



# DEFINING AND DESIGNING RURAL MOBILITY AS A SERVICE (RMaaS)

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# About SRITC

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Established in 2017 and incorporated as a Community Interest Company (CIC) in 2021, SRITC has over 600 members in 19 countries. Our mission is to create a space to share insights, collaborate, and support our members in addressing their rural and island transport challenges.

We connect and support stakeholders from individuals to national bodies, shaping rural and island transport policy by contributing to Scottish Government consultations and Parliamentary committees.

Since 2020, SRITC has been exploring demand from across Scotland's rural and island communities for a RIMP and how it would align with the Scottish Government's commitment to publish a Rural Delivery Plan in 2026. The exploration process has taken place in a variety of environments, including workshops that we've facilitated as part of our Annual Gathering and the Scottish Rural & Islands Parliament, transport conferences, and less formally through our monthly Virtual Cafe.

Hundreds of stakeholders representing all shapes and sizes of organisations from across the private, public, academic, and third sectors have shared insights that have contributed to validating demand for a RIMP, and specifying what it should prioritise.

This workshop, which took place on June 6, 2024, at the MaaS Scotland Conference in Glasgow, aimed to assist a range of stakeholders from the private, public, and community sectors in defining and designing Rural Mobility as a Service (RMaaS).



# 1. Workshop design

The workshop is rooted in the Thrive Rural Framework published 2022 by the Aspen Institute in the United States of America <sup>1</sup>. It was adapted for a Scottish context using input from over 500 practitioners at the 2023 Scottish Rural and Island Parliament.

The 'Last Dance Framework' (Figure 1), as it has come to be known in Scotland, is a tool for applying a rural lens approach to policy and service design. A rural lens approach recognises that policies and services tend to be designed with an urban bias and, accordingly, seeks to ensure geographic parity in desired outcomes across the diversity of urban, rural, and island places.

Rather than identifying 'what' rural areas need, e.g. more housing or better transport, the Framework focuses on the 'how' of delivery, using the language of community development to provide menus of delivery drivers at three different levels – community/place, policy/fiscal/legislative and institutional/systemic.

Practitioners may use the Framework to identify assets, resources, and mechanisms that can underpin successful policy or service delivery in rural and island contexts. It can be adapted to different thematics, from childcare services and wastewater management to the roll-out of smart metres or the delivery of RMaaS.

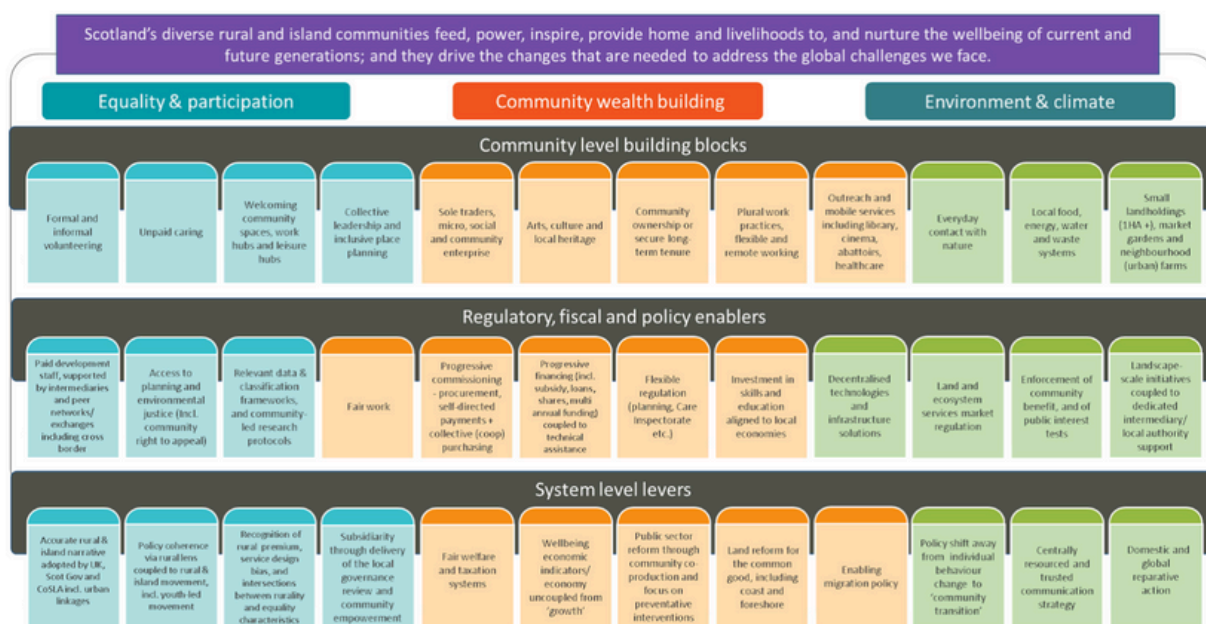



Figure 1: The Last Dance Framework (sourced from: Scottish Rural Action ) (see the full size image in Appendix A)

## 2. Workshop aims

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This workshop was designed to:

- 1 Challenge participants to view MaaS through a rural lens;
- 2 Help define the processes and outcomes of RMaaS;
- 3 Enable participants, through design thinking principles and co-creation, to adapt the Last Dance Framework as a tool for designing, implementing and evaluating RMaaS.

# 3. Workshop outputs

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A separate paper on the workshop methodology is available on request from the Scottish Rural & Islands Transport Community or Scottish Rural Action. Workshop outputs are provided below:

## 3.1 Defining the processes and outcomes of RMaaS

MaaS is generally defined as integrating various transport and transport-related services into a single, comprehensive, and on-demand mobility service. MaaS is technology-enabled, relying on bespoke applications and digital platforms that act as virtual hubs or one-stop-shops for everything from journey planning (including EV charging) to booking, ticketing, payments and feedback. MaaS platforms are generally designed around the building blocks of public transport modes available in a given place – buses, trains, underground, etc. They rely on their ability to tap into large user markets to secure buy-in from transport providers. They do not usually encompass parcels and freight.

While the purpose of MaaS is to increase public transport uptake and make journey planning and execution easier, its desired outcomes are mainly linked to sustainability, for example, the reduction of car use (hire-car use for tourists) linked to a reduction in emissions and congestion. Less touted are outcomes linked to equality and accessibility, for example, making journey planning and execution easier for disabled people to navigate. Or making cheaper transport options available for households who might struggle with the running costs associated with car ownership. Even less touted are outcomes linked to service or network improvements. MaaS platforms are designed based on complex data, including predicted behaviours, but they also generate data, and this data can contribute to continuous improvement in mobility offerings for different consumer groups.

Defining the process and outcomes of RMaaS is problematic, however, because in rural places, the building blocks of different public transport modes are not available as an integrated hyperlocal network in the same way that they are available in a city, and the user market is much smaller. This means that the processes of RMaaS have to be revisited, including its financial model, along with the outcomes of RMaaS in a context where many households have to rely on car ownership and use.

Discussion on the Last Dance Framework offers some insights, with the first step being to identify potential drivers of MaaS processes in the absence of large markets and dense public transport networks (Figure 2):



Figure 2: Community level delivery drivers identified as relevant to RMaaS (see the full size image in Appendix B)

DRIVER	MAAS PROCESS IMPLICATIONS
Formal and informal volunteering	Factor in volunteer-led car-centric initiatives such as informal lift shares, informal delivery services, and formal arrangements such as car clubs and community transport services.
Welcoming community spaces, work hubs and leisure hubs	Design MaaS around destinations rather than public transport modes, answering how you connect people to community/social spaces and services and ensuring that opportunities to build on some of these spaces as 'mobility hubs' are considered. This may lead to the consideration of RMaaS in relation to both people and parcels/freight. It may also lead to the consideration of RMaaS integration with other services, for example, online village hall booking systems.
Collective leadership and inclusive place planning	Co-design MaaS with communities rather than individuals or consumer groups, the latter being the industry norm.
Community ownership and secure long-term tenure	Develop MaaS as a community-led platform, building on learning from existing platforms like community social media pages or websites and looking at models of community ownership that may help address the unviability of the current MaaS financial model.
Plural work practices, flexible and remote working	Recognise employment patterns in rural and island places that may be different to urban and peri-urban commuter migration.
Outreach and mobile services, including library, cinema and healthcare	Recognise the need to move services to people, not just people to services.
Local food, energy, water and waste systems	Sustain hyperlocal and circular economies, population and resource movements, challenging the tendency to connect small villages to towns or cities, rather than with each other.

The market and policy-driven reliance on car use in rural areas sets parameters for RMaaS outcomes. RMaaS can only, realistically expect to make a significant dent in car ownership and use with comprehensive parallel investment in rural and island public transport infrastructure and services. Yet, it has the potential to contribute to a range of outcomes:

<p>Equality and Participation</p>	<p>Improved rural connectivity, especially at the hyperlocal level, with knock-on positive outcomes for well-being and social cohesion; Improved access to mobility services for specific groups, for example, disabled people, people on low incomes or tourists.</p>
<p>Community Wealth Building</p>	<p>Improved rural connectivity, especially at the hyperlocal level, with knock-on positive outcomes for the local economy and access to education; Improved financial viability of community-owned enterprises such as car clubs, village halls and mobility hubs by offering technology-enabled approaches to increasing customers and efficiencies.</p>
<p>Environment and Climate</p>	<p>Improved understanding (data) on rural mobility opportunities and behaviours, which may contribute to the design of better services (MaaS as a data tool to understand readiness and gaps) (long-term) Reduction in car ownership and use, including through the promotion of volunteer-led car-centric initiatives.</p>

### 3.2 Designing RMaaS (A): Mapping places, not modes

The Framework guides what RMaaS practitioners should map at the community/place level in rural and island areas to inform the design process:

- Formal and informal volunteering: mapping, for example, community transport options, car clubs, lift sharing, informal delivery (e.g. prescription) services and how they are coordinated (e.g. social media platforms);
- Welcoming community spaces etc: mapping destinations such as schools, village halls, health centres, shops, places of work or places of worship;
- Collective leadership and inclusive place planning: mapping community bodies which may be contracted to shape and facilitate consultation and product testing;



- Community ownership or secure long-term tenure: Mapping community ownership dynamics may open different avenues for futureproofing the MaaS platform's sustainability and relevance;
- Plural work practices etc: mapping place-specific population movements. Workshop participants noted it was necessary, when mapping RMaaS, to take into account the tourism industry both in terms of seasonal worker and visitor impacts, as well as other sectors, like agriculture, that rely on seasonal workforces;
- Outreach and mobile services: for example, mobile library, leisure and healthcare services;
- Local food, energy etc systems: mapping circular economies and the role of transport in underpinning these.

These mapping considerations sit in addition to the business-as-usual mapping of:

- populations statistics;
- transport modes and providers;
- safe and accessible pathways for pedestrians and cyclists alongside motorised transport options and;
- infrastructure such as shelters, stations, lighting, etc.

### 3.3 Designing RMaaS (Part B) Identifying policy, fiscal and regulatory drivers

The Framework provides guidance on identifying policy, fiscal and regulatory drivers of RMaaS (Figure 3):

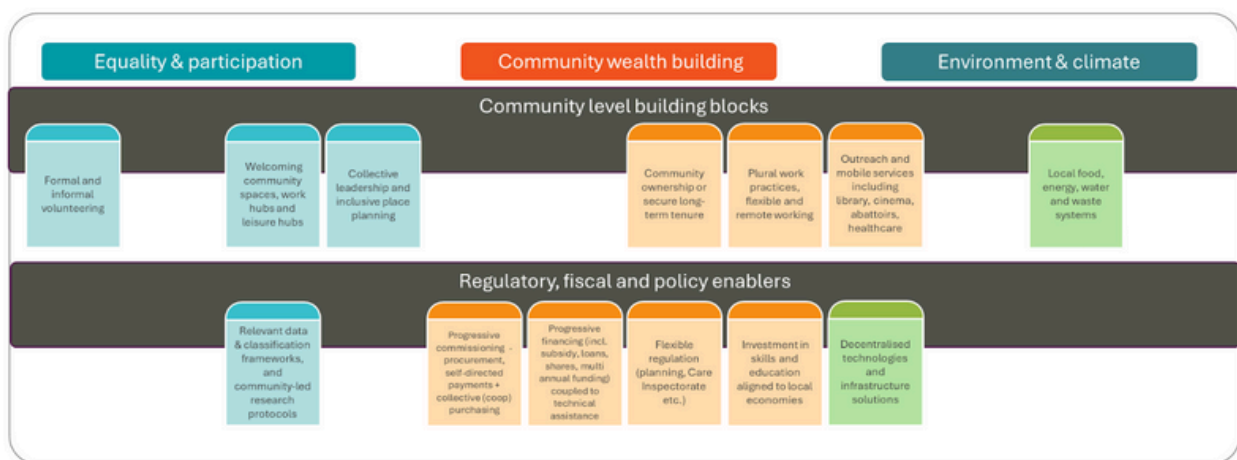


Figure 3: Regulatory, fiscal and policy drivers identified as relevant to RMaaS (see the full size image in Appendix C)

DRIVER	MAAS PROCESS IMPLICATIONS
Relevant data & classification frameworks and community-led research protocols	Over and above the data sharing protocols MaaS requires transport operators to adopt, it is also essential to harvest data that accurately describe rural and island areas, for example: Demographics: participants highlighted the need to pay attention to rural demographics as the needs of rural communities were more diverse than those of urban communities with a concentration of amenities. Deprivation Statistics: participants wanted to highlight that deprivation did not just occur in urban environments but that rural communities suffered from poverty and that the impact of transport deserts disproportionately affected these groups. The inclusion of community-led research protocols acknowledges the need to ground truth data and draw on community expertise rather than just high-level data frameworks and academic discourse. This is particularly relevant for MaaS, where the disconnect between transport data, e.g. whether a service is used, and the lived reality, i.e. why it is not used, is critical to unpick.
Progressive commissioning and procurement	Contract rural and island expertise in the design and delivery process of MaaS. In this context, 'Rural and island expertise' is likely to include micro businesses and sole traders, so procurement practice needs to enable small entities.
Progressive financing	RMaaS is unlikely to be financially viable as a profit-making enterprise model, and its contributions to three outcome areas—equality/participation, community wealth building, and environment/climate—must be quantified and recognised. This area of progressive financing also covers the following: Importance of enabling insurance: including the impact of unsustainable insurance on car club schemes. The importance of multi-year funding and willingness to invest in innovative ideas. An assessment of where investment opportunities exist that will support RMaaS because it is part of sector or network resilience, e.g., using visitor taxation (visitor levies) to fund RMaaS links back to increased positive visitor outcomes and increased local capacity for sustainable tourism.
Flexible regulation	Regulation must be flexible to the opportunities and constraints in rural and island places, e.g., legal considerations for e-scooters, active travel policies, and regulations preventing combined carriage of people and parcels.
Investment in skills and education aligned with local economies	Ensure MaaS skills development (STEM, programming, product design) is accessible to rural and island populations and that rural tech enterprises that can support RMaaS receive equitable levels of investment and business development assistance as enterprises in urban places. It is equally important to invest in tackling digital exclusion.
Decentralised technologies	Without universal fit-for-purpose digital and mobile coverage, recognise the importance of decentralised networks and alternative technologies that do not rely on standard infrastructure.

### 3.4 Designing RMaaS (Part C) The need for system-level change

Because of the complex policy and institutional framework that shapes transport, mobility, and connectivity services, including MaaS, it is important to interrogate what system-level changes would be helpful to secure the outcomes RMaaS seeks. "System-level" looks at the way that governments and economies are organised, so the drivers would require significant realignment of strategic narratives and resources.

While the Framework offers guidance on what those drivers might be, workshop participants immediately identified one driver that the original Framework does not include. This is noted in purple in Figure 4 below and covers enshrining access to mobility as a human right in legislation.

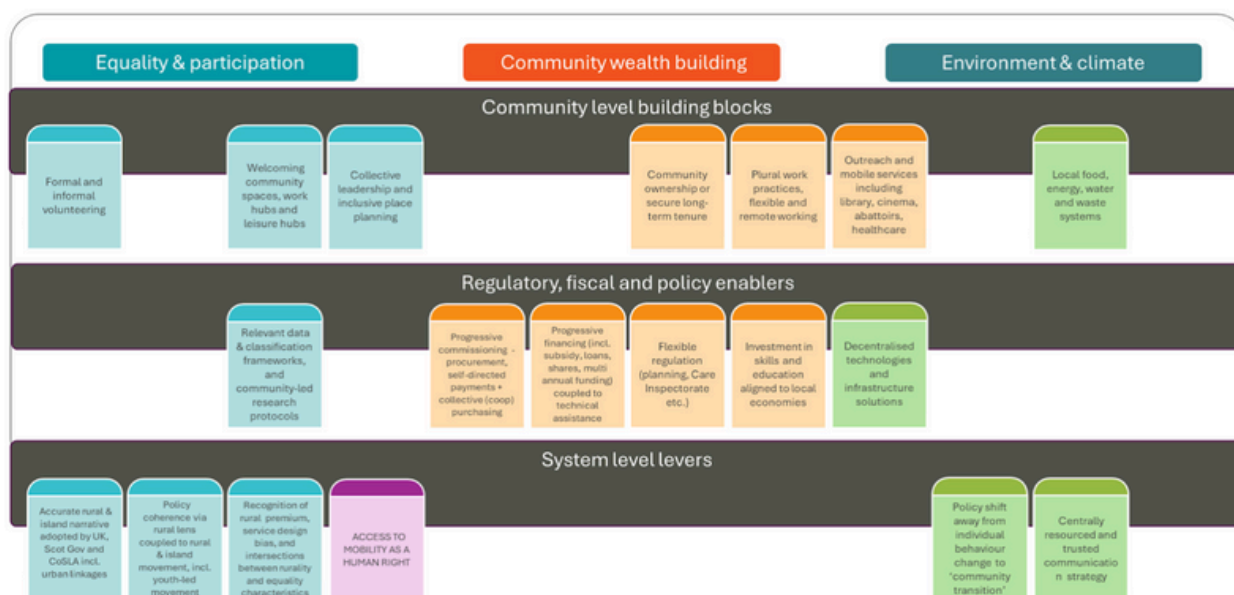


Figure 4: System level drivers identified as relevant to RMaaS (see the full size image in Appendix D)

DRIVER	MAAS PROCESS IMPLICATIONS
Accurate rural & islands narrative adopted by UK, Scot Gov and CoSLA including urban linkages	This driver encompasses more than the accurate data collection driver noted as a policy lever in the previous section. It requires a shared understanding of rurality across different tiers of government, noting, for example, that the Scottish and UK Governments do not have the same definition of 'rural'. Further, given the reserved nature of certain regulation and investment programmes, it also requires collaboration between governments at different tiers to maximise transport, connectivity, and mobility strategies in rural areas.
Policy coherence via rural lens coupled to rural & island movement	RMaaS is unlikely to achieve desired outcomes without a rural lens applied to linked policy areas such as broadband roll-out, workforce development, and public transport. Accordingly, this driver requires the government to adopt a rural lens approach across all policies that impact mobility, not just RMaaS. It also requires the government to involve rural stakeholders (the rural movement) in the design and governance of that policy.
Recognition of rural premium, service design bias and intersections between rurality and equality characteristics	RMaaS and mobility services, in general, must be designed, recognising that services are, in many cases, more expensive in rural areas and that consumers with equality characteristics will face additional logistical and social barriers to accessing services because of living in a rural or island area.
Access to mobility as a human right	Access to mobility underpins education, employment, healthcare, and social inclusion. Enshrining in legislation a "right to access mobility" rather than just a "right to mobility" puts a responsibility on planners to ensure equity in access to transport and connectivity opportunities across geographic communities and interest groups. Such legislation would underpin the RMaaS outcomes.
Policy shift away from individual behaviour change to community transition	Government climate policy is framed around individual behaviour change – asking people to travel less or in different ways, to decarbonise their homes or businesses, etc. A balanced shift to investing in whole-community transition would contribute to efficiencies, such as supporting street-by-street coordinated retrofit. It would also ensure those hardest to reach, including rural people, are not left behind. For RMaaS, such a policy shift would help underpin community-wide initiatives such as car clubs and lift shares.
Centrally resourced and trusted communications strategy	While this driver is strategic and highlights the need for the government to adopt a communication strategy similar to the COVID-19 pandemic to support social changes needed to mitigate or address the climate and biodiversity crises, it is nevertheless directly relevant to RMaaS. RMaaS also needs to map out its own clear messages about its purpose and potential impact within this wider communications strategy.

# 4. Concluding Remarks

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The core workshop output, Figure 4, is a framework for designing RMaaS strategy and implementation. After sense-checking the Framework with different practitioners interested in contributing to the RMaaS debate, the next step is to develop a route map that provides added detail to each of the drivers in the Framework.

When developing the MasS Route Map, workshop participants noted the following:

1

RMaaS and MaaS offerings, in general, need to be flexible in places and consumer groups, not just in transport modes. The route map should generate different models that meet MaaS standards but are not one size fits all. There is an interesting question about what, if anything, the core of MaaS is that can be standardised like a kite mark to apply in any geography.

2

A new evaluation framework for MaaS is needed that recognises a wider measure of value (including social value) outside of traditional cost-benefit analyses and sets realistic policy objectives. This framework would recognise that goals and targets for RMaaS and urban MaaS will differ, and costs will likely be higher.

3


Community-led RMaaS has been piloted alongside major RMaaS demonstration projects led by the transport industry.


4


Linked to the above, governance, decision making, and budgets for MaaS must be developed to be as close to user communities as possible.

# 5. Useful Resources

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Scottish Rural and Island Transport Community (2022) Spotlight on Rural & Islands Transport Report. 

Scottish Rural and Island Transport Community (2023) The SRITC Gathering 2023 Report. 

Scottish Rural and Island Transport Community (2024) Scottish Rural and Island Parliament - Transport Forum Report. 




## Acknowledgements

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# Appendix A



Figure 1: The Last Dance Framework (sourced from: Scottish Rural Action )

# Appendix B



Figure 2: Community level delivery drivers identified as relevant to RMaas



# Appendix C

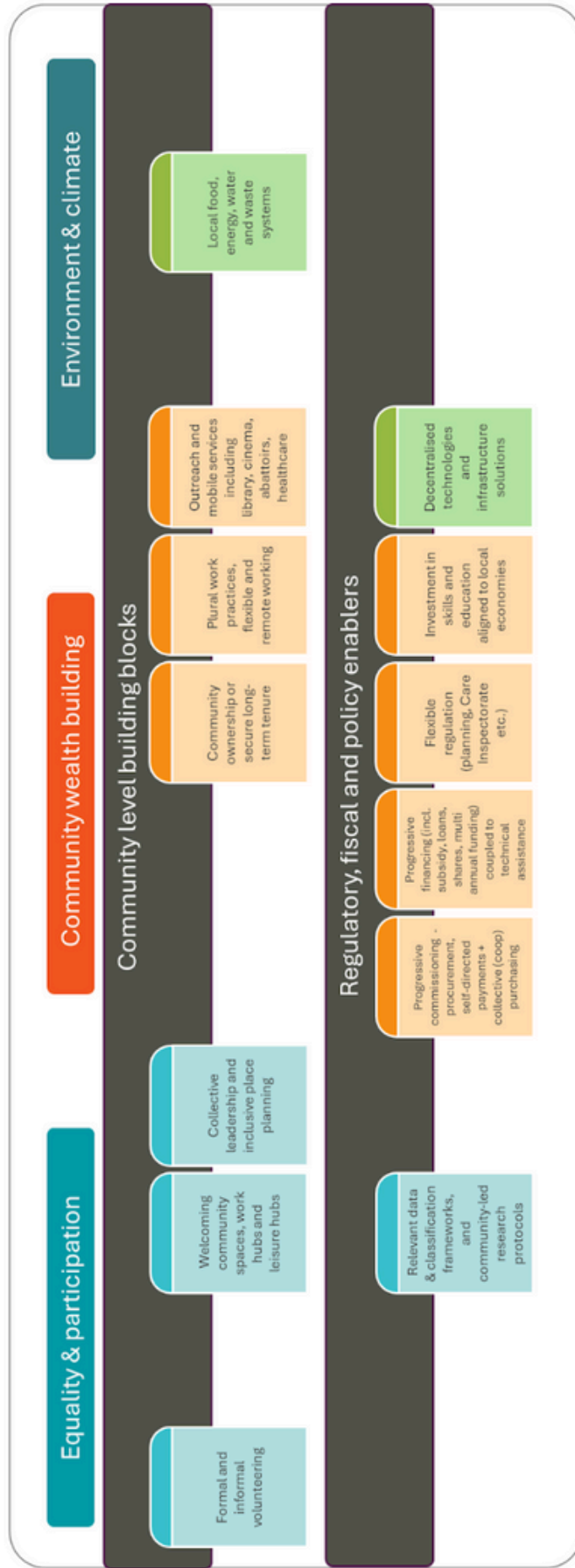


Figure 3: Regulatory, fiscal and policy drivers identified as relevant to RMaas

# Appendix D

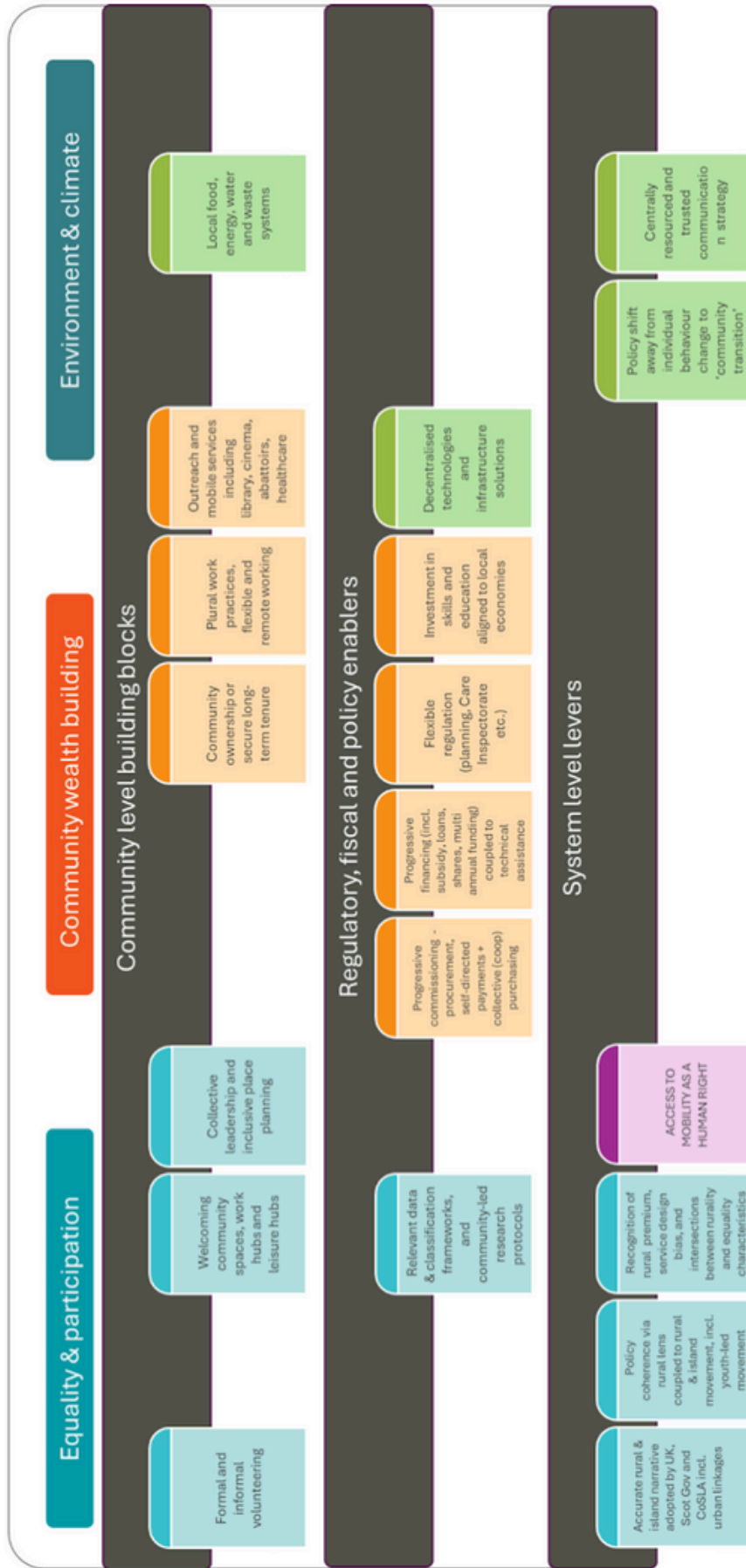


Figure 4: System level drivers identified as relevant to RMaaS

# Contact SRITC



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