Working Paper – The Architecture for Knowledge Translation in 'Creating Healthy Jobs'

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Contents

1. Introduction

This working paper sets out the parameters of Knowledge Translation (KT) in the Creating Healthy Jobs (CHJ) project. The intended audiences for the paper are the Strategic Advisory Board, and the Work Package (WP) leads and researcher teams. It is intended as a stimulus for discussion, collaboration and steer and is drafted at mid-point in the project, a period when most work packages are turning to public engagement as an element of their work. It will also be discussed and revisited at intervals with the project Co-production Group – an advisory body set up to oversee our public engagement and involvement programme.

Our funding agreement for CHJ commits to an integrated programme of Patient and Public Involvement and Engagement (PPIE), though for the purposes of this project we refer to PIE or public involvement and engagement (given that patients are not directly relevant to the involvement process or goals of the study). By integrating public PIE at all stages, the programme aims for solution-focused outputs, more likely to yield results that may be used in policy decision making and practice[1]. We therefore began our approach to KT by looking at the role of PIE in contributing to the evidence base, following the frameworks promoted by NIHR[2] and the UK Standards for Public Involvement[3]. Training on PIE was delivered to all researchers in CHJ at the outset of the work, and relevant reading material has been circulated since. We are also hosting a seminar in June 2026 with other NIHR funded work and health researchers to discuss the application of PIE in work and health related settings. At the time of drafting, Work Package 2 (WP2) is complete. It included an element of PIE in the work, and this is reported independently on the CHJ website.

We do not have a blueprint for KT in this project. This is because we believe the nature of KT and public involvement is best determined by the project Work Package (WP) leads on the basis that they are *closest to the data, and the research users.* For instance, we anticipate that the timing and nature of PIE will be informed by specific WP research questions, data sources and evidence under consideration, personal demographics of potential research participants, and the need to reflect different academic and organisational insights. However, in this paper and earlier training we set out the parameters of both KT and PIE, as benchmarks to stimulate thinking in WP teams, to make plans and report activity. We also set out a draft architecture describing the KT process. This paper is a reference point for conducting the PIE and knowledge translation elements of the programme and the associated CHJ logic model. Like the logic model, we see this paper as a live document. We anticipate and hope that there will be some iteration of this paper as approaches develop, or individuals bring new perspectives or research evidence into the fold.

This paper is drafted in plain language to establish the principles of clear communication and accessibility in the knowledge translation process. Referencing is in footnotes. The paper draws on academic and practitioner literature, and the research team members' experiences.

1 For a discussion on integrated knowledge translation research see Introduction Knowledge translation: Straus, S. E. Tetroe, J. and Graham, I.D. (2013) What it is and what it isn't. In *Knowledge Translation in Health Care* (eds S.E. Straus, J. Tetroe and I.D. Graham). https://doi.org/10.1002/9781118413555.ch01

2 We used NIHR guidance as a starting point: Public involvement in research | NIHR

3 UK Standards for Public Involvement developed by NIHR in partnership with Wales, Scotland and Northern Ireland.

2. Knowledge Translation Concepts

A multiplicity of definitions surrounds knowledge translation processes[4]. Indeed, the field continues to evolve.[5] Drawing on definitions of knowledge translation developed by Boaz and Nutley (2019)[6] in their typology 'three generations of evidence use' we refer to: knowledge transfer, knowledge exchange, and knowledge mobilisation[7] whereby:

- '*Knowledge exchange'* is the process of information and evidence development but emphasises the relational or 'push pull' (or two way) nature of evidence sharing. The comparator is *'knowledge transfer'* which suggests a linear/one directional flow of information.

- '*Knowledge mobilisation'* which is a process of activating the evidence base to reach the most important users of the research. In this phase of knowledge translation factors such as context, complexities and interdependencies become essential to ensuring a real-world interpretation of the evidence base. These factors become especially relevant in synthesising material in later stages of the work on roadmap activity. Knowledge mobilisation in this way paves to the way to achieving impact via implementation.

The two categories of knowledge exchange and knowledge mobilisation are not discrete. The mobilisation of data begins during the knowledge exchange process, and context (of the data, the researchers, and the PIE participants) is relevant to both knowledge exchange and the knowledge mobilisation process. We also refer to co-creation in the project. This concept overlaps with knowledge mobilisation, particularly if individuals or groups work together to mobilise knowledge.

2.1 Co-Approaches

Knowledge mobilisation – which refers to the process of generating, sharing and using evidence- has evolved as a key concept, particularly in health research. The use of PPIE throughout the research cycle is central to effective knowledge mobilisation, helping to translate the evidence generated from research into actionable, accessible and useful knowledge. Knowledge mobilisation is a two-way process between research users and researchers and can be done using, co-approaches including co-production, co-design and co-creation.

The NIHR define co-production as "an approach in which researchers, practitioners and the public work together, sharing power and responsibility from the start to the end of a project, including the generation of knowledge."[8] However, there are many definitions of co-production, which reflect the many disciplines in which it has roots. The relationship between PPIE, or in our case, PIE, and

4 In their work to create a KT search filter, McKibbon et al identified more than 100 terms for research use which may contribute to confusion about what knowledge translation is and thus, hinder its advance [McKibbon KA, Lokker C, Wilczynski N, et al. A cross-sectional study of the number and frequency of terms used to refer to knowledge translation in a body of health literature in 2006: a Tower of Babel? Impl Sci 2010; 5: 16.].

5 Stanisewska, S. Walsh, J. et al (2025) comment that the diversity of terminology and the richness of theoretical development in the academic literature have not always been fully embraced knowledge mobilisation agency actors. This is understandable given the complexity of some of the models, theories and frameworks, and the difficulties of operationalising many of these. https://doi.org/10.1186/s40900-025-00728-w

6 Boaz, A. and Nutley, S, in Boaz, A. Davis, H, Fraser A and Nutley, S (2017) What Works Now? Evidence informed policy. Policy Press. The typology draws on an earlier model developed by Best, A. and Holmes, B. (2010) 'Systems thinking, knowledge and action: towards better models and methods', *Evidence and Policy*, 6 (2), pp 145-50)

7 See also Plan knowledge mobilisation | NIHR See also Nilson, P. (2015) 'Making sense of implementation theories, models and frameworks', *Implementation Science* (2015) 10:53

8 https://www.learningforinvolvement.org.uk/content/resource/nihr-guidance-on-co-producing-a-research-project/

co-production can also lead to some confusion. PIE is where members of the public/research users share insights into their lived experience with researchers. Co-production is increasingly recognised as a key component of using evidence and engagement to tailor 'services' to be more responsive to user needs and this includes a route to addressing social inequalities. The key principles of co-production such as the sharing of power, including a range of perspectives and skills, respecting and valuing the knowledge – assets - that each person brings and building relationships based on trust will inform the PIE for the CHJ project. Lundy's Model of Participation[9], based on the United Nations Convention on the Rights of the Child (UNCRC), provides a useful benchmark for PIE. The four elements of the model help focus participation. Space – refers to the safe, inclusive opportunities for people to express their views; Voice – refers to people being facilitated to express their views; Audience – is the necessity of everyone's views being listened to and Influence refers to the need to act upon views as appropriate.

Figure 1 - Lundy's model of participation[10]

Taking account of the discussion above and the structure (including the WPs) of CHJ, we identified a working typology for knowledge translation in CHJ as most appropriate to achieving our intended outputs and impacts. See box 1 below.

Knowledge exchange and mobilisation *between* work package researchers: where researcher teams engage in a dynamic process sharing evidence to inform subsequent work packages and enhance understanding across the whole programme.

Knowledge exchange and knowledge mobilisation *with external partners* support a co-creation approach to identifying solutions and informing outputs. This will build an interpretation of evidence, bringing in the skills, experience, and insights and cognisant of factors such as context or organisational culture.

Box 1 - The spheres of Knowledge Translation in Creating Healthy Jobs

9 Lundy, L., 'Voice' is not enough: conceptualising Article 12 of the United Nations Convention on the Rights of the Child. British Educational Research Journal, 2007. 33(6): p. 927-942

10 https://generationr.org.uk/wp-content/uploads/2023/08/CRF-PPIE-Strategy-2022-2027-Final-23.pdf

We refer to ‘research users’ (or ‘research communities’) in the CHJ project. In this instance, researcher users are an extensive list including employers, workers, unions and employer bodies, academics, government departments, and professional bodies, all of whom have capacity to be both knowledge providers and users. They have potential to impact all aspects of the project, from evidence synthesis and iteration to knowledge generation and producing outputs. WP leads are encouraged to prioritise research users considering their interest (contribution) as well as potential impact.

As well as considering the participant communities when it comes to KT in the CHJ projects, it is also crucial to think about the context, e.g. the political, social, economic, technical, and legal contexts that might affect stakeholders and the communication methods that work best[11]. The Co-production Group plays an important role in steering and informing the knowledge transfer process.

3. Our ambition for Knowledge Translation Practices in Creating Healthy Jobs

The impact of tailored knowledge translation processes aims:

- To minimise the risk of sub optimal use of evidence or evidence being lost, ignored, being inaccessible for some audiences; and maximises the opportunity for a wide range of audiences to benefit from insights and evidence.

Research does not (always) speak for itself. Knowledge mobilisation, coupled with tailored communication strategies, will be designed to ensure the data reaches the right communities of interest. It will include for instance creating accessible frameworks summarising the evidence and creating stories and narratives that offer a route into understanding and contributing to problem solving. The engagement methodologies used will be tailored to meet research questions and facilitate involvement on how to make a difference.

- To close the evidence gap between knowledge and practice.

Knowledge mobilisation and cocreation strategies will help ensure that evidence is presented in a way that encourages engagement with interested parties being able to share insights and experiences. This process will help close some evidence gaps and make elements of the new evidence base more relevant to policy and real-world practice.

- To use strategies of engagement that provide research users with the opportunity for personal reflection and development as well as stimulating attitudinal and behavioural change.[12]
- More broadly, to advance understanding of what works in relation to knowledge translation processes as a mechanism for improving work related health outcomes.

11 NIHR Introduction to knowledge mobilisation for researcher’s webinar.

12 Reed, M. S. (2025) The Research Impact Handbook, Routledge. See also McIntyre, A. (2008) Participatory Action Research, Sage for a discussion on enrichment experienced by research participants in two case studies.

4. The Architecture for Knowledge Translation in Creating Healthy Jobs - a working model

We use a simplified *process model* to explain KT in CHJ (Figure 2). The model also indicates the range of influences which will inform the final outputs and is thus mindful of *implementation dynamics*, though the programme does not include a programme of implantation (or piloting) change, in the case of this programme, in workplaces or organisations.[13]

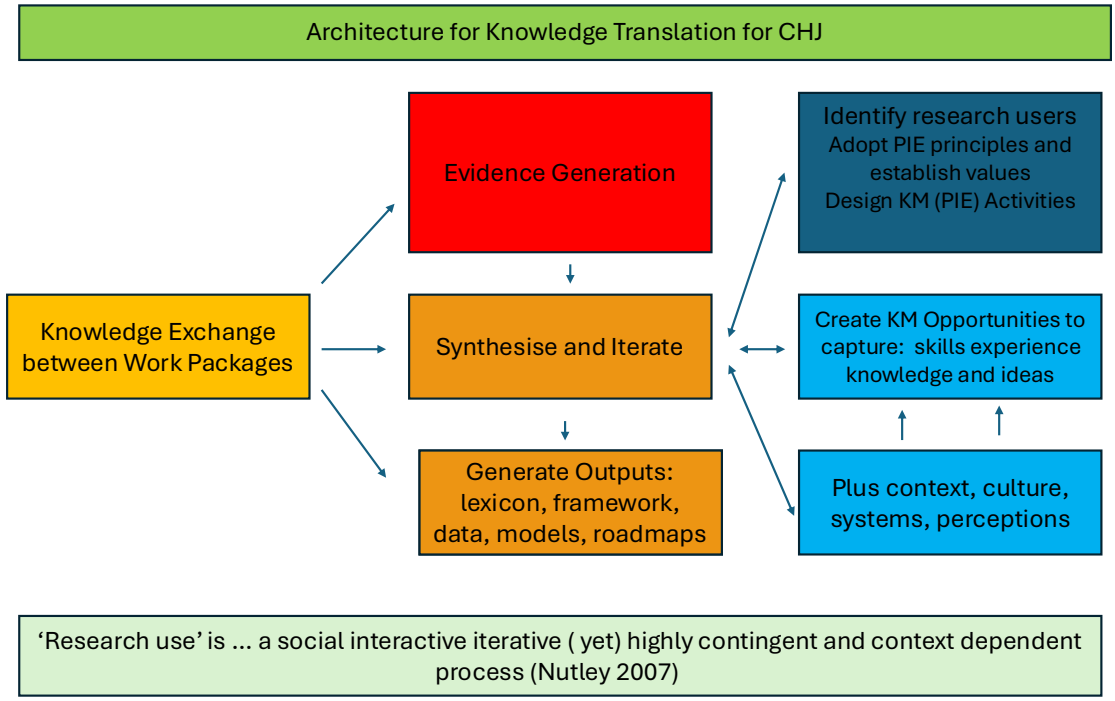

Figure 2 - Architecture for Knowledge Mobilisation

- Central to the model is evidence generated in the work packages (shown in orange in figure 2). Content is synthesised and refined – in knowledge exchange between the work packages, and with external research users. Researchers, and others involved, perhaps in partnership, act as knowledge brokers facilitating engagement in the research. Successive iterations of content lead to outcomes such as the working 'lexicon' in WP2; the ideal types of good and bad jobs (WP3); an improved understanding of job-related health inequalities nationally (WP4); a cost benefit model of job-related health (WP5) and two roadmaps for change (WP6) - one for the hospitality sector and one for employer members of the Greater Manchester Good Employment Charter[14] .
- Knowledge exchange between WP researchers (shown in yellow in figure 2) is an essential component of this process. As our evidence base grows and enhances, we will need to develop transparent reporting mechanisms for this interactivity between the WPs.

13 See Nilson, P. (2015) 'Making sense of implementation theories, models and frameworks', *Implementation Science* (2015) 10:53 on use of models in implementation science. Nilson identifies models under a series of headings including those designed to support process and others which include implementation determinants.

14 The factors informing the choice of these two target groups for roadmaps are including in Annex A to the paper. We will continue to discuss the precise focus of this work with the CPG and relevant stakeholder bodies.

- Turning to broader engagement, figure 2 sets out opportunities for research user engagement (shown in blue in figure 2). We propose a knowledge translation cycle[15] in which:
  - The 'external' research users are identified according to personal and organisational characteristics with a focus on ensuring that participants are diverse by personal characteristics, experiences, and perspectives.
  - Research and knowledge users can contribute at any stage in the life cycle of the research, from developing research questions, search terms, scope of research, to the iteration of evidence synthesis - increasing its relevance, and accessibility.
  - They will be sources of knowledge and experience; explicit and tacit knowledge; illustrative and explanatory stories and case examples; and provide a channel for interpretation. In some instances, this will mean 'shedding' elements of the data which feel less relevant to users and shining a light on gaps.
  - The content and understanding are further refined as context, culture, perceptions, and systems are brought into the data interpretation - this may be explored directly or inferred at the analytical stage.
  - Barriers and enablers for change will also be explored.

Using the elements of the above Architecture for Knowledge Translation, we suggest an action-based step by step model for designing the CHJ roadmap (Annex B).

5. The Knowledge Translation Architecture in practice

5.1 Knowledge Translation between WPs

Work Package 2 - establishes a foundation for cross disciplinary understanding of work and health ('the lexicon') which then sets the parameters for the subsequent WPs.

Drawing on WP2 to inform search parameters and introducing PIE WP 3 - reviews existing multi-disciplinary evidence to construct what makes jobs healthy and unhealthy.

Using the outputs of meta-analyses and sub-group comparisons from WP3, data will be disaggregated by socio-demographic variables, e.g., age, and socioeconomic variables, e.g., pay. WP 4 - will access public longitudinal datasets, such as Understanding Society, to create a new dataset linking Census data with longitudinal health and non-health data. This linkage will enable the development of novel 'econometric models to produce health-job quality 'maps' of the UK, based on worker, sector, occupation and region, characterised by the seven dimensions of Good Work. PIE will be embedded throughout WP4 to ensure the design, interpretation, and dissemination of findings are informed by lived experience of poor-quality work and its effects on health and wellbeing.

Drawing on the literature and longitudinal datasets identified in WP3, on what makes a job healthy or unhealthy, WP5 will develop a conceptual model to represent the causal pathways between job

15 Drawing on Baumbusch et al. 2008 and evidence mobilisation based on collaborative relationships and Ward et al 2009 on cyclical nature of development. See also Action Cycle discussed in Straus, S. E. (2013) Introduction. In Knowledge Translation in Health Care (eds S.E. Straus, J. Tetroe and I.D. Graham). https://doi.org/10.1002/9781118413555.ch01

quality and health and economic outcomes. The innovative modelling will estimate the costs of unhealthy and benefits of healthy jobs – to individuals, employers, the NHS, and the state. *PIE partners will feedback on the suitability and credibility of the evidence and conceptual model.*

Work Package 6 will work further on synthesising the whole evidence base, introducing PIE to co-create roadmaps for change in a region and in a sector.

5.2 Knowledge Mobilisation Practices

Below we set out, in brief, a series of considerations for teams integrating public engagement into the knowledge mobilisation process.

5.2.1 Levels of public involvement and engagement

A paper by Pollock et al[16], was distributed amongst the teams as a potential framework against which to map engagement plans. The ACTIVE framework originated from a review of public involvement designed to inform systematic reviews. The ACTIVE continuum provides a useful starting point for describing PIE referring to:

- recruitment - as either open or closed
- the approach to involvement as either one-time, continuous, or combined
- the method of involvement as either direct or indirect
- some specific elements, for example, engagement in strategic reviews following Cochrane Ecosystem stages of a review.

Finally, the level of control or influence was defined according to the roles and activities of stakeholders in the ACTIVE continuum of involvement: leading (the 'strongest' form of involvement), to controlling, influencing, contributing, and receiving.

The framework has been sent around WP teams and researchers are encouraged to align their approach to the framework to achieve a degree of consistency in recording and reflecting on knowledge translation activity.

5.1.2 Values

The values and spirt behind using PIE will influence several dimensions of activity including who, when and why to engage groups or individuals. Considerations may include: the extent of power sharing between researchers and research users, and between research user groups; how to build trust and value different forms of knowledge; and how to build relationships in a way that values people and unlocks their potential.

The UK Standards for Public Involvement[17] provides a value-based approach to public involvement and engagement and has been shared across researchers in the team. Standards relating to inclusivity and accessibility are especially relevant, as is the focus on plain language communication, clarity on terms of engagement and expected roles and values to follow. Gradinger et al.'s, (2015) framework also provides useful pointers in respect of values: as reflective of three broad value systems drawn from the literature:

16 Pollock, A. et al Development of the ACTIVE framework to describe stakeholder involvement in systematic reviews Journal of Health Services Research & Policy 2019, Vol. 24(4) 245–255.

17 Op cit.

- a value system that focuses on moral, ethical, political concerns - normative values
- a system that focuses on the consequences of public involvement in research, such as validity, relevance, and representativeness – substantive values
- a system that focuses on concerns about the conduct of public involvement in research, such as partnership, trust, and clarity - process values.

The authors argue that making these values explicit can reduce potential tensions, maximise benefits for all involved in public involvement and the research itself.[18]

5.1.3 Knowledge Mobilisation Activities

We envisage a range of activities being used in the PIE.[19]

- One to one interviews with key informants, and those covering sensitive or especially complex issues.
- Standard focus groups for information gathering v workshops with a participatory approach to knowledge sharing, contributing, and debating issues. For example, an evidence presentation/evidence debate sessions.
- Deliberative conversations potentially supported by stimulus material, small surveys, games, or other exercises.
- In WP6 it is envisaged that some exercises will be structured to support 'discovery' and prioritisation sessions, akin to agile working. It may be viable to use polling, or some form of digital engagement.

5.1.4 Evaluation

Knowledge translation in general lack evaluation.[20] Individual evaluation strategies for each WP should be developed to broadly capture:

a. contributions, weaknesses and strengths of approaches, collated through reflective sessions with researchers and participants.
b. perceptions and values attached to the involvement process by research users (potentially through feedback sheets).

These exercises will be carried out at intervals to allow for learning in next steps.[21]

5.1.5 Reporting

We propose using an established reporting guideline for PIE in health and social care research. The model – GRIPP2 - was designed by an expert panel to improve quality and transparency in reporting.[22] The model worked well in reporting PIE in WP2 in which quantitative data and limited demographics on invitees and attendees was collated for two online workshops.

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18 Gradinger, F., Britten, N., Wyatt, K., Froggatt, K., Gibson, A., Jacoby, A., Lobban, F., Mayes, D., Snape, D., Rawcliffe, T. and Popay, J. (2015), Values associated with public involvement in health and social care research: a narrative review. Health Expect, 18: 661-675. https://doi.org/10.1111/hex.12158

A further interesting example: https://genuinepartnerships.co.uk/wp-content/uploads/The-Four-Cornerstones-Approach-to-Co-production.pdf
19 INVOLVE provides a useful resource: Methods | Involve

20 Davies, H. T. O., Powell, A. E., Nutley, S. M. (2015) Mobilising knowledge to improve UK health care: learning from other countries and other sectors– a multimethod mapping study. Health Serv Deliv Res 2015;3(27).

21 Useful resource: Guidance - developing co-pro impact framework

22 see Staniszewska et al GRIPP2 reporting checklists: tools to improve reporting of patient and public involvement in research | The BMJ (2017). This paper contains a short and long summary of headings for reporting.

Annex A

Hospitality

The hospitality industry is a diverse sector, made up businesses spanning coffee shops, pubs, hotels, holiday accommodation and leisure parks. It is the third biggest employers in the UK with over three million workers and makes up 4% of UK GDP. Forty-two percent of consumer spending after 6pm takes place in the hospitality sector, across the bars, restaurants and clubs that make up the night-time economy. It is one of the few sector that employs workers across every constituency in the UK and yet, it is also regarded, globally, as a 'classic bad jobs' sector.[23]

The hospitality sector faces significant institutional and structural challenges, including: the demographics and skills profile of its workers; pay – it is the sector with the highest proportion of jobs that pay below the real Living Wage – conditions; job security; skills development and retention.[24] Low pay disproportionately affects women, ethnic minorities, and disabled and young workers. Alongside low pay and the negative health impacts of night workers, hospitality workers are also at most risk of insecure employment, with its significant use of zero hours contracts.[25] However, the challenges of precariousness in hospitality extend beyond the workforce to the businesses that make up the sector, with high rates of opening and closing of ventures, underline the vulnerabilities inherent within the sector.

Young workers form a substantial portion, of the hospitality workforce, making up half of roles such as waiting and bar staff, which by offering flexible work arrangements, provides a 'vital' gateway to employment for young people. Recent government initiatives, such as the Plan for Change aim to create new workplace opportunities for young people on Universal Credit, alongside reforms in the apprenticeship system, in the hospitality sector.[26]

Mindful of the significant industrial and demographic diversity of the sector we are working with UKHospitality to identify two organisations in which to engage key actors (employer and employee) to trial and iterate frameworks. Outcomes of WP4 will also inform sampling choice.

The Greater Manchester Good Employment Charter (GMGEC)

The Greater Manchester Good Employment Charter (GMGEC) was established to improve job quality in the region as part of the drive for inclusive growth. Similar good or fair work charters have been created for other regions and cities though Greater Manchester is to an extent considered the benchmark (for a full discussion see Dickenson, 2023).[27] The development of a Good Employment Charter for Greater Manchester was first proposed in Andy Burnham's manifesto for the 2017 Greater Manchester mayoral election. Following the election, the Combined Authority chose to include the concept of a charter within the Greater Manchester Strategy Implementation Plan to help deliver the priorities of 'good jobs with opportunities for people to progress and develop' and 'a thriving and productive economy in all parts of Greater

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23 Baum, T., Cardenas Rubio, J., & Congreve, E. (2023). *Work, wages and employment in the UK's hospitality sector*. Warwick Institute for Employment Research, University of Warwick. https://warwick.ac.uk/fac/soc/ier/rewage/news-archive/employment_in_uk_hospitality_-_evidence_paper_-_formatted.pdf

24 National Institute of Economic and Social Research (NIESR)/Fair Work Convention (2023) A qualitative investigation into the experiences of workers in the hospitality sector in Scotland, https://www.fairworkconvention.scot/wp-content/uploads/2023/01/A-qualitative-investigation-intothe-experiences-of-workers-in-the-hospitality-sector-in-Scotland.pdf

25 Living Wage Foundation. (2024). *Living wage in hospitality toolkit.*

26 Department for Work and Pensions. (2025, December 6). *Almost a million young people to benefit from expanded support, new training, and work experience opportunities*. GOV.UK. https://www.gov.uk/government/news/almost-a-million-young-people-to-benefit-from-expanded-support-new-training-and-work-experience-opportunities

27 https://wrap.warwick.ac.uk/179630/

Dickinson, P. Evidence Paper Review of Employment Charters in the English Mayoral Combined Authorities

Manchester'. Leaders saw the importance of involving a variety of different stakeholders in the charter and so a process of co-design was undertaken, involving employers, business groups, trades unions, professional bodies, campaign groups, and academics to understand their aspirations and to create a consensus around the contents of the charter and its definition of good employment across the city region.

The Charter is a membership and assessment scheme, which is open to organisations of any size, in any sector. It is made up of:

- Supporters, of which there are currently 900+ employers, who support the aims of the Charter and Greater Manchester Strategy, but are not yet able to meet the requirements of accreditation.
- Members, – there are currently 150+, who demonstrate excellent practice in key characteristics of "good employment" practice, including: secure work; a Real Living Wage and productive & healthy workplace.

Together these two tiers cover over 700,000+ employees in the region.

All ten GM council and major regional bodies are part of the voluntary accreditation scheme. Manchester Metropolitan University worked with the GMCA to evaluate the employment charter, across a three-year project they examined the impact of the introduction of the charter on participating organisations.[28] The findings paint a generally positive picture of employee satisfaction with the charter characteristics, with those organisations who engage committing to strengthening existing, as well as building new areas of, good practice. Analysis showed that four of the seven charter characteristics were predictive of employee perceptions of what makes up good employment overall. The report outlines how the charter characteristics relate to one another in terms of how employees and managers experience good employment. Alongside the report a Toolkit[29] has been compiled to help support similar initiatives plan and explore each stage.

We will work with the Employment Charter team and regional Public Health Directorate (DPH) to consider both the public health implications of the current Charter and its application in creating healthy 'good' jobs in its region. We will use existing regionally based networks and initiatives to achieve this.

28 Crozier, S. (2022). *Evaluation of the Greater Manchester Good Employment Charter: Phase 2 final report*. Manchester Metropolitan University.

29 Crozier, S. (2022). *Sharing learning in charter development: Toolkit*. Manchester Metropolitan University. https://www.mmu.ac.uk/sites/default/files/2022-10/sharing-learning-in-charter-development-toolkit.pdf

Annex B: Draft action-based model for developing CHJ roadmaps

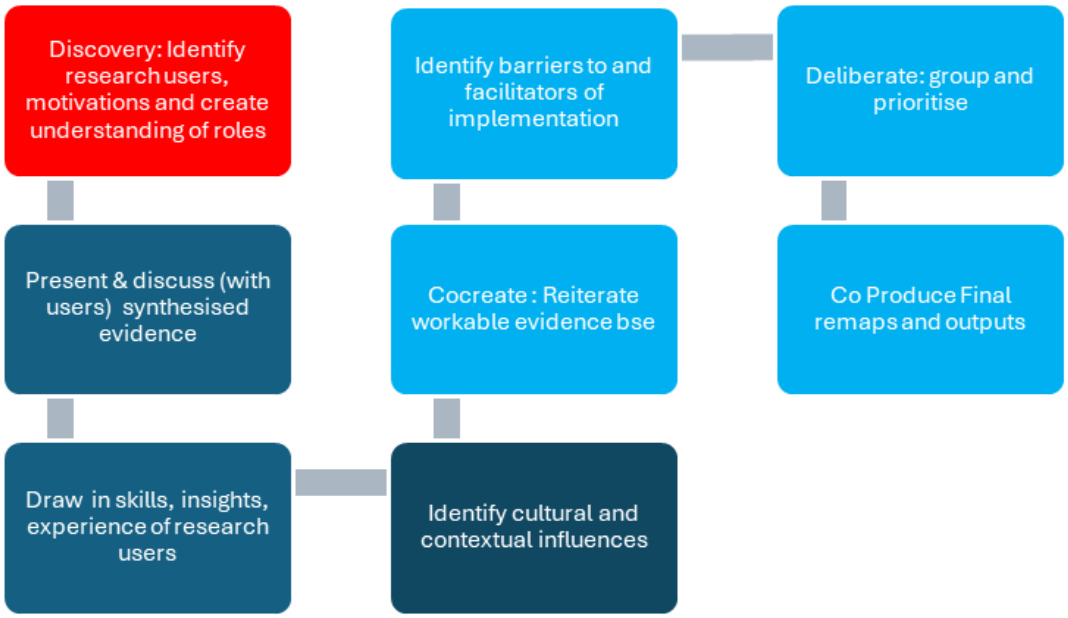

Figure 3 - Action-based process map for developing CHJ roadmaps

The model draws on components of the architecture to set out a plan of action for developing roadmaps which can form the basis of co-creation discussion with the Co-production Group and research users.