







Manchester Metropolitan University: Application of Systemic Engagement principles in the TRiFOCAL project

Who is this case study for?

- Higher Education Institutions and academic audiences seeking to engage with NGOs/projects within their own contexts and subject areas.
- Other sector partners who benefit from collaboration with Higher Education Institutions.
- Academic audiences interested in Systemic Engagement.

ABSTRACT

In this case study, we illustrate how principles of Systemic Engagement (SE) were applied to bring an effective collaboration between researchers from Manchester Metropolitan University and the TRiFOCAL project team. TRIFOCAL was an EU LIFE programme that promoted healthy sustainable eating, recycling of inedible food and prevention of food waste in London. It was organised like collective impact (Kania & Kramer, 2011), with WRAP as the 'backbone' agency.

In establishing cooperation with NGOs, universities may contribute to systems wide partnership that aims to tackle endemic social problems (MaCleod-Grant, 2019; Becker & Smith, 2018, Presidio Institute in Smith & Becker, 2018). In view of the complexity of problems facing UK society, close collaboration involving Higher Education Institutions (HEIs) and all kinds of organisations (working on all types of activities) is more urgently needed than ever before. This case study aims to demonstrate how partnership working may create gateways for mutual learning and achieving set goals.

Background

About TRiFOCAL

The TRiFOCAL (Transforming City Food Habits for LIFE) project started in September 2016 to help tackle London's food waste challenges. London households throw away an estimated 910,000 tonnes of food each year, of which 640,000 tonnes could have been eaten (WRAP 2018a).

Funded by the EU LIFE programme (\in 3.2 million, over 3.5 years), TRIFOCAL aimed to: 1) prevent food waste and; 2) promote recycling of inedible food waste, and; 3) encourage healthy sustainable eating in London via an integrated campaign.

TRiFOCAL's unique integrated approach demanded outreach across sectors and involved organisational complexity. The project governance was led by WRAP in partnership with LWARB (London Waste and Recycling Board) and Groundwork London. The delivery activity included working with 15 London boroughs¹ across 4 delivery waves and engagement with citizens, businesses, schools, community groups and influencers across London.

About Manchester Metropolitan University (MMU)

The Manchester Metropolitan University Business School (MMUBS) has a research and teaching specialty in entrepreneurship, and significant UK and international experience in systems theory and operational research projects. The University was a recipient of national and international green impact awards for 'MetMUnch'; a student-led enterprise supporting healthy food choices and

¹ Bexley, Brent, City of London, Croydon, Hackney, Hounslow, Islington, Kingston, Lambeth, Lewisham, Merton, Richmond, Southwark, Sutton and Tower Hamlets







sustainable living. MMU also has a Waste to Resource Innovation Network (W2RIN) which works closely with local and regional partners to promote circular economy.

In practical terms, the University was a viable academic partner because of previous links with WRAP. As far back as 2013/14, the University had participated in WRAP's *Love Food Hate Waste* Manchester campaign. By 2017, MMU was five years into its Green Education Declaration (subsequently, gaining 1st place in the UK People and Planet University League for its Green credentials). Around that time, the University's Centre for Enterprise was also liaising with WRAP about a specialty tool for restaurant food waste measurement. The tool was created by MMU researchers, working in an academic/private sector collaboration with Robinson's Breweries².

Rationale & initiating the academic partnership

In February 2017, Manchester Metropolitan University began its TRiFOCAL journey. The cooperation started after a scoping exercise for a doctoral study at MMUBS. This PhD. research was about how cross sector collaboration might enable food SMEs to address food waste, through circular business efforts. According to WRAP (2018b), 75% of wasted food in the hospitality and food services (HaFs) sector, could have been eaten. Therefore, this qualitative study targeted HaFs and adopted a systemic focus.

TRiFOCAL was highlighted to MMU because of its integrated approach and commitment to tackling food waste, across all three messaging areas. Here was a classic case for systemic thinking around the challenges of food waste, healthy eating and achieving behavioural change.

Additionally, TRiFOCAL was conducive to an MMU alliance, based on some aspects of engaged scholarship (Van de Ven, 2007; NCCPE, 2017). TRiFOCAL aimed to engage with food service businesses, large employers, food safety professionals and business influencers, to cascade the messaging to other businesses. It was fair to assume that there were many HaFs among these enterprise groups, representing the SME sub-sector.

In choosing to collaborate with TRiFOCAL, MMU was responding to the call to promote utilising waste as a resource, through institutional and other collaboration (Kraaijenhagen, van Oppen & Bocken, 2016; Camilleri, 2018). The relationship between MMU and TRiFOCAL and other projects and initiatives operating in the food waste sphere in 2017 is visually represented in the systems flowchart Figure 1.

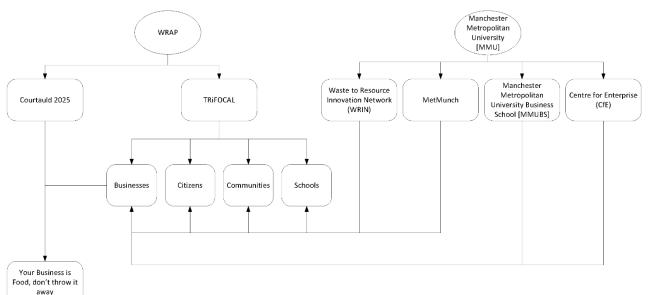


Figure 1: Systems flowchart depicting connections between TRiFOCAL and MMU (2017)

² This project with Robinsons was entitled: *"Making pub retailing greener: A university / private sector partnership to build and share research"*. It was funded by the Economic and Social Research Council (ESRC) 2015 – 2016. Award number ES/M006255/1 <u>https://gtr.ukri.org/projects?ref=ES%2FM006255%2F1</u>







Application of Systemic Engagement to TRiFOCAL

TRiFOCAL was a good opportunity for PhD. case study research about promoting circular business principles through institutional collaboration.

Systemic Thinking was already at the heart of TRiFOCAL's engagement with partner agencies and communities and its aim for collective impact, as opposed to the 'isolated-impact approach' (Kania & Kramer, 2011). According to McNall et. al. (2015:2), the project presents a valid context for applying Systemic Engagement, which is defined as '...involving universities as partners in systemic approaches to social problem solving'. Systemic Engagement comprises 6 principles outlined below. Although these were not deliberately itemized from the start of the MMU/TRiFOCAL collaboration, it is worth noting that a distinctive Systemic Engagement code could still be recognised as the relationship unfolded.

1. Systems Thinking, the first principle, is a theme running through the entire TRiFOCAL project. From an organisational standpoint, this is translated into an inclusive style which endorsed MMU's involvement. Notably, although TRiFOCAL was a place-based initiative (McNall et. al., 2015:7) delivering in London, this did not preclude involving a Manchester-based university in the project.

2. Collaborative inquiry was reflected in the wide boundaries and scope of TRiFOCAL. This led to people connections because of a flexible, participatory work style. McNall et al. (2015:3) would posit that this embraces the fact that '. . .complex problems rarely (if ever) arise from the action of a single isolated cause'. The logic here is that in seeking to deal with contemporary problems, there must also be some participatory role for universities (such as MMU). TRiFOCAL was delivered in a range of business and community settings. These included the kitchens and restaurants of participating HaFS. Overall, this allowed business and other community stakeholders to take part in various phases of the project, to help redefine issues and ultimately, to learn from working together.

3. Support for ongoing learning. This is demonstrated in the space given to the PhD. project coming on board in the first place. Commitment to ongoing learning was demonstrated in the interaction between the TRiFOCAL team's own learning and, the testimony of other project partners, including MMU.

4. Emergent design was reflected in the iterative style of TRiFOCAL's action research approach. Emergent design was also reinforced in an initial broad start and adjustments in the layout of the PhD project. This required some shifting and re-alignment of research methods and their sequencing (i.e. participant observation, interviews, focus groups, interviews). This was necessary simply because working alongside TRiFOCAL was a journey of discovery and change for all parties due to the project's 'test and learn' approach.

5. Multiple strands of inquiry and action. TRIFOCAL's engagement was not limited to Higher Education. It was also a child-friendly project, boasting input from many primary school pupils across London and the development of a TRiFOCAL education pack³. The project itself utilised 'test and learn' techniques and delivery featured extensive use of social media platforms, face to face/events, and a multi-method evaluation approach spanning focus groups, surveys, video interviews and waste composition analysis.

6. Trans-disciplinarity. This scenario is explained by McNall et. al.(2015:6) as involving '[...] researchers working jointly on a common problem using a shared conceptual framework that draws from multiple disciplines. Applied to TRIFOCAL, the project's Business Working Groups (BWGs) and other fora provided opportunities for MMU personnel to meet individuals from a range of disciplines. These included: environmental health, management (food, tourism and hospitality) and community development. In every instance, trans-diciplinarity was maintained through the focus on three core messages – recycling inedible food, food waste prevention and healthy sustainable eating – within the conceptual framework of collective impact.

³ <u>http://resources.trifocal.eu.com/resources/education-packs/</u>

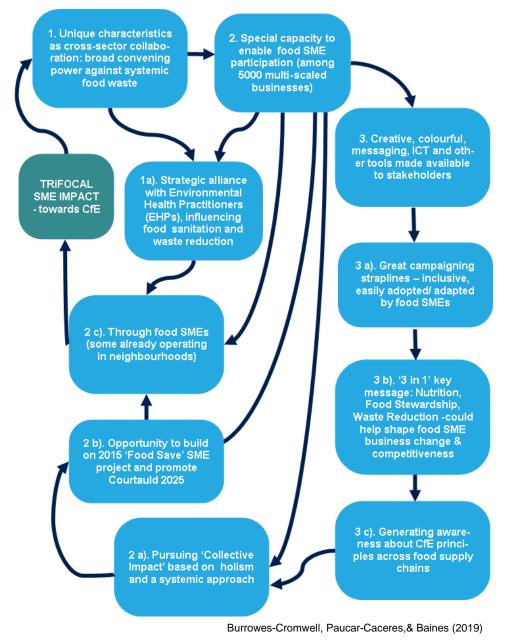






How has MMU added value as an academic partner?

By using systems thinking, MMU complemented the delivery approach being employed in TRiFOCAL, highlighting a 'vital thread' and relating theory to practice. The multiple agency arrangement of the project's governance and stakeholder engagement entailed widespread involvement of many community organizations, agencies and London businesses. MMU identified the relational features of Systemic thinking conducive to food SME and community partnership, against food waste and, how these were all employed in TRiFOCAL (Figure 2).



Storyboard adaptation from Thomas (2016)

Figure 2: Storyboard: TRiFOCAL cross sector support for food SME participation, towards a circular food economy (CfE)

MMUBS offered an independent perspective and a constant presence throughout the project, with regular check-in points as the project progressed in its 'test and learn' approach. MMU supported the strategic direction of the business engagement work package, encouraging the delivery team to reflect, take stock of progress, achievements and learnings, and re- align delivery plans with systemic thinking, essentially '...sound-checking with an academic partner.' MMU's input







enhanced the approaches taken by the delivery team. Further details of the business engagement approach are detailed in a separate case study⁴.

How has TRiFOCAL added value as a partner to MMU?

TRiFOCAL provided space for doctoral researcher participation and learning, involving a wide grouping of HaFS and other participants. In real terms, the project opened access to owner managers, chefs and kitchen staff, corporate and other food enterprises, as well as potential key enablers for circular food business (such as environmental health officials). TRiFOCAL invited knowledge sharing via its iterative approach and its deep engagement via the 'business working groups' and community level groups and organisations. It helped to highlight interrelationships which could be subsequently explored by MMU faculty, particularly through the University's Waste to Resource Innovation Network (W2RIN).

As with other HE providers, internal institutional learning (Celep, Brenner & Mosher-Williams, 2016) is important for MMU. The TRiFOCAL/MMU cooperation fitted the profile of collaborative leadership for green impact. In this case, supporting development of HE pedagogy for sustainable living and business (Müller-Christ et. al., 2013; Sales de Aguiar & Paterson, 2017).

Additionally, TRiFOCAL's workshops were delivered in non-formal learning settings. This approach to instructional design could help MMU to bridge any gaps between actual student learning and its formal education for sustainable development (ESD) programme. Nunes et al., 2018 describe such gaps as the 'hidden curriculum'. TRiFOCAL's approach could be a helpful strategy for promoting carbon friendly living among students and the wider Manchester community, supported by WRAP's 'Guardians of Grub' national campaign. Many examples of non-formal learning are already being conducted through the creative (but practical) approach of the University's MetMUnch team⁵.

Challenges

In view of the above, an agreed protocol/ Memorandum of Understanding (MoU) between the University and TRiFOCAL/WRAP was necessary. This was the first such agreement between an EU-funded project at WRAP and an independent academic partner. Legal partnerships between Higher Education Institutions and NGOs typically take time to be finalised and this case was no different as the MoU negotiations were time consuming to complete. There are internal organisational learnings to be drawn from this experience.

TRiFOCAL was an ambitious project with wide institutional span and inevitable complications. Navigating through this vast project was challenging, particularly since MMU joined a project that was already in motion. Mapping exercises were therefore crucial – especially during early stage engagement – and these helped to outline TRiFOCAL'S systemic features. This also allowed refining of the PhD research questions, revisiting design and methodological elements.

Project partners were informed of MMU's input during business working groups and periodically through the project's quarterly electronic newsletter. These provided channels for MMU to inform businesses and other project partners about research activities (interviews, etc.). However, this had to be administered in a way that fully complied with data protection requirements and MMU's ethical research framework.

Higher Education Institutions and NGO engagement

PhD. projects may be a gateway for universities to deepen their own faculty engagement and interagency cooperation. Concurrently to this project, MMU's researchers were also participating in the University's cross-faculty network for promoting waste to resource practice. Additionally, working linkages were made with MMU's Research and Knowledge Exchange (RKE) department.

Sharing expectations, ensuring conscientious supervision and appropriate institutional support was a critical combination. This supported effective cooperation with the WRAP/TRiFOCAL team

⁴ <u>http://resources.trifocal.eu.com/resources/case-study-trifocal-business-approach/</u>

⁵ https://metmunch.com/blog/







and other external partners. It also confirmed that Institutional trust and open access can work together. However, with complex cross-sector projects like TRiFOCAL, ultimately, individuals help to ensure this agility.

In terms of systemic thinking methods, mapping enhanced much of the above processes. This technique helped to outline boundaries (real or perceived) and to define interrelationships. This is because mapping identifies who is on board with a vision, and any related functions or activities. In short, mapping exercises may uncover the added value of partnership.

Tips

- Working across sectors may be enhanced by creative tools and platforms. These could be physical or virtual but should be configured to match the operational profiles of partners and participants.
- Don't be afraid to revisit original project concepts and to share perceptions about outcomes. These could help to feed project life in unexpected ways.
- Partnerships between academia and NGOs/industry inevitably require appropriate agreement frameworks and MoU templates
- In terms of project implementation, genuine openness to engage really matters. This may draw others in and confirm the authenticity of project outreach activities.

Conclusions

During the life of the TRiFOCAL project, an openness to re-think premises and engage with theoretical concepts enabled mutual learning and exchange. Re-assessment of work plans and objectives helped in delivering the TRiFOCAL programme.

We believe that our partnership provided a platform for applying Systemic Engagement and represented a fruitful cooperation. Arguably, this case study (and a second which details the business engagement approach⁶) testifies the benefits of the collaboration.

It is worth noting that TRiFOCAL's London focus did not rule out a similar vision for Manchester. Rather, it has helped to embed MMU's commitment to waste to resource efforts (through wider community engagement) in this UK 'second city'. Thus, the TRiFOCAL/MMU collaboration demonstrated that universities should not be 'ivory towers', out of touch with everyday challenges (Ackroyd & Karlsson in Edwards, O' Mahoney & Vincent, 2014, Autio, Medkova & Cura, 2017).

What's next?

- MMU discusses potential opportunities with WRAP and partners, to jointly develop works or projects that further the objectives of TRiFOCAL This would take place beyond the life of the project and based on systemic thinking. It could draw from the suite of systemic methodologies and be informed by related MMU studies (Abuabara et. al., 2017; Abuabara, Paucar-Caceres & Burrowes-Cromwell; 2019)
- Publication of the TRiFOCAL <u>summary report</u> which describes the project experience, its outputs, project resources and the <u>legacy plan</u>.

⁶ <u>http://resources.trifocal.eu.com/resources/case-study-trifocal-business-approach/</u>







References

Abuabara, L., Paucar-Caceres, A., Belderrain, M.C.N., & Burrowes-Cromwell, T. (2018). 'A systemic framework based on Soft OR approaches to support teamwork strategy: An aviation manufacturer Brazilian company case'. JORS, 69 (2), 220-234.

Abuabara, L., Paucar-Caceres, A., & Burrowes-Cromwell, T. (2019). 'Consumers' values and behaviour in the Brazilian coffee-in-capsules market: promoting circular economy'. International Journal of Production Research, 57 (23), 7269-7288.

Ackrovd, S., & Karlsson, J.Ch. (2014). 'Critical Realism, Research Techniques, and Research Design' in Edwards, P.K., O'Mahoney, J. & Vincent, S., (ed.) Studying Organizations Using Critical Realism: A Practical Guide. Oxford: Oxford University Press, 21-46.

Autio, S., Medkova, K., & Cura, K. (2017). 'Students are Learning Circular Economy with Companies in the Reiska Project'. Finland: Lahti University of Applied Sciences and Lappeenranta University of Technology with the support of the European Regional Development Fund. Available at:

https://www.academia.edu/17093415/Students Are Learning Circular Economy with Compani es_in_the_REISKA_Project?auto_download=true&email_work_card=view-paper

Baltrušaitis, D. (2015). What about Circular Economy?: Benefits, Challenges and Reasoning to Implement Circular Economy within European Context'. 51st ISOCARP Congress, 2015. Rotterdam, Netherlands. 19th-23rd October, 2015. Available at: https://www.academia.edu/27792604/What about circular economy

Bhaskar, R. (1978). A Realist Theory of Science (2nd edn). Hassocks: Harvester.

Bhaskar, R. (2014). 'Foreword' in Edwards, P.K., O'Mahoney, J. & Vincent, S., (ed.) Studying Organizations Using Critical Realism: A Practical Guide. Oxford: Oxford University Press, v-xv.

Becker, J., & Smith, D.B. (2018). 'The Need for Cross-Sector Collaboration'. Stanford Social Innovation Review, (Winter), 1-3, Available at: https://ssir.org/articles/entry/the need for cross sector collaboration.

Camilleri, M.A (2018). 'Closing the Loop for Resource Efficiency, Sustainable Consumption and Production: A Critical Review of the Circular Economy'. International Journal of Sustainable Development, [Pre-print], Available at:

https://www.um.edu.mt/library/oar/handle/123456789/26757

Celep, A., Brenner, S., & Mosher-Williams, R. (2016). 'Internal Culture External Impact: How a Change-Making Culture Positions Foundations to Achieve Transformational Change'. The Foundation Review, 8 (1). Available at: https://scholarworks.gvsu.edu/tfr/vol8/iss1/12/

Crow, M. (2014). 'What is the role of universities in global development?', World Bank Blogs, Education for Global Development, 10th February 2014. Available at: https://blogs.worldbank.org/education/what-role-universities-global-development

Geissdoerfer, M., Savaget, P., Bocken, N., & Hultink, E. (2017). 'The Circular Economy – A new sustainability paradigm?'. Journal of Cleaner Production, 143 (1), 757-768. Available at: https://www.repository.cam.ac.uk/handle/1810/261957

Green, E. (20 November 2019). 'MetMUnch-Beyond Graduation'. Blog MetMUnch. 7 December 2018. Available at: https://metmunch.com/blog/.

Kalmykova, Y., Sadagopan, M., & Rosado, L. (2018). 'Circular economy - From review of theories and practices to development of implementation tools' Resources, Conservation and Recycling, 135, 190-201.

Kania, J., & Kramer, M. (2011). 'Collective Impact'. Stanford Social Innovation Review 9 (1), (Winter), 36-41. Available at: https://www.hbs.edu/faculty/Pages/item.aspx?num=51823

Kraaijenhagen, C., van Oppen, C., & Bocken, N., (2016). Circular Business: Collaborate and Circulate. The Netherlands: Circular Collaboration.





Lewandowski, M. (2016). Designing the Business Models for Circular Economy—Towards the Conceptual Framework. *Sustainability*, 8(1),43.

MaCleod-Grant, H., & Cortés Culwell. A. (2019). 'Making Better Big Bets'. Stanford Social Innovation Review, (Winter), 21-23. Available at: https://ssir.org/articles/entry/making better big bets

McAvoy, J., & Butler, T. (2018). 'A Critical Realist Method for Applied Business Research'. *Journal of Critical Realism*, 17 (2), 160-175.

McNall, M.A., Barnes-Najor, J.V., Brown, R.E., Doberneck, D., & Fitzgerald, H.E.(2015). 'Systemic Engagement: Universities as Partners in Systemic Approaches to Community Change'. *Journal of Higher Education Outreach and Engagement, 19, (1).*

Mingers, J. (2015). Systems Thinking, Critical Realism and Philosophy: A confluence of ideas. London & New York: Routledge.

Müller-Christ, G., Sterling, S., Dam-Mieras, R.V., & Adomβent, M. (2013). 'The Role of Campus, Curriculum, and Community in Higher Education for Sustainable Development – a Conference Report'. Journal of Cleaner Production. 62(1),134–137. Available at: <u>https://www.researchgate.net/publication/313558276_The_role_of_campus_curriculum_and_community_in_higher_education_for_sustainable_development_-Conference_report</u>

National Coordinating Centre for Public Engagement. (2017). Annual Conference *Engage 2017: Exploring Collaboration.* Bristol. Thursday, Dec. 2017. Available at: https://www.publicengagement.ac.uk/whats-new/events/engage-2017-exploring-collaboration

Nunes, B.T., Pollard, S.J.T., Burgess, P.J., Ellis, G., De los Rios, I.C., & Charnley, F. (2018). 'University Contributions to the Circular Economy: Professing the Hidden Curriculum'. *Sustainability*, 10 (*8*), 2719.

Sales de Aguiar, T.R., & & Paterson, A.S. (2017). 'Sustainability on Campus: Knowledge Creation through Social and Environmental Reporting'. Available at: https://pureapps2.hw.ac.uk/ws/portalfiles/portal/15120474/Revised 150117 AP.pdf

Smith, D.B., & Becker, J. (2018). 'The Essential Skills of Cross Sector Leadership'. The Stanford Social Innovation Review, (Winter 2018), 4-6. Available at: https://ssir.org/articles/entry/the_essential_skills_of_cross_sector_leadership#

Urbinati A, Chiaroni D, Chiesa V. (2017). 'Towards a new taxonomy of circular economy business models'. *Journal of Cleaner Production.* 168, 487-498.

UK Research and Innovation (2016). *Making pub retailing greener: A university / private sector partnership to build and share research*. Available at: https://gtr.ukri.org/projects?ref=ES%2FM006255%2F1

Van de Ven, A.H. (2007). *Engaged Scholarship: A Guide for Organizational & Social Research.* Oxford: Oxford University Press.

Webster, K. (2015). *The Circular Economy: A Wealth of Flows.* Cowes, Isle of Wight: Ellen MacArthur Foundation Publishing.

WRAP (2018a) *Household food waste: restated data for 2007-2015.* Available at: <u>http://www.wrap.org.uk/sites/files/wrap/Household%20food%20waste%20restated%20data%202</u> 007-2015%20FINAL.pdf Note: London figures are based on calculations from national food waste figures

WRAP (2018b) *Courtauld Commitment 2025 food waste baseline for 2015.* Available at: <u>http://www.wrap.org.uk/sites/files/wrap/Courtauld%20Commitment%202025%20-</u>%20baseline%20report%20for%202015.pdf.