with a patient, we need to try, modify and evaluate any interventions for change and impact, with a view to continual assessment. This is detailed in the approach to performance measurement set out by the WMCA. Outcome indicators have been identified in the SEP; our recommendation would be to have a multi dashboard approach which has baskets indicators and priority indicators and rebalance the indicator set to meet wider objectives of offering life chances, health and wellbeing.

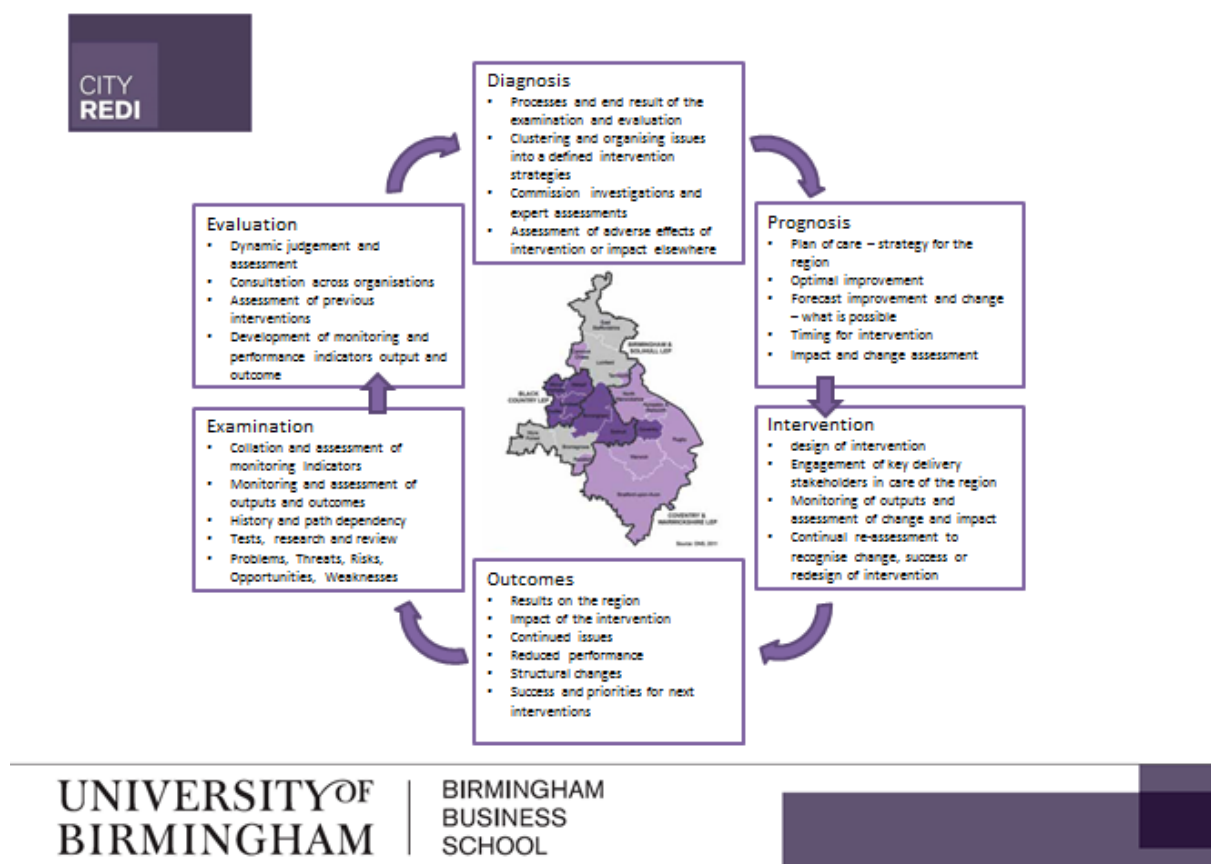
Figure 9 People Centred Approach

- Regional economies are **not production lines** but rather an organic system, growing changing and adapting
- Many indicators act in opposition, GVA and employment, or inclusivity, therefore we have to know the balance
- Important to define **your ideal 'economy'** and therefore what you are examining against
- In medicine we have a good idea of the ideal and also what we can **tolerate** in terms of difference from the ideal
- Important to review the presentation of indicators; match outputs to outcomes and show **achievement against outputs** as outcomes are far removed in time and impact



This approach allows us to reflect on a region being a system, organic and changing, monitoring helps us to understand this change. Unlike a patient or a production line there is no identified 'ideal economy'. This ideal needs to be defined through decision making within strategy and consultation, reflecting the local needs of people. This paper does not set the ideal but recommends an approach that balances objectives and takes into account the need for growth to be inclusive and accessible.

Figure 10 Translation the people centre approach to the region



Adapting the ‘patient’ centred approach of the healthcare sector we can approach monitoring in a different way and develop more sophisticated approaches which encourage dashboard monitoring systems which allow you to examine the whole system. This approach also enables us to think in terms of types of person and therefore the types of ideal. For a city region such as West Midlands we may want to consider the region as an athlete, aiming to be at peak performance, pushing boundaries and personal bests.

We would recommend monitoring takes this people centric approach and takes a continual approach to this monitoring to assess change and risks. The process above, suggests a constant cycle of monitoring and evaluation and redesign of interventions.

Balancing Growth

The WMCA may want to consider within subsequent dashboard development further performance measures which enhance our understanding of the region, and this section reviews potential approaches.

In the long term, the national and local economy have grown consistently, albeit within a cyclical process. There is an increasing move towards understanding 'good growth' or 'inclusive growth'. The PWC good growth index¹⁹ illustrates the need for a balanced approach and recommends: shaping visions to achieve inclusive place based growth; use an assets based approach to leverage investment and attract and retain talent; and stresses the need for local, national government and the private sector to act together to achieve good growth.

City REDI's work on the Professional Services deep dive has shown that there is significant optimism for growth. It is also evident that the sector will grow, whatever the regional institutions do. However the companies within the sector do want to promote 'good growth' and contribute to the region. They have a drive and ambition to grow through the local community, increase the number of access routes into the sector and utilising the local labour market to its full extent. They see this as both a business opportunity and an asset the West Midlands has the capability to deliver on. This approach would suggest a move away from simple 'growth' priorities to 'good growth priorities'. If the WMCA chose to take this approach we would recommend prioritising indicators such as:

- Gross Domestic Household Income per head; this is a better measure of household wealth
- Breakdowns and analysis of employment and skills indicators by, gender, age and ethnicity; to ensure balanced distribution of growth
- Retention of local graduates (resident and non-resident)
- Balance of local leadership (this would need new data and reporting through survey work, possibly based on the leadership commission work)
- Wage inequalities, which could be expressed as a ratio of median to mean income
- Housing Affordability, average price to earnings ratio helps us understand if the residents of the region can access homes
- Work life balance through the % in employment working more than 45 hours per week
- Security is an important indicator of wellbeing, and we would recommend the addition of crime rates as a high level indicator.

Ultimately this may mean the need to accept an expected lower growth trajectory as forecast, but with effort focussed on how we achieve growth, who can access the growth and ensuring local communities have pathways into the opportunities the growth provides.

To assume the region will grow, and instead focus and prioritise the how, through 'good' growth, would be a bold change but within the context of uncertainty, due to BREXIT and technological change, it would focus future strategy on place inclusivity and resilience. Which evidence shows enables places to bounce back more quickly from shocks.²⁰ It would also align delivery partners where their focus is on employability, skills and well-being and not just economic growth.

The WMCA is currently reviewing its monitoring dashboards with a view to creating a monitoring index for inclusive growth, our recommendation would be to review all indicators and other dashboards and ensure there are measures of 'inclusivity' across them all. In doing so the idea of good and inclusive growth is embedded in the whole strategy. These can be drawn together as a dashboard if required.

¹⁹ Good Growth for Cities 2017, PWC <https://www.pwc.co.uk/industries/government-public-sector/good-growth.html>

²⁰ Martin, Ron & Sunley, Peter. (2014). On the notion of regional economic resilience: Conceptualization and explanation. *Journal of Economic Geography*. 15. 1-42. 10.1093/jeg/lbu015.

Skills and Productivity Indicators

Within the project other approaches emerged to be reviewed and the next sections represent those discussions and debates. The Skills and Productivity Commission may want more focussed indicators which look at skills and productivity in a wider context. Extensive work has been carried out looking at sectors and creating dashboards, again these focus on the economic performance on the region as required to date. They present the best available data. The Commission may want to also have additional core indicators, for review and assessment by the Commission, these could include:

- **GVA per hour worked**, this is the most accurate measure of productivity in the workplace we have, which also allows us to compare and contrast across place and time. It also overcomes the issue of non-participation which GVA per head currently has.
- **GSCE attainment by region**, this would help understand the educational attainment of the supply of young people into the labour market, it can also be a core measure of social inclusion.
- **Breakdown of skills levels by qualification** and these must be viewed as steps on the ladder to the level 4 identified as a priority.
- **Apprenticeships levels**, however currently this measure is a take up and completion measure, not a quality measure and we may want to develop further apprenticeship and technical skills indicators, or look to use T-Level numbers in the future.

Industrial Strategy Indicators

Alongside this is a renewed focus on Industrial Strategy. A place-based approach to assets, sustainable, good growth and resilience sits within this approach and indicators identified would already apply. However, these are generally measures of infrastructure. Innovation, competition and investment have poor indicators (these are key to understand as they are productivity drivers and/or Industrial Strategy measures of the 'ideas' and 'infrastructure' and foundations of the industrial strategy). Indicators in these areas are often subject to significant fluctuations (patents) or lack of consistency (Community Innovation Survey); these areas are also poorly accounted for within GVA. They don't describe the activity of research establishments like universities, don't account for innovation within the firm which may be more aligned to process innovation and are too infrequent for monitoring.

Key to an Industrial Strategy is competitiveness within regions, described as "the capacity and capability of regions to achieve economic growth relative to other regions at a similar overall stage of economic development"²¹. Enabled by institutions, networks link companies and knowledge which are important for innovation driving economic development. Endogenous growth theory²² furthers the importance of knowledge through start-ups, entrepreneurship and R&D activities to increase economic development.

As such we would recommend the region look to develop its own indicators through a survey approach to fill the gaps in current knowledge, although this would sacrifice comparison and longitudinal performance measurement, but it will allow the West Midlands to have a deeper understanding of the core issues related to productivity, beyond skills. These indicators should also build on the work of the Science and Innovation Audits to monitor the impact and growth of key R&D assets, large companies and public sector anchor institutions as assets, tracking them over time and their contribution and embeddedness to the region.

Indicators and Place Building

The concept of place making is key to driving perceptions of growth and attracting investment, either in monetary terms or people terms, and creating local resilience. This can be demonstrated by²³:

²¹ Huggins et al, 2013; 156

²² This is an economic theory which argues that economic growth is generated from within a system as a direct result of internal processes. It emphasises innovation and investments in technology and human capital.

²³ Robert Huggins, Hiro Izushi, Daniel Prokop and Piers Thompson (2013)

- Regional growth and competitiveness – reiterating at the heart of the concept is knowledge, entrepreneurial and competitiveness for regions growth capacity and capability.
- The key to resilience is innovation; regions with low levels of vibrant, innovative and entrepreneurial economies tend to be hit harder by external shocks. Economic futures are dictated by past economic history. Regions are often tightly bound in development paths and unable to escape from declining competitiveness spiral.
- Institutional enablers are the conditions and factors that allow for competitive environments which are conducive for firms. Institutions therefore play an important role either to enable or disable competitive advantage of firms in the region.
- There are split two main types of competition 1. Low road 2. High road.²⁴ Low wages, docile labour and low tax will help attract firms but won't help the region. High road for example knowledge based policies like investing in entrepreneurs will upgrade the region. Entrepreneurs are seen as key positive in revitalising the regional economy.

Why culture of place matters²⁵

This approach develops a framework to capture economic culture and community culture of places, examining the relationship. Economic culture is the traits relating to factors such as entrepreneurship, innovation, risk-taking, economic motivation and opportunity-development; Community culture is the broader societal traits and relations that underpin the 'way of life' within particular places, this way of life, adds to the attractiveness of place and places a greater emphasis on community assets, cultural attractiveness assets and access to green spaces. Assets which are attractive to a wide set of communities are important for thriving places. Community is a contentious term with some arguing it may or may not be place-based²⁶, but it is key to place based good growth to take account of different communities, as social structures and we grow the assets to meet the needs of those communities and respond to the needs and features of groups within a region. For the West Midlands, the young population is a defining feature, alongside its ethnic diversity, both these factors can be positively associated with growth and the culture and assets of the need to respond to those groups.

The Arcadis – Investing in Britain report²⁷ highlights the “investibility” challenge focussing on attracting social, economic and human capital, and the need to brand a globally investible city that results in an 'attractive factor'. Overall index score for the cities future growth prospects are determined across six categories; economic performance, brand, housing, quality of life and place, people and growth, and infrastructure. Birmingham ranks: 10th at 52%. Behind key competitors like Manchester (6th), Liverpool (4th) but also in the WMCA area Coventry comes in 5th. It outlines key levers for enhancing investability in the West Midlands:

- Enhance skills levels
- Improve school performance and capacity
- Increase inward net migration

²⁴ Malecki (2004)

²⁵ Robert Huggins & Piers Thompson (2015)

²⁶ Miller (1992) ;Stroper (2008)

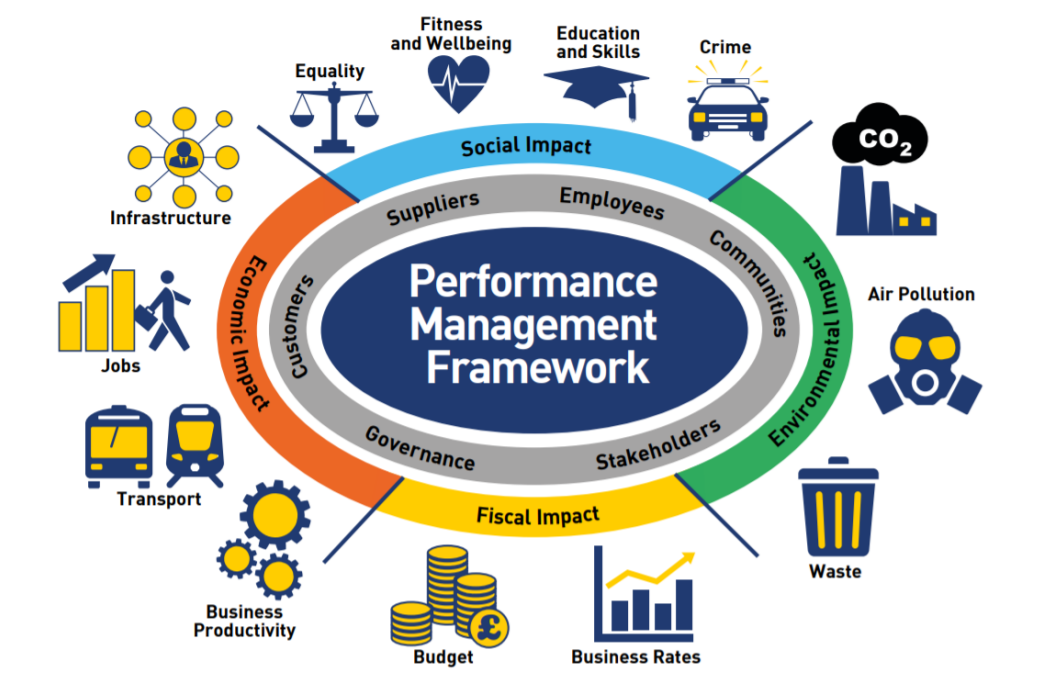
²⁷ <https://www.arcadis.com/en/united-kingdom/our-perspectives/investing-in-britain/>

Measure of Success – Overview of the WMCA approach

The WMCA was founded on the principles of balance, and many of the indicators identified in previous sections are included as detailed monitoring indicators, the challenge for monitoring success is what we prioritise.

The balance objectives were translated into strategic objectives and measured and reported annually via the WMCA Performance Management Framework (PMF) report - WMCA Annual Economic Review²⁸

Figure 11 Performance Management Review



The process to improve performance reporting continues to develop and the WMCA approved a comprehensive system which includes supplementary dashboards by portfolio area (e.g. transport, inclusive growth etc.) to provide more in-depth analysis of the thematic areas. This will complement the overall PMF which is updated annually by the Black Country Consortium Economic Intelligence Unit and will be reviewed regularly to ensure the indicators are fit for purpose. Initial scoping work by City REDI for this report highlighted the need to include more detailed business survival data which has already been reflected at the portfolio level.

The impact of outputs in delivering the strategic ambitions is key and the use of logic chains, explained further below, will be key to enable the region to quantify this. City-REDI has developed sample logic chains as part of the BPFS deep dive, and can be seen below.

Aligned to the performance reporting to support the Productivity and Skills Commission a series of detailed sector dashboards were developed to support the Commission's sector leads. These included broad economic measures e.g. GVA and Jobs. It highlighted some issues (as set out in more detail through the City-REDI work on the Professional Services Deep Dive) on the issue between firm level GVA data and ONS national measures. This work highlighted key issues with measuring productivity, including:

²⁸ <https://www.wmca.org.uk/what-we-do/economy>

- Allocation of activity, workers and income/sales
- Regional price levels and differentials
- Flexible mobile workforce
- International supply chains and identifying where the value added activity takes place

Following the sector deep dives the Black Country Consortium Economic Intelligence Unit will develop in conjunction with the sector leads sector dashboard that reflect the productivity growth needs of the WMCA. It is also worth exploring the use of ONS micro data, which may allow us to develop better measures of change at a lower level than currently available.

Forthcoming work also includes a detailed review of the evidence base to support the sectors in the emerging WMCA Local Industrial Strategy and the development of an Office for Data Analytics.

Value driven future

Going forward and reviewing the Strategic Plan the WMCA may want to consider the values on which it wants to base its collaborative future, and how much these steer decision making and goals. Values can shape action far quicker than monitoring indicators.

The approach WMCA may take could be an extension of the principles of WMCA to: be collaborative; be innovative; be driven; and be inclusive. Prioritising these values suggests a strategy which is based on ideas and inclusivity.

What might be outside the WMCA's gift?

Ultimately most macro indicators are outside our gift to influence at a local level, therefore it is important to focus on the real outputs delivered by the WMCA and its partners and align those with the outcomes already highlighted. Targets should be set on the things the WMCA and its partners can deliver. This ensures delivery bodies and activities are aligned to achieving long term goals and impacts. The WMCA can be accountable for its delivery of outputs as can all its partners, such as local authorities.

Mapping outputs to outcomes

Theory of change, impact pathways and outcome mapping are approaches which assess real and tangible change, introducing monitoring and evaluation considerations at the planning stage of a project. This approach provides a way of also challenging project partners and should identify behavioural changes to achieve the desired outcomes, whilst understanding the potential contributions of individual interventions on outcomes.

Outcome mapping works best when:

1. There is the existence of complexity in an intervention - this might be uncertainty of results
2. Recognition and willingness to act upon complexity and understand the rationale for intervention, and to move beyond cause effect logic
3. Commitment of champions and availability of appropriate technical support

This approach allows us to map local action to broader performance; however this mapping should be done at an intervention level as part of the Treasury Green Book approach and the 5 Case Model, developing the strategic, economic, commercial, financial and management cases. A full business case should demonstrate how interventions should contribute to the overall strategic delivery of outcomes. However this means that identifying broad outputs is potentially difficult and inappropriate at a higher level, rather outputs should be associated with the core purpose of an organisation or a programme. All partners should contribute to the overall outcome indicators and understand how they contribute to the overall aims and goals.

There are however examples of output mapping useful as starting points and within the Professional Services Deep Dive a number of programmes have been mapped in this way:

Figure 12 Impact Pathway – Trainee Professional

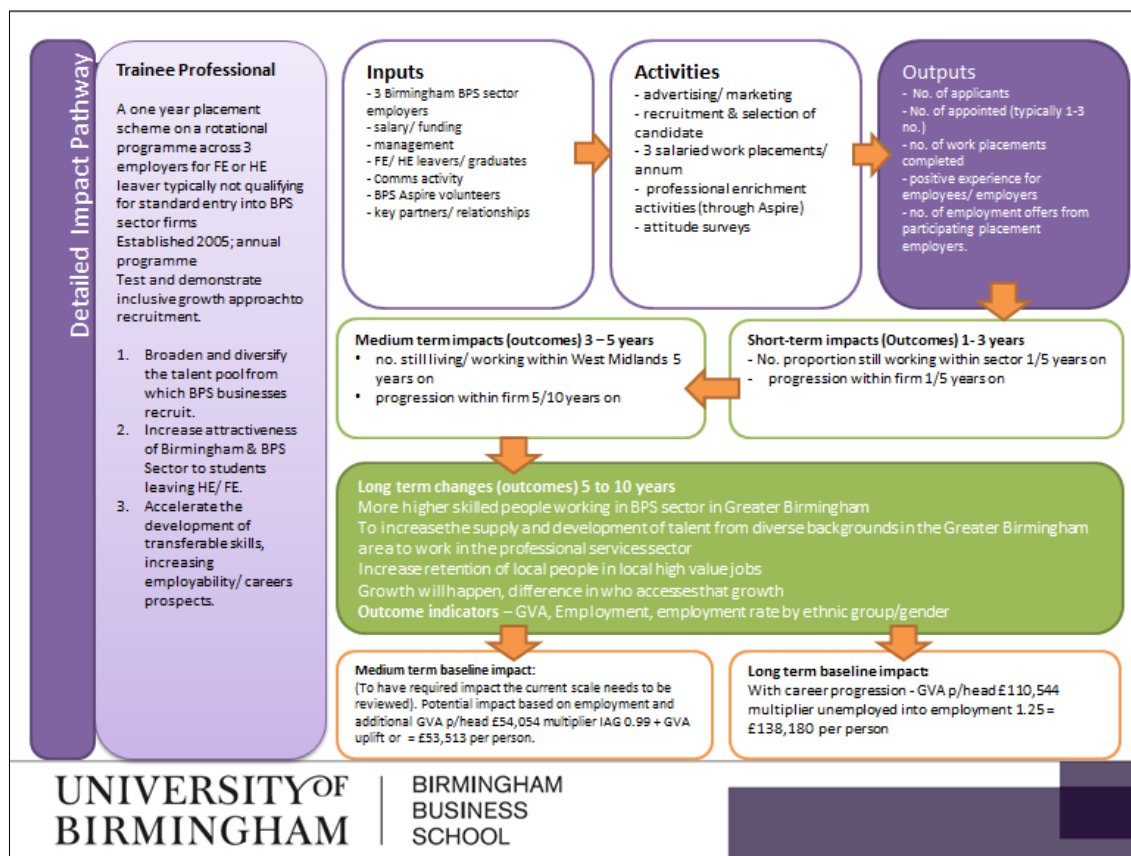


Figure 13 Impact Pathway – Professional Services Week

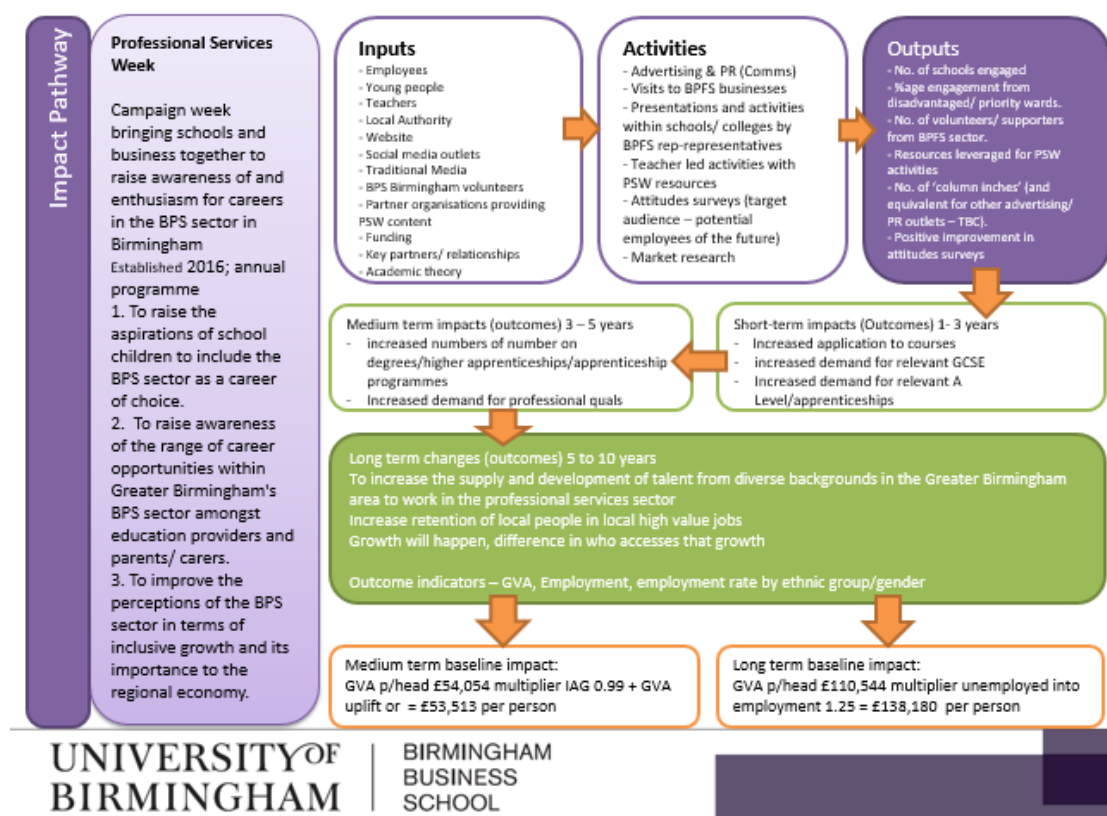
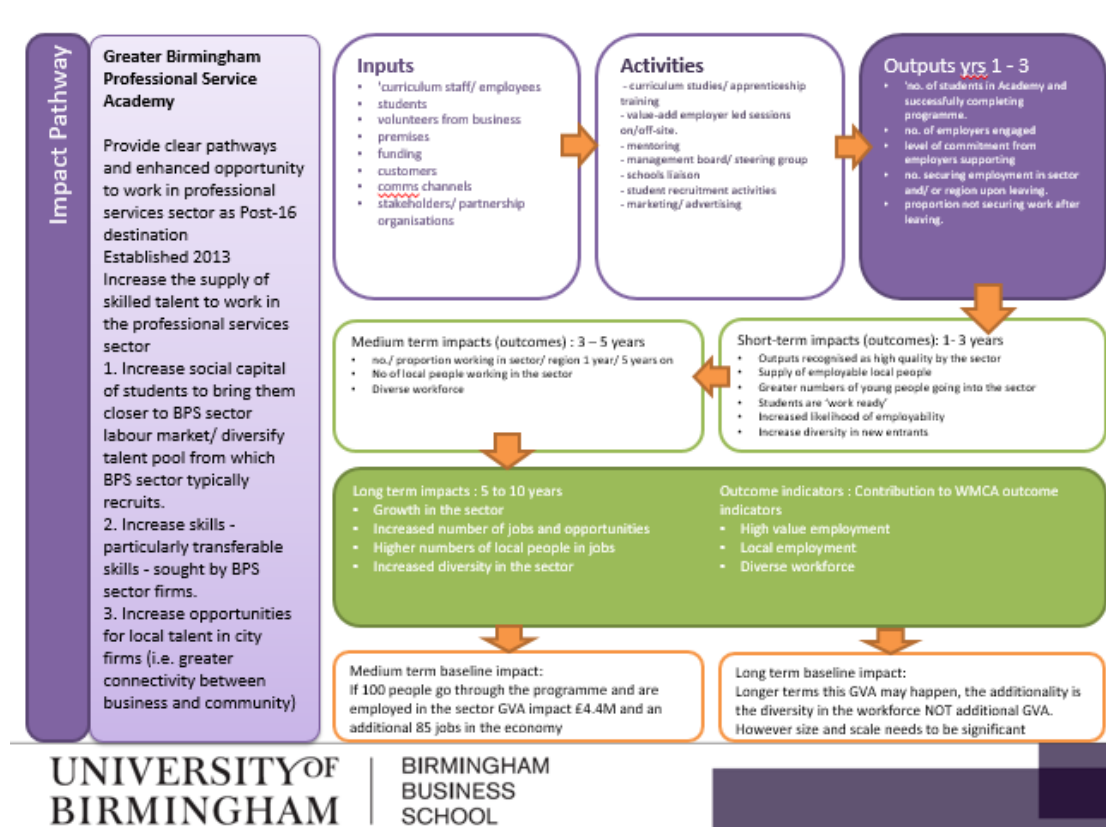


Figure 14 Greater Birmingham Professional Services Academy



Monitoring of outputs should be conducted on an ongoing basis to support the day-to-day management of interventions and ensure effective delivery of the strategy. For example, monitoring data can act as a vital tool for identifying situations where programmes are not fulfilling expectations and where action may be needed to undertake a corrective measure. Monitoring data will also inform any evaluation of whether the anticipated results (achievement of outcomes) of the programmes have been achieved.

Outputs are direct products, activities, processes or services. Outputs are usually counted numerically – examples include the number of sessions delivered, hours of young people’s participation or accreditations achieved. These may be qualified by particular conditions for example, activities are meaningful and meet a certain standard. There is a range of quality assurance frameworks that are used to assess these sorts of values.

Output monitoring is sometimes forgotten in the mix of monitoring, however this is important alongside outcome monitoring as it is near to activity and represents tangible investment in people, places and businesses.

There are already a wide range of options in output monitoring, and a selection of key outputs may need to be identified once the monitoring indicators are agreed and finalised. Examples currently in use are:

WMCA current identified PMF outputs:

Business improved the productivity of our businesses focussing on growth sectors

Q1 Businesses assisted

Q2 businesses created

Q3 new jobs created by sector

Q4 Expenditure savings

Q5 learner assists by level

Q6 number of apprenticeships

Q7 Reduction in Not in Employment, Education of Training

Q8 Offenders assisted

Q9 Troubled individuals assisted

Q10 New dwellings built

Q11 New floor space by land use type in m2

Q12 Land remediated

There are a number of output frameworks which could be used and developed for the region:

Output indicators – ERDF/ESIF

Support for businesses

(C1) Number of enterprises receiving support

(P13) Number of enterprises receiving information, diagnostic and brokerage support

(C2) Number of enterprises receiving grants

(C3) Number of enterprises receiving financial support other than grants

(C4) Number of enterprises receiving non-financial support

(C5) Number of new enterprises supported

(C6) Private investment matching public support to enterprises (grants)

(C7) Private investment matching public support to enterprises (non-grants)

(C8) Employment increase in supported enterprises

(C28) Number of enterprises supported to introduce new to the market products

(C29) Number of enterprises supported to introduce new to the firm products

Supporting ICT connectivity

- (P3) Additional Businesses with broadband access of at least 30Mbps
- (P4) Additional Businesses taking up broadband access of at least 30Mbps

Enterprise culture

- (P11) Number of potential entrepreneurs assisted to be enterprise ready

Working with research entities

- (C25) Number of researchers working in improved research facilities
- (C26) Number of enterprises cooperating with research entities

Energy and low carbon

- (C30) Additional capacity for renewable energy production
- (C31) Number of households with improved energy consumption classification
- (C32) Decrease of annual primary energy consumption of public buildings
- (C34) Estimated GHG reductions

Land and Environment

- (C22) Total surface area of rehabilitated land
- (C23) Surface area of habitats supported in order to attain better conservation status
- (P2) Public or commercial buildings built or renovated
- (P12) Square metres public or commercial building built or renovated in targeted areas
- (P6) Business premises with reduced flood risk

Transport

- (C14a) Total length of reconstructed or upgraded roads of which TEN-T 63
- (P7) Length of railway with new or enhanced signalling installation
- (P8) Alternative fuel charging/re-fuelling points
- (P9) Improved multimodal connection points
- (P10) Number of multimodal transport hubs

Previous Regional Development Agency Core Outputs

1. Job creation – Number of jobs created or safeguarded
2. Employment support – Number of people to get a job
3. Business Creation – Number of new businesses created and demonstrating growth after 12 months and businesses attracted to the region
4. Business support –
 - a. Number of businesses assisted to improve their performance
 - b. Number of businesses within the region engaged in new collaborations with the knowledge base (knowledge base/ business collaboration)
5. Regeneration Public and private regeneration
 - a. infrastructure investment levered (£m/% private)
 - b. Brownfield land reclaimed and/or Redeveloped
6. Skills
 - a. Number of people assisted in their skills development as a result of RDA programmes
 - b. Number of adults gaining basic skills as part of the Skills for Life Strategy that count towards the Skills PSA Target
 - c. Number of adults in the workforce who lack a full Level 2 or equivalent qualification who are supported in achieving at least a full Level 2 qualification or equivalent

Local Alternatives:

Black Country Consortium – Black Country Growth Deal

1. New jobs
2. New homes

3. Additional businesses helped to grow
4. Additional learners supported to develop skills needed by business

Greater Birmingham and Solihull Local Enterprise Partnership

1. Private sector business start up
2. Business start-up per 10,000 population
3. 3 year survival rate
4. Start-ups reaching £1m turnover after 3 years

London LEP programme

- 1 people into Jobs
- 2 people into sustainable jobs
- 3 qualifications/skills interventions
- 4 apprenticeship starts
- 5 work experience or volunteering opportunities
- 6 employers supported
- 7 sqm of new or improved public realm
- 8 new homes built
- 9 new or improved business units
- 10 businesses/traders supported
- 11 job starts
- 12 markets supported or created
- 13 sqm of workspace/commercial space created or improved
- 14 new workspaces
- 15 jobs created or safe guarded
- 16 pre-start businesses supported

However, we would recommend a process which looks at the current output frameworks of delivery partners within the region and mapping these against overall outcomes for the WMCA, identify any gaps in delivery and activities which contribute to outcomes and look at how these might be filled. This process ensures alignment across delivery partners and buy in to a shared vision, by encouraging collaboration on delivery.

Logic Chain Approach

WMCA has adopted the use of a “logic model” approach as the consistent basis for evaluation design. Within this “CALM” (CA Logic Model) approach, different types of evidence (e.g. qualitative case studies or intelligence from front-line staff or users, and quantitative results from cost-benefit analyses) can be brought together in a coherent way, drawing together the background context, inputs, outputs, outcomes achieved and what impact has occurred. The approach is also known as the “impact pathways” and “theory of change” approaches. It is based on the Treasury Green Book approach²⁹.

The structure and impact of Change

1. **Define outcomes**
2. **Define outputs**
3. **Define Theory of Change (or impact pathway)**
4. **Develop the intervention:**
 - **Activities**
 - **Logic model/Logic chains**
 - **Detailed impact pathway**
 - **Monitoring framework**
 - **5 case model**³⁰

It is important to bear in mind:

- Generic approaches do not replace detailed business cases
- Logic models largely answer the case for change and the economic case
- The 5 case model should be applied on every intervention

The full business case in support of a new policy, new strategy, new programme or new project must evidence:

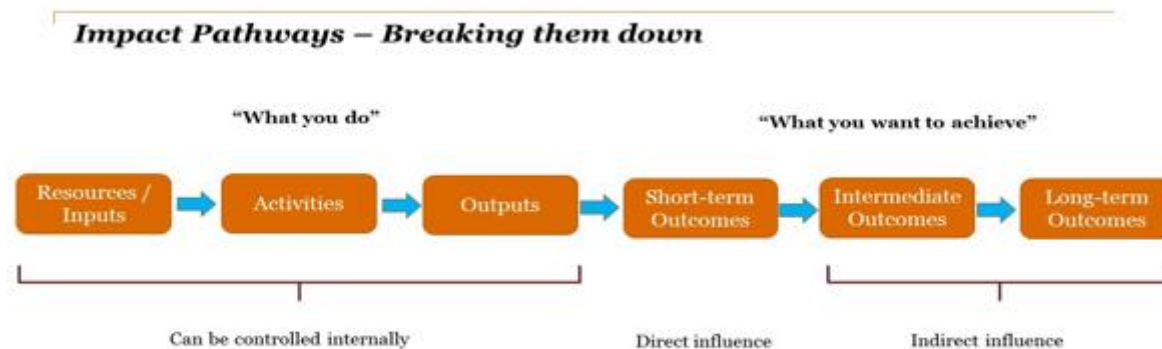
- that the intervention is supported by a compelling **case for change** that provides holistic fit with other parts of the organisation and public sector– the “strategic case”;
- That the intervention represent best **public value** – the “economic case”;
- That the proposed Deal is attractive to the market place, can be procured and is **commercially viable** – the “commercial case”;
- That the proposed spend is **affordable** – the “financial case”;
- That what is required from all parties is **achievable** – “the management case”

²⁹ <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>

³⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/469317/green_book_guidance_public_sector_business_cases_2015_update.pdf

The WMCA approach is based on this and they have a clear pathway to impact methodology, detailed below:

Figure 15 Impact Pathway WMCA



This approach looks at developing pathways which address:

What are the key issues behind a project?

- What problems, market or other failures or undesirable outcome is the intervention seeking to address?
- What opportunities is the intervention seeking to capitalise on?
- What, primarily, is the intervention seeking to contribute towards?
- What are the objectives of the intervention?

What activities and outputs need to be delivered?

- What are the primary activities of the intervention?
- What types of outputs are expected to be achieved?
- What level of additionality are you expecting for the outputs? i.e. taking account of what would have happened without the intervention, displacement, leakage and multiplier effects.
- How might the levels of additionality be evaluated? What might cause additionality to be higher or lower?

What outcomes are we seeking to change?

- What types of outcomes are expected to be achieved or contributed towards?
- What are the potential wider effects?
- Why do you expect the outcomes to be achieved and wider effects to occur?
- What other things need to happen in order for the outcomes and/or wider effects to occur?
- What evaluation evidence would be needed in order to understand the net outcomes and wider effects?

Implications for monitoring and evaluation

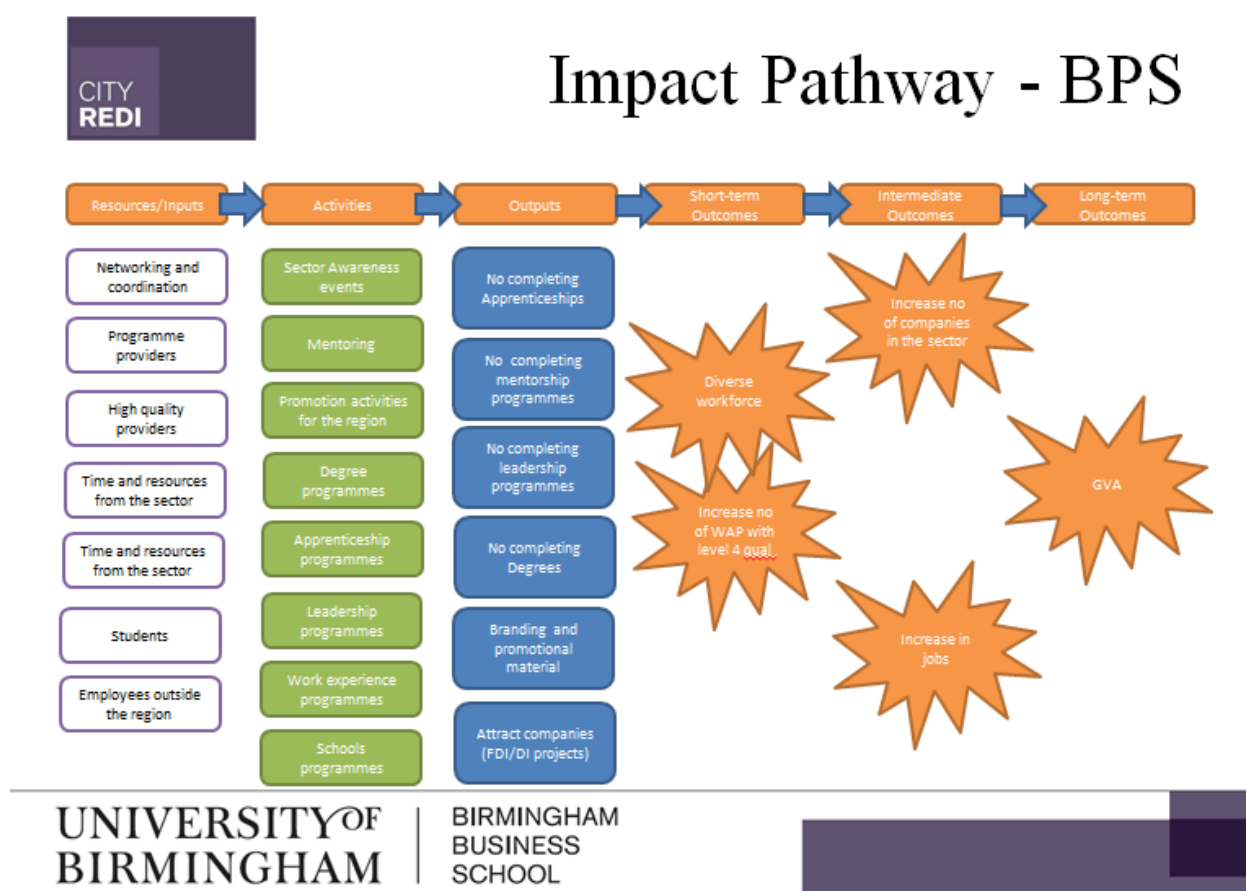
- What are the implications for data requirements and evaluation?
- Will the evidence enable you to calculate net outputs and assess net outcomes?
- Will the evidence enable you to comment on how far objectives have been met?
- Will the evidence enable you to comment on how far the intervention has addressed the problems and failures identified?

Defining monitoring and evaluation

- Look at connecting Key Performance Indicators (KPIs) with - Deliverables (ownership) – Outputs (ownership)
- Which of the Outputs lead to the long term results (outcomes) and what are they?
- What are we missing?
- Feedback to plenary and discussion on how to fill in the gap

This approach sits with an output to outcome framework at a project level for example:

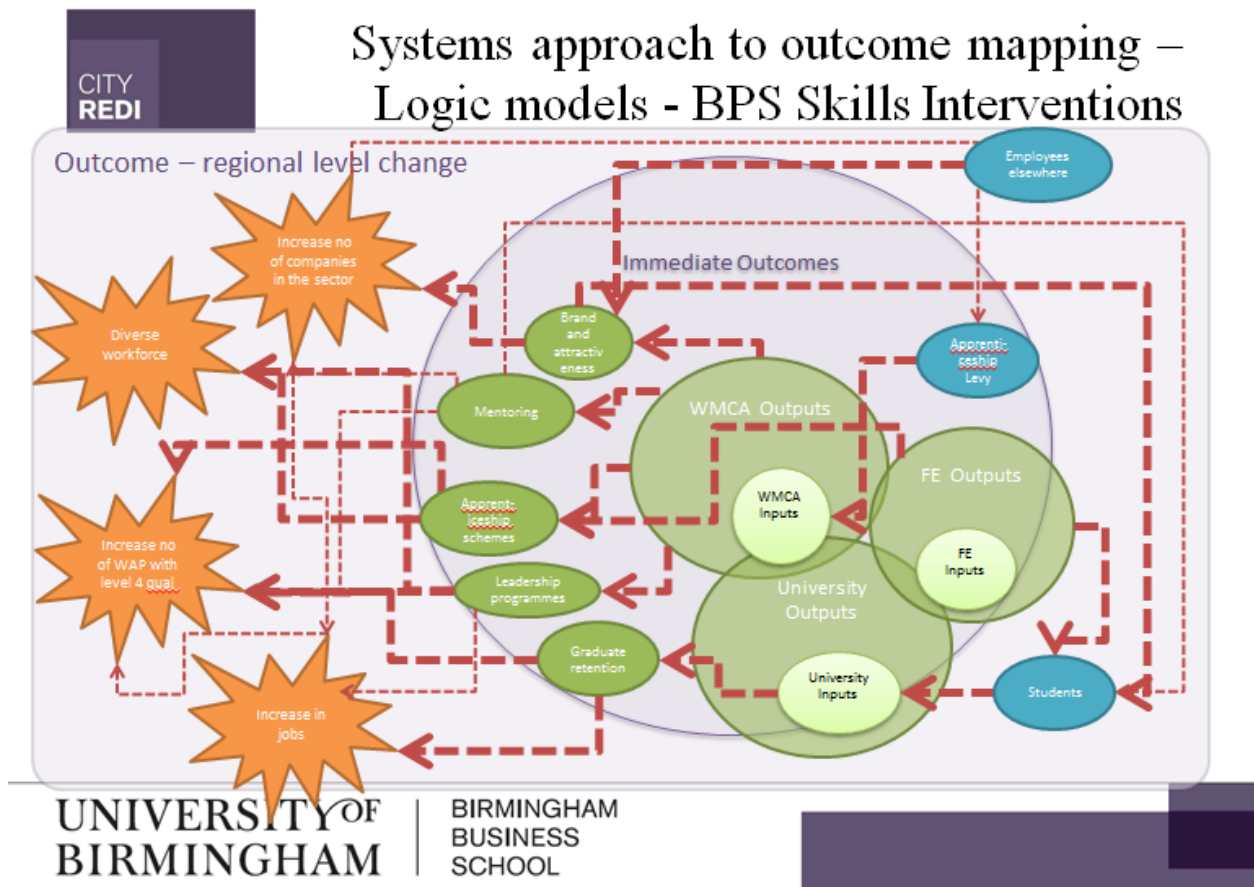
Figure 16 Example Impact Pathway



Although this is the recognised approach to project development and focus on outputs creates clarity of understanding and delivery focus, the real is far more complex. The often mean to complement the logic chain mapping a systems mapping approach can be taken, this ensures impact pathways are understood within a wider context and potential risks and barriers to delivery can be thought through, and delivery partners identified.

Below is an example systems map for the Business and Professional Services sector, this diagram illustrates the complex nature of intervention and the difficulty in mapping out all possible interactions and activities which will impact on successful delivery. The approach of mapping out a complex system, helps identify risks, challenges and key partners. Ideally these two approaches should be combined as they have different purposes and one does not replace the other. But key to delivery is clear KPIs on outputs and outcomes.

Figure 17 Example Systems Approach



Conclusion

This work is part of an ongoing process of developing the monitoring framework for the WMCA, and this will continue to be developed as the role, responsibilities and delivery structures develop. In conclusion this review raises important issues about the data local areas have in order to understand their local economies and develop effective interventions. It continues to be a challenge to effectively understand local areas in real terms and the key issues are:

- Lack of reliable local data
- Data which is built for national purposes and being apportioned to regions
- Significant gaps in available data on specific themes (innovation) and large amounts of data in other areas

Within this context however the indicators being developed and chosen by WMCA are the best available but we would advise caution in interpretation and use, with some additions to broaden the scope beyond the purely economic starting point. We would like to note that the WMCA and Black Country Consortium have developed their dashboards and indicators in response to this work and will continue to do so into the future as better information and indicators are developed.

Additional References

- Monitoring and Evaluation in the Development Sector, KPMG International 2014
- Ten years of Outcome Mapping | Richard Smith, John Mauremootoo & Kornelia Rassmann | July 2012
- Outcome Mapping: A Basic Introduction By [Research to Action](#) 20 January 2012
- Improving GDP: Demolishing, Repointing or Extending?* Carol Corrado, The Conference Board and Georgetown Center on Business and Public Policy; Kevin Fox, University of New South Wales; Peter Goodridge, Imperial College Business School; Jonathan Haskel, Imperial College Business School, CEPR and IZA; Cecilia Jona-Lasinio, ISTAT and LUISS, Rome; Daniel Sichel, Wellesley College; Stian Westlake, NESTA September 2017
- The challenges of measuring GDP in the digital, borderless world, ONS 22nd
<https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/thechallengesofmeasuringgdpinthedigitalborderlessworld/2016-11-22>
- <https://www.ft.com/content/b4a4e236-c084-11e7-9836-b25f8adaa111>
- https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/672407/ESIF-GN-1-002_ERDF_Output_Indicators_Definition_Guidance_v5.pdf
- https://www.seupb.eu/sites/default/files/OutputIndicators/IVA_2017-01-24_IndicatorGuidanceDocumentTheme1_1_Version2.pdf
- National Statistician's article: measuring regional economic performance
https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&ved=0ahUKEwjM_r_euuXZAhUEW8AKHSGaB0IQFghDMAQ&url=https%3A%2F%2Fwww.ons.gov.uk%2Ffile%3Furi%3D%2Feconomy%2Feconomicoutputandproductivity%2Fproductivitymeasures%2Fmethodologies%2Fregionalproductivitymethodology%2Felmjrjan09dunnelltc77101396.pdf&usg=AOvVaw3AYISPSvzdLOXH_9MZ9r3i
- Evaluating the impact of RDAs PA Consulting SQW 2006
<http://www.sqw.co.uk/files/4813/8712/1417/149.pdf>
- Regional Development Agencies; House of Commons Library Research paper 02/50 22nd August 2002
<http://www.cles.org.uk/wp-content/uploads/2011/01/RR10-New-Role-for-RDAs.pdf>
https://gcs.civilservice.gov.uk/wp-content/uploads/2015/11/6.1395_CO_LL_GCS-user-guide.pdf
- SQW learning from evaluation
<http://www.sqw.co.uk/files/6613/8712/9777/102a.pdf>
- sqw learning more from evaluation
<http://www.sqw.co.uk/files/6013/8712/9777/102b.pdf>
- GVA methodology
<https://www.ons.gov.uk/economy/grossvalueaddedgva/methodologies/regionalgrossvalueaddedincomeapproachqmi>
- PWC good growth
<https://www.pwc.co.uk/industries/government-public-sector/good-growth.html>
- Labour market data guide -
<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/aguidetolabourmarketstatistics#jobs>
- demos good growth for cities - https://www.demos.co.uk/wp-content/uploads/2016/11/Good_Growth_For_Cities_2016.pdf
- Assessing business cases a short plain English guide-
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/190609/Green_Book_guidance_short_plain_English_guide_to_assessing_business_cases.pdf
- Drivers of GVA - Jim Twomey, Pion Economics, 2005
- Robert Huggins, Hiro Izushi, Daniel Prokop and Piers Thompson (2013) Regional competitiveness: theories and methodologies for empirical analysis. Journal of CENTRUM Cathedra: The Business and Economics Research Journal, 6(2), 155-172
- Robert Huggins & Piers Thompson (2015) Culture and Place- Based Development: A Socio-Economic Analysis, Regional Studies, 49:1, 130-159.