

Rural Mobility Fund

Call for Expressions of Interest

Application Form

Applicant Information

Bidding authority: Essex County Council

Bid Manager Name and position: James Hopkins, Business Development Manager

Contact telephone number: 03330 131115

Email address: james.hopkins@essex.gov.uk

Postal address: County Hall, Market Road, Chelmsford, Essex, CM1 1QH

Additional evidence, such as letters of support, or maps should be included in an annex.

Applications to the Fund will be assessed against the criteria set out below.

Submission of proposals:

Proposals must be received no later than 1700 on **Thursday 4 June 2020**.

An electronic copy only of the bid including any supporting material should be submitted to betterdeal4buses@dft.gov.uk with 'Rural Mobility Fund' in the subject line.

Enquiries about the Fund may be directed to betterdeal4buses@dft.gov.uk

Transparency and Privacy

Please refer to the guidance for this scheme before completing your application to understand how DfT will manage your data.

SECTION 1: Defining the area

This section seeks evidence to confirm eligibility against the definition of the rural or suburban area to be covered by the on-demand solution within the bidding authority. Bidders should:

- **Name the area**, and include a map showing the proposed area in which the demand responsive transport service will operate.
- **Explain how the area meets the eligibility criteria against either the definition of rural or suburban area** as set out in the guidance. This should also include, where relevant, links to urban areas that the services will provide local residents access to.

1.1 Geographical area:

Please name the area within the local authority that will be covered by the demand responsive transport solution. Include information setting out the extent of the rural or suburban area covered in the proposal and a description.

Please include maps and any relevant supporting evidence as annex documents.

Please limit your response to 500 words.

Our innovative, fully-electric Digital¹ Demand Responsive Transport (D-DRT) service, provisionally named the “**Central Essex Square**” (CES), will deliver a vital, modern and forward-thinking solution to connect poorly-served rural areas in Essex. The D-DRT platform will connect passengers with an available vehicle, offer corner-to-corner mobility and provide a new channel for booking/paying fares and communicating with passengers.

The proposed scheme aims to introduce a 24/7 D-DRT service, offering corner-to-corner mobility anywhere within the service area and, to feed passengers to key transport interchanges (eg “first/last-leg” of a journey) for onward travel, in order to alleviate reliance on private car, improve accessibility and reduce isolation.

The proposed scheme will cover 57 sq.mi in rural Essex, cutting across the boundaries of Chelmsford City Council (CCC), Braintree District Council (BDC) and Uttlesford District Council (UDC). Most of the proposed scheme area falls broadly equally within the boundaries of UDC and CCC, with a small proportion of the scheme within BDC (Annex 1.1). It is estimated² that 17,560 people reside within the proposed service area.

The service area is primarily rural with residential settlements including Barnston, Felsted (for services to Stansted Airport), Great Leighs, High Roding and Pleshey. The ‘square’ service area is bounded by the A120 to the north, A131/A130 to the east, A1060 to the south and B184 to the west. The road network within the proposed service area is comprised primarily of narrow country lanes, making it difficult to provide a viable, single-decker/midi bus service. The B1008/B1417 distributor roads cross the service area (north-south) and are the main corridors for local traffic and bus services.

The population of UDC is estimated to be 89,000 (2018) making it the eighth largest local authority area in Essex in terms of population size. Covering an area of approximately 641

¹ ‘Digital’ refers to the technology required to make a traditional Demand Responsive Transport service on-demand through the provision of a passenger app, driver app and operations dashboard.

² These figures are based on 2011 Census Data, uplifted to 2018 using the ONS’ forecasting factors.

sq.km, UDC is the largest authority in Essex by area. The southern area of UDC that falls within the scheme boundary is classified as rural.

The population of CCC is estimated to be 177,000 (2018) making it the third largest authority in Essex in terms of population size. Covering an area of approximately 339 sq.km, CCC is the fourth largest authority in Essex in terms of area. It is classed statistically as predominantly urban, although the area included in the proposed scheme is primarily rural and does not include the western suburban fringe of Chelmsford.

The population of BDC is an estimated 152,000 (2018) making it the fourth largest authority in Essex in terms of population size. Covering an area of approximately 612 sq.km, BDC is the second largest authority in Essex in terms of area. It is classed statistically as predominantly rural with the majority of residents living in rural settlements or hub towns such as Braintree. A small area to the north-east of the proposed scheme falls within BDC; this location will host the scheme's primary Electric Vehicle (EV) depot, including charging facilities, which can be easily accessed from A120/A131.

1.2 Rural or suburban area eligibility:

Explain how the area meets the eligibility criteria against either the definition of rural areas or of suburban areas set out above. This should also include, where relevant, links to any urban areas that the services will provide local residents access to.

Please limit your response to 500 words.

We will not accept bids that do not meet the definition of rural or suburban area as explained in the eligibility criteria.

The application for funding for the CES service covers an area largely classified as rural under the Government Urban Rural classification. The area to be served by the D-DRT service comes under the classification type of 'rural village and dispersed'. Key settlements in the study area include Felsted, Barnston, Great Leighs, High Roding and Pleshey. All settlements in the area are villages or hamlets, with all discrete settlements numbering a population fewer than 10,000 residents.

Away from key road links (A1060, B184, A120 & A131 at the edge of the defined area, and B1008 & B1417) the level of bus service provision/accessibility is low, with the majority (84% / 89%) of the CES population residing more than 400/800metres walking distance to a bus stop without a frequent service, as shown in the table below.

	Hourly Service		20-minute frequency service	
	400m	800m	400m	800m
% population within CES that cannot access a bus stop	84%	53%	89%	64%

- Results are census demographic reports based on the OAs for each area
- Calculated using TRACC's Local Accessibility tool where the combined service frequency per hour was set to 1 and 3 for hourly and 20-minute frequencies respectively. The time period used to calculate this was Monday 7-10am.
- The percentage reported shows the number of people in the given area that **cannot** access either bus stop (with the given frequency) within a walk of 400m or 800m.
- The source of the public transport data is [DataCutter](#) and was downloaded for Quarter 1 of 2020

Even where residents live near to a bus route, except for along the main corridors, provision is often infrequent, and sometimes limited to specific times of day, or days of the week.

Existing bus services passing through the area range from traditional stopping services, serving the local urban areas of Chelmsford, Harlow and Braintree, to the provision of high-speed services such as the X10/X30, which link the area to Stansted and Southend airports. The proposed D-DRT aims to complement these existing bus services by providing swift and reliable access to them, in the form of a “first/last-leg” for residents in the area of the scheme. Due to the range of existing bus services and destinations served, it is expected this will translate into a diverse passenger demographic using the D-DRT.

The south-eastern corner of the CES area covers Broomfield Hospital and Writtle University College. Broomfield hospital is a significant local employer, with 3,800 staff and hosts regional plastics, head and neck and upper gastrointestinal surgical services. It’s importance as a health and employment centre to the whole county means that it is well-served by existing bus services outside of CES. Therefore, the D-DRT will provide residents from the service area direct access to the hospital and “first/last-leg” public transport connection for onward travel to other locations. Similarly, the D-DRT would widen access to apprenticeships and study options available at the college.

The service will provide access to the X10/X30 buses, for onwards connections to Stansted Airport, the largest single site employer in the East of England, with over 12,000 jobs across 200 companies, and home to the Stansted Skills Academy, offering education and training to people of all ages and career stages.

At the western edge of the study area, the service would offer local residents faster access to the urban areas of Harlow and Bishop’s Stortford via an interchange with existing bus services at the village of Leaden Roding.

These examples fulfil the aim of the service as a connector to high-frequency corridors of conventional bus routes to urban areas.

An outline of the area covered by the service, shown against a background of LSOAs according to Government Urban Rural classification is in Annex 1.2.

ECC have not/will not receive TCF funding.

SECTION 2: Setting out the challenges

This section seeks a description of challenges faced by local residents in accessing services within the operating area. Local authorities should:

- **Explain the challenges faced by local residents in accessing services within the operating area**, and who those local residents are. This could include data on population-density and demographics of the population in the area.
- **Clearly describe the local transport offer**. This could include the number of operators (both commercial and non-commercial operators), size of the bus fleet in the area, existing routes offered (commercial, tendered or community transport services), and areas which are not served by those routes as well as lack of transport provision.

Data and maps from the Department for Transport Public Service Vehicle Survey will be used to assess changes in mileage in the operating area.

Evidence must be provided that the current transport offer in the area in which the demand responsive transport service will operate are not sufficient to meet the needs of local residents.

- **Explain the challenges faced by local authorities or bus operators in maintaining or providing transport services to meet the needs of local residents**, and why Government funding is needed.

2.1: Challenges faced by local residents

We recognise that each area will see different challenges. Supporting evidence on the challenges facing local residents could cover the following:

- *Population without access to regular timetabled bus service*
- *Accessibility requirements*
- *Missed GP and NHS appointments through lack of access to bus services*
- *Evidence of residents unable to access other local services within the operating area*
- *Population 16+ unable to access school or college via public transport*
- *Population not in work due to lack of public transport options*
- *Population demographics and population-density*
- *Any other relevant information*

Please limit your response to 500 words.

The area of the scheme is a typical shire location, with a small number of urban centres acting as service hubs for peri-urban satellite villages and a broad rural hinterland. The rural characteristics of the service area do not generate a critical mass of demand; thus, public transport services are not sufficiently attractive to generate usage. As a result, residents without access to private cars (particularly older/younger people and the less well off) struggle to access key services such as employment, health, education and shopping.

Walking and cycling can be difficult for these groups, as geographic distance, severance, time factors, weather and lack of suitable safe routes across major, heavily trafficked roads (e.g. along CES boundary) pose genuine barriers. While the main roads connect to relatively frequent (commercial) bus services, access to these from CES hinterland is not ideal.

Within the CES hinterland, bus access is limited, with services typically low frequency and designed around offering lifeline connections to key services rather than meet wider

transport needs. Accessing information about what services are available is also problematic, relying on limited printed timetables at bus stops and few RTPI³ screens. The table in Section 1.2 shows that 89% of residents within the service area, do not live within 400m walking distance of a bus stop offering a 20-minute frequency bus service.

The high cost and low availability of public and private transport (taxis) in rural areas, acts as a significant barrier⁴ to the post-16 choices of rural young people, and their overall progress into employment. Specifically, approximately 5% of the population within the proposed scheme area are aged 16-19 years old, who potentially face challenges in accessing higher education or apprenticeships – especially if not having access to a car. Our scheme will help this age group by providing corner-to-corner mobility and encourage students to attend more classes, for example at Writtle University College.

Travel Time to 8 Key Public Services by Public Transport (time in minutes)									
	Average travel time to key local services	Employment Centre (500-4999 Jobs)	Primary Schools	Secondary Schools	Further Education	GP Surgeries	Hospitals	Food Stores	Town Centres
Essex	19.4	14.6	10.8	19.4	22.0	11.6	45.4	10.0	21.6
Basildon	16.1	12.6	9.9	16.7	19.8	8.9	34.8	9.0	17.1
Braintree	23.7	17.3	11.6	23.0	28.1	13.8	60.0	12.0	23.7
Brentwood	18.8	11.7	12.0	18.2	18.2	14.3	48.0	8.9	18.8
Castle Point	17.6	13.8	10.0	14.5	22.1	11.0	45.3	7.4	16.6
Chelmsford	17.9	14.8	10.4	17.6	17.3	11.5	39.5	9.6	22.7
Colchester	18.7	12.9	10.2	20.7	24.9	11.0	36.3	9.1	24.5
Epping Forest	19.3	13.9	12.2	20.4	22.7	12.1	41.1	12.0	19.7
Harlow	14.5	12.9	7.5	14.5	18.8	10.4	23.4	9.8	18.9
Maldon	28.5	24.4	13.5	24.4	24.4	14.9	80.9	12.1	33.3
Rochford	16.9	14.7	10.7	17.2	17.4	10.1	38.0	8.8	18.5
Tendring	21.5	14.3	11.0	19.7	21.8	10.2	64.3	8.8	21.9
Uttlesford	23.7	17.3	11.6	26.8	27.6	15.1	50.6	14.1	26.1

Source: Department for Transport: Travel Time to 8 Key Local Services

According to the table above, Uttlesford and Braintree residents have the joint second highest travel times (average 23.7minutes) to local services compared to the Essex average (19.4minutes) by walking/public transport to 8 key services.

Average times to GP surgeries in Braintree were estimated at 14 minutes, whilst hospitals were 60 minutes (fourth and third highest times in Essex). Access to a car reduced these times to 8.5 minutes (GP surgeries) and 30 minutes (hospitals).

In Uttlesford, average times to GP surgeries were the highest in the county (15minutes). Time to hospitals was 51 minutes, higher than the county average (45.4minutes) and the fourth highest in Essex. Access to a car reduced these times to 9 minutes (GP surgeries) and 24 minutes (hospitals).

The D-DRT service will help to reduce these journey times to services via more direct journeys, taking cars off the road through ride-sharing – and offering equal opportunities to everyone. Annex 5 includes letters of support detailing additional context on challenges faced by local residents.

2.2: Current local transport offer

³ Real Time Passenger Information (RTPI)

⁴ Barriers to participation in education and training – Department for Education, 2010

Please provide details on your current local transport offer. This could include the number of operators both commercial and non-commercial, size of bus fleet in the area, existing routes offered (e.g. commercial, tendered services or community transport operators) and areas not served by those routes as well as lack of transport provision)

Bids will not be accepted if sufficient evidence is not provided that the current transport offer is not able to meet the needs of local residents.

Please limit your response to 500 words.

The scheme will cater for passengers who need to make short local journeys in a rural area but also act as a 'feeder service' to public transport interchanges (and vice versa) for onwards travel, enhancing local accessibility and connectivity. This approach will complement rather than compete with existing services, additionally providing new options for travel, especially during weekends and late evenings, when public transport provision is limited/non-existent. The introduction of this D-DRT scheme, in itself, will not result in the removal of funding for the supported services listed.

Annex 2.2 provides an overview⁵ of existing public transport provision within and around the area of operation. The area is largely unserved by existing bus routes, with most operating along the CES boundary (A-roads), and only a handful on B1008/B1417 roads which cross the scheme area. These services are of relatively high mileage and frequency, connecting to nearby towns/airports, and thus don't serve the majority of CES.

Table below includes bus services that travel along, or near, to the CES scheme boundary and along the B1008/B1417 – thus not directly serving the CES hinterland. For example, service 42A is relatively high frequency and crosses the scheme area (B1008) but does not directly serve the smaller communities away from the main road network. There are also two commercially-operated, long-distance, express services (X10&X30) crossing the CES area (B1008), connecting Chelmsford and other towns to Stansted and Southend airports. Route 70 is a long-distance service with relatively high frequency, connecting Chelmsford, Braintree and Colchester. This service operates along the A131 – the eastern boundary of the D-DRT scheme.

These services are excellent examples where our scheme will act as a feeder to transport interchanges (eg Barnston and Great Leighs) for onward travel, making it possible for residents within CES to access airports, retail, education establishments in the wider area by public transport without using their car (see Annex 3.2).

There are also four commercially operated bus routes (570,451,621&676) that serve local schools, but only offer one service per day.

⁵ All information included in this section, refer to the situation before Covid-19.

Existing bus services that travel along, or near, to the CES scheme boundary and along the B1008/B1417 (pre-Covid19)								
Existing bus routes	Description of route	Direction	Services per day, Mon - Friday	Services per day, Saturday	Services per day, Sunday	Classification of route	Operator	Total route mileage operated (weekly)
59	Harlow - Hatfield Heath - Leaden Roding - Roxwell - Chelmsford	East along boundary of zone	13	11	6	Partly Supported	Arriva	3,500
		West along boundary of zone	14	11	6			
10	Pleashey - The Walthams - Broomfield - Chelmsford - West	Departures from zone	4	No services	No services	Supported	Arrow	540
		Arrivals into zone	5					
99/99A	Dengie Peninsula - Maldon - Danbury - Chelmsford - Broomfield	Departures from zone	8	No services	No services	Supported	Arrow	n/a
		Arrivals into zone	8					
703 (P&R)	Chelmer Valley P&R - Broomfield Hospital	Eastbound within zone	32	No services	No services	Supported	Ugobus	1,179
		Westbound within zone	32					
42	Galleywood - Chelmsford - Broomfield - (Gt. Waltham)	Departures from zone	48	48	10	Partly Supported	First Essex	5,061
		Arrivals into zone	50	50	9			
42A	Galleywood - Chelmsford - Broomfield - Stansted Airport	South through zone	14	13	8	Partly Supported	First Essex	4,662
		North through zone	15	13	8			
42B	Galleywood - Chelmsford - Broomfield - Braintree - (Halstead)	South through zone	27	10	5	Partly Supported	First Essex	5,311
		North through zone	24	8	6			
47	Moulsham - Chelmsford - Chelmer Valley - Springfield - Broomfield	Departures from zone	10	10	No services	Supported	First Essex	1,328
		Arrivals into zone	11	11				
54/54A /56B	Beaulieu - Chelmsford - Broomfield	Departures from zone	42	37	No services	Partly Supported	First Essex	5,160
		Arrivals into zone	42	36				
70	Chelmsford - Broomfield - Gt. Leighs - Braintree - Colchester	South through zone	27	25	8	Partly Supported	First Essex	9,943
		North through zone	26	26	8			
701 (P&R)	Sandon - Chelmsford - Chelmer Valley	Departures from zone	76	70	No services	Supported	First Essex	6,343
		Arrivals into zone	78	70				
X10	Basildon - Chelmsford - Barnston - Stansted Airport (Limited Stop)	South through zone	18	18	18	Commercial	First Essex	4,831
		North through zone	18	18	18			
X30	Southend - Chelmsford - Barnston - Stansted Airport (Limited Stop)	South through zone	25	23	22	Commercial	First Essex	6,594
		North through zone	25	23	23			
352	Chelmsford - Broomfield - Gt. Leighs - Braintree - Halstead	South through zone	2	2	No services	Supported	Heddingham	614
		North through zone	2	2				
451	Felsted - Gt. Dunmow - Thaxted - Debden - Newport (Schooldays	Departures from zone	1	No services	No services	Commercial	Stephensons	187
		Arrivals into zone	1					
621	Witham - Braintree - Gt. Notley - Gt. Leighs - Chelmsford	South through zone	1	No services	No services	Commercial	Stephensons	237
		North through zone	1					
676	Lt. Waltham - Broomfield - Chelmsford - Hatfield Peverel -	Departures from zone	1	No services	No services	Commercial	Stephensons	306
		Arrivals into zone	1					
570	Gt. Dunmow - Lt. Dunmow - Braintree - Coggeshall - Colchester	East through zone	1	No services	No services	Commercial	First Essex	300
		West through zone	1					

Table below includes information on existing bus routes that *directly serve parts of the CES hinterland*. Only three low-frequency services (Routes 16&17/18), cater for communities away from the main road network, which are the rural settlements we seek to connect. Route 16 runs approximately four times daily (each way), connecting Chelmsford and Great Bardfield via Felsted and Broomfield Hospital. Route 17/18 runs once/twice a week, connecting Chelmsford and Great Dunmow. Low frequencies and lack of service during evenings and weekends, do not encourage sustainable use of public transport. Our scheme will provide on-demand, corner-to-corner mobility anywhere within CES. For example, passengers can be picked from any location within CES and dropped-off at Broomfield Hospital to access health services and employment, but also potentially to access other bus services for onwards travel.

Existing bus routes directly serving CES hinterland (pre-Covid19)								
Existing bus routes	Description of route	Direction	Services per day, Mon - Friday	Services per day, Saturday	Services per day, Sunday	Classification of route	Operator	Total route mileage operated (weekly)
17/18	Gt. Dunmow - Leaden Roding - High Easter -	South through zone	0.6	1	No services	Partly Supported	Lodges	170
		North through zone	0.6	1				
16	Chelmsford - Broomfield - Ford End - Felsted - Gt.	South through zone	4	4	No services	Partly Supported	Stephensons	1,305
		North through zone	4	4				

There is no railway station within CES; nearest station is Chelmsford Station. Our scheme would enhance accessibility to the station from CES, by providing 24/7 connectivity via public transport either directly or indirectly⁶.

2.3: Challenges faced by local authorities and bus operators in providing transport services.

Please provide details of the challenges faced by local authorities in subsidising socially necessary services or bus operators in maintaining or providing services, and why government funding is needed. Supporting evidence could include:

- Total passenger numbers
- Number of ENCTS passengers compared to fare paying passengers
- Revenue information
- Passengers using other concessions such as jobseekers or youth
- Types of fares paid and tickets used
- Revenue information
- Increase in social care provision or other statutory duty requirements.
- Any other relevant information

Please limit your response to 500 words.

Challenges faced by ECC and bus operators include; relatively low population density outside town centres and consequent low passenger generation, complex and difficult to penetrate peri-urban developments often requiring services to reverse direction, poor access to bus stop infrastructure and relatively long journey lengths and times.

This is compounded by a perception issue with buses being seen as mode of last resort. This is partly due to the level of service and inconvenience of fixed-times and routes and part due to the long-standing societal view of buses being the purview of older people, school pupils and the economically disadvantaged.

Commercial operators have reacted by retreating to core interurban routes, largely ceasing to serve areas away from main roads and running services only to key central points in towns and by maximising fares. Commercial operators also feel that the concessionary fares regime adversely affects their ability to run commercially, particularly in low-density rural areas.

ECC, given its role as a service provider of last resort, covering commercial network failures, has led it to fund routes that maintain lifeline access for isolated communities that

⁶ See Section 3.2

are affordable by the taxpayer. This has led to focussing on off-peak, low-frequency services running through several small settlements, often using circuitous routes. However, even these services are increasingly difficult to maintain due to several factors including changing demography, budget pressures on local authorities and smaller operators leaving the market.

Despite high-level car ownership in the area and heavy reliance on them for most journeys, the populations expectations and perceptions around mobility are being reshaped partly on environmental grounds and partly by the experience of under 25's. They are statistically less likely to have access to a car (fewer young people are learning to drive, prohibitive insurance costs mean it is difficult to afford, while access to employment and education is limited by travel opportunities). In addition, this demographic's experience of a digital world has led them to expect rapid, easy access, affordable, personalised services that the existing rural transport network cannot provide. The D-DRT will significantly address these unmet needs.

Research undertaken by FutureGov⁷ for ECC and Suffolk CC, considered what the future might hold for rural public transport. There was agreement that the rural network would see further reductions as marginal commercial services no longer paid their way and local authorities could no longer afford replacements. A holistic future network would be based on the provision of inter-urban services, with complementary D-DRT services that cater for a diverse range of passengers.

School transport is the largest area of expenditure on passenger transport in rural areas. For many years, the integration of school and public transport requirements has supported the provision of conventional bus services, with the school service covering the peak costs and rest of the service operated at marginal cost. With local authorities reducing their discretionary home-to-school transport spend, this has resulted in elements of conventional bus services becoming less commercial due to lower patronage.

⁷ Catapult Transport Systems in association with FutureGov (2017): Ready for innovation – the opportunity for innovation in rural transport

SECTION 3: Explaining the ambition and proposed solution

This section seeks evidence of the level of ambition from the local authority, support from stakeholders and evidence that the local authority is well-placed to use the Rural Mobility Fund to tackle these challenges. Local authorities should:

- **Set out the high-level ambition for the local transport offer through demand responsive transport services.** This should explain how the services would enhance the opportunity of local residents in accessing education, employment, healthcare, and other services as well as enabling greater social inclusion, or improve the experience of or offering to passengers through improving bus journey times, destinations, reliability, providing weekend or evening services, etc. It should show how this option would compare with and be better than a traditional bus service.

This could include estimates of how the services could help reduce the overall cost of the local transport offer, for example, through delivering efficiencies, or improve living standards, access to employment or progression through income of local residents. Estimates of cost efficiencies beyond the local transport offer, for example to the NHS through reducing loneliness and isolation would also be helpful, where relevant.

This section should also explain how the service will attract a diverse range of passengers.

- **Clearly describe the proposed solution.** We are not seeking to specify a solution ourselves, as those need to be tailored to the specific needs of local residents and the geographical circumstances of the rural and suburban areas that the services will operate in. We have provided an indication of identified need for support in the section on "Eligibility".

This should also include an estimate of the potential demand for the services, and thus the size of the fleet and the type of vehicles to meet that demand.

Evidence should also be provided as to how the service (or its benefits) might be maintained, and become sustainable in the long-term.

- **Explain the maturity of the solution.** This should include a summary of previous work which has been completed, and identified barriers that might need to be removed before the project can begin.
- **Provide the amount of funding needed,** and indicate how it will be used (i.e. buying solutions or resources needed.) This should include an estimate, if relevant, of other funding provided by the local authority, other bodies such as NHS Clinical Commissioning Groups, and from private investment.

We will not accept bids that do not provide sufficient evidence of support from local partners.

3.1 High level ambition.

Set out the high-level ambition for improving the local transport offer to local residents through demand responsive transport services, and how this links with the challenges outlined in section 2. Information provided could include:

- Improved access to education, employment, healthcare and other services.
- Improvement of journey times
- Greater social inclusion
- Increased reliability

- Cost efficiencies e.g. reduced cost to NHS through reducing loneliness
- Improvement of living standards such as increased access to employment opportunities.
- Diversity of passengers and how they will be attracted
- Any other relevant information

Please limit your response to 500 words.

The CES D-DRT ambition is to connect passengers with transport interchanges for onward travel to urban areas and provide corner-to-corner mobility within the area of operation; providing a vastly improved local transport offer and thereby promoting greater social inclusion. Passengers will be attracted to the scheme through a comprehensive below-the-line marketing strategy, its responsiveness, green credentials and the convenience of the digital platform.

The scheme has the potential to unlock access to significant employment and education opportunities for residents without access to a car. It will serve Skyline120 and Horizon120⁸ business parks in Braintree, which are unserved by public transport. It will also enable access to Stansted Airport (employs 12,000 people across 200 companies, including a skills academy), and Broomfield Hospital (major local employer, 3,800 jobs).

Improved access will be supported by improved journey times, as detailed in table below, reductions of between 27% and 51% are achievable⁹ when using the D-DRT service compared to existing public transport for accessing education, health and employment opportunities.

	Bishop's Green - Stansted Airport (via existing Routes X10/X30)	Pleshey - Broomfield Hospital	Felsted - Braintree Station (via existing Route 70)	Good Easter - Writtle College
Current Public Transport (Mins)	70	95	85	65
Direct Drive (Mins)	18	15	20	10
Proposed D-DRT (Mins)	51	47	61	32
Journey Time Saving (Mins, Current PT vs with D-DRT)	19	48	24	33
Journey Time Saving (% , Current PT vs with D-DRT)	27%	51%	28%	51%

To achieve a similar scale of journey time savings across such a wide area with a conventional bus service would be prohibitively expensive compared to our D-DRT solution.

The D-DRT will provide a direct link to Writtle University College. The site is difficult to access for students living in the operational area that do not have access to a car. The service will also improve local connectivity to primary/secondary schools, as the current public transport provision to access local schools is inadequate or unavailable.

⁸Currently under construction; first tenants to move in December 2020

⁹ The D-DRT journey time is calculated assuming a 10-minute initial wait time, 5-minute loading time, a 5-minute wait time to pick up any additional passengers on route and a 20% penalty applied to the direct drive time.

Additionally, by offering a 24/7 service, we aspire to provide opportunity for students to independently access after school clubs, evening and weekend activities. This further supports our ambition to offer a service that removes reliance on car use and ownership.

The figure in Annex 3.1 shows the operational area has higher barriers to accessing housing and services compared to the national average. The rural characteristics of the area mean that without access to a car, residents may feel socially isolated from the hubs of their local village communities and health services, particularly the elderly population. The D-DRT service is likely to reduce some of these accessibility barriers and feeling of rural isolation. For example, by offering a 'first-leg' connection to public transport, residents would be able to access the nearest GP surgeries situated outside the operational area in Great Notley and Great Dunmow. In addition, direct travel to the few GP surgeries within the operational area (e.g. Felsted/Little Waltham) will also be possible.

3.2: Proposed solution

Please provide details of your proposed solution and evidence on how it, or its benefits, might be maintained, and become sustainable in the long-term. You should refer to the section on "Type and size of projects" in the guidance for an indication of identified need for support when completing this section. Please also include estimate of demand, including size of fleet and type of vehicles that will be used.

We will not accept bids that do not meet the eligibility criteria.

Please limit your response to 500 words.

Our proposed solution (Annex 3.2) seeks to leverage the benefits of a digital platform, comprised of a customer-facing booking/paying app, a driver app with routing algorithms and an operational dashboard. This will aid the introduction of a new D-DRT service, with fully electric vehicles and provides a vastly improved level of service, particularly at evenings and weekends.

The D-DRT platform will connect passengers with an available vehicle, offer corner-to-corner mobility anywhere within the operational area and provide a new channel for communicating with passengers. When a passenger makes a journey request, the platform will provide an estimated pick-up/drop-off time and fare quote; then, if accepted, the platform will guarantee a seat for the passenger and allocate the journey to the most efficiently located vehicle. Upon dispatch, the passenger (and operator) can monitor the vehicle's progress in real-time on the app. The app will also enable passengers to book for groups travelling together (up to six people) and pre-book a journey a fortnight in advance. Bookings and payment can also be taken over the telephone and provide information and customer care.

The scheme will operate 24/7 to promote sustainable travel within the area and to transport interchanges for onward travel (eg bus,rail,P&R). In addition, direct connectivity to and from Chelmsford rail station will be offered outside of the P&R hours of operation.

The platform's algorithm will enable us to avoid competing with existing bus routes by not offering passengers a D-DRT option, if the same journey can be reasonably undertaken by public transport. The platform will check the location of the closest public transport node and scheduled frequencies. If the journey requested on the D-DRT app cannot be undertaken by public transport (for example there is no bus stop nearby or next bus is not within a reasonable timeframe), then it will offer the D-DRT option and fare quote.

The platform's parameters are flexible, but we have chosen to keep waiting time for a pick-up to a maximum of 10 minutes. Applying this assumption to initial analysis, modelling has shown that four 10-seater vehicles will be required to satisfy estimated demand. Vehicles will be wheelchair accessible.

Furthermore, this analysis has shown that each vehicle will cover c.130km per day; within the range of a single charge of EV's already sold commercially. The vehicle depot will be within the Horizon120 business park, adjacent to GRIDSERVE's Electric Forecourt, where vehicles will be charged.

This future-focused and sustainable solution will require ECC to lead by example and spearhead the encouraging of ride sharing and electrification. Therefore, we intend to deliver this electric D-DRT service in-house, through Ugobus¹⁰, to demonstrate the feasibility of electrification to the commercial operator market. However, we retain the option to tender the service for a commercial operator instead of delivering in-house. This approach, combined with a comprehensive marketing plan to generate sufficient demand, will ensure the services long-term sustainability.

3.3 Maturity of solution

This should include a summary of previous work which has been completed, and identified barriers that might need to be removed before the project can begin.

Please limit your response to 500 words.

ECC has a proven track record of successfully commissioning non-digital-DRT services in rural areas.

The first, introduced in May 2011, used grant funding from Local Area Agreement and commercial match funding. It provided DRT¹¹ from the rural Dengie Peninsula to two hospitals, aiming to meet the needs of workers and patients. It exceeded expectations and was commercially sustainable within the two-year target. The passengers using the service were primarily car users who were temporarily unable to drive.

Following this success, in 2012 a scheme to replace traditional local bus services was piloted in rural Maldon District, showing a 251% increase in passenger numbers in year one by improving links to key services for often vulnerable customers. Three further DRT schemes were set up in North Essex in 2016, and another in the Maldon District in 2018. Each of these rural services has different operational characteristics and have shown successful passenger number increases of at least 58% in Year 1 (28% of passengers under 18 years old, 2017).

For each service, care was taken to ensure it supplemented and not compete with the existing public transport network. Time was taken to set up each service, working closely with parishes and transport representative groups, so they understood the concept and had confidence using the service.

The satisfaction level from users remains very high and this has helped to promote the service. These are premium, personalised services; telephone calls are received by a

¹⁰ Ugobus provides tailored transport throughout Essex, using ECC's in-house minibus fleet and drivers. The fleet undertakes contracted work to meet specific accessibility needs for adults/children and support local community transport provision. It also operates the Broom-field Shuttle, rural bus services, as well as home-to-school services.

¹¹ This section refers to Demand Responsive Transport (DRT) services that are not supported by a digital platform – all bookings are made over the phone.

dedicated advisor to ensure continuity of information and advice; the service is door to door; and passengers frequently praise the drivers as friendly and professional.

They enable individuals who were previously isolated to go out and be part of the community. One lady who lived alone, said that previously her family and friends had to do all her shopping, but now “*she opened her life again*” by being able to shop and socialise independently, significantly improving her quality of life.

Conventional buses are often viewed as a ‘community centre’ by patrons, therefore, one concern of introducing a DRT service is individuals would not have the same opportunity to socialise. ECC have observed the opposite, residents book the service as a group and do even more activities together than before.

As an evolution of this success, ECC delivered two pilots testing a D-DRT platform on existing minibus services for students. One pilot focussed on college students, who were able to book on-demand journeys from selected rail stations to campus. The second was for secondary students, who could opt-out of their daily transport if not attending school.

The aim was to prove the D-DRT concept, test feasibility, assess benefits and raise its profile in Essex. Data analysis showed that with D-DRT, the same or better level of service can be provided with fewer vehicles and that users enjoyed tracking their vehicle in real-time. Other lessons learnt include, that success of D-DRT projects depend on expertise in data analytics, bus planning and behavioural research. Stakeholder engagement and marketing are crucial, with drivers being a valuable source of feedback/insights.

3.4 Funding required.

Please provide an estimate of the amount of funding required. Funding for each project will be between £0.5 million to £1.5 million, though we will also consider support for other amounts depending on the identified need. Please also provide details of any other funding for your solution from local government, other bodies such as NHS Clinical Commissioning Groups, or from private investment.

Please limit your response to 500 words.

The CES D-DRT scheme will run for a period of 2 years, with a clear objective to becoming financially sustainable in Year 3, in order to continue providing the service to passengers without an impact to the taxpayer.

It is estimated that £1.493 million in funding is required for the pilot, taking account of expenditure and projected fare revenue from delivery of the service.

The amount requested will enable us to:

- Procure a digital platform, comprised of a customer-facing booking/paying app, a driver app with routing algorithms and an operational dashboard – providing a holistic, flexible and upgradable solution;
- Procure and maintain four, fully electric minibuses to operate the scheme
- Operate a 24 hours, 7 days a week service; with digital booking and telephone support;
- Employ and train a high-quality driver workforce for the period of operation
- Fund dedicated staff to manage and operate the scheme during the pilot; with specialisms in D-DRT delivery, marketing and operations;

- Devise and implement a comprehensive marketing plan to advertise the new scheme in a targeted and tailored approach to identified market segments (e.g. students, commuters, car drivers etc);
- Create a new brand that epitomises the electric, on-demand and digital nature of the service;
- Carry out a piece of primary research, comparing EVs with their diesel equivalents to optimise vehicle charging regimes and provide an evidence base for potential, future fleet electrification within the wider operator market; and
- Purchase the necessary hardware to operate a digitally-based service (e.g. tablets, phones etc.)
- Ongoing evaluation and monitoring, with lessons learned, for sharing with other parties

In further support of the bid, ECC has been working collaboratively with BDC to identify a suitable vehicle depot location. To that end, BDC have agreed to reserve a parcel of land on their Horizon 120 business and innovation park, which is immediately adjacent to the GRIDSERVE Electric Forecourt, as a base for the vehicles. This parcel of land has a value of £200,000, making a valuable contribution towards the proposal and the long-term sustainability of the scheme (including potential future expansion).

Furthermore, the scheme is supported by GRIDSERVE, who have provided their EV expertise in the development of this bid, and will offer ultra-rapid charging facilities through the UK first's Electric Forecourt. This enables the scheme to avoid additional investment into charging infrastructure and utility connections.

Finally, ECC is submitting two bids to the Rural Mobility Fund (*'The Central Essex Square D-DRT'* and *'South Braintree D-DRT'*). In producing these bids, ECC has been mindful to align opportunities for cost savings and, therefore, should both bids progress to Stage 2, and be approved by the Department for Transport, an overall reduction of £254,000 is achievable. This is based on economies of scale and sharing resources between the two schemes; calculated using the estimated funding requested at Stage 1 (combined total of £2.575 million).

Section 4: Deliverability

This section seeks evidence of how the demand responsive transport service will be delivered, and demonstrate that plans are credible and deliverable.

- **Demonstrate that your plans are credible and deliverable in the time proposed, and that any risks are understood and mitigated.** This should also show how the scheme will be marketed to attract passengers. A detailed project plan is not required at this stage.
- **Set out timescale for implementation.** This should include key milestones such as recruiting staff, when vehicles will be on the road, marketing of the services, and initial take-up of new or expanded services.
- **Provide a list of partners involved in the projects,** and briefly explain how they will contribute to the success of the project. For example, through specific expertise, reduced duplication of services, enhancing opportunities for operators of any size to trial the demand responsive transport solution and make efficiencies by pooling resources (e.g. back-office/administration of demand responsive transport services, marketing, fleet, etc.)
- **Describe how monitoring and evaluation will be used** to ensure learning about the project to inform future schemes. A detailed monitoring and evaluation plan is not required at this stage but we expect applications to include information on how the evaluation could identify learnings about the implementation of the services, including the approach to communicating with service users, which can be used to improve the design of services in future. Bidders should explain how the approach to delivering the services will ensure that future learning is maximised.
- **Confirm you have received advice on EU State Aid rules,** and provide a summary of that advice to confirm how your transport offer will fit in with state aid rules.

4.1 Deliverability plan

Please demonstrate that your plans are credible and deliverable in the time proposed, and that any risks have been mitigated

Please limit your response to 500 words.

ECC has demonstrable experience in setting up DRT schemes, including two recent D-DRT pilots. Leveraging that experience gives us confidence to take the proposed scheme a step further, using electric minibuses combined with a digital platform, for which we have mitigated the risks of this innovative approach.

To mitigate perceived concerns and operational viability of using electric minibuses for a D-DRT service, ECC has assured itself through pro-active engagement with electrification and vehicle engineering specialists. Expertise has been harnessed from the Energy Saving Trust¹², GRIDSERVE¹³ and AVL¹⁴, alongside speaking to several EV manufacturers on their current and future EV models. In addition, use of the Electric Forecourt as a hub for the proposed scheme gives us access to the necessary infrastructure and expertise to confidently overcome any teething issues with electrification.

¹² <https://energysavingtrust.org.uk/>

¹³ <https://www.GRIDSERVE.com/>

¹⁴ <https://www.avl.com/>

Digitalisation can bring many challenges, but with ECC having already piloted two D-DRT operations, in a tripartite partnership with Ringway Jacobs and Shotl, it has equipped the organisation with expertise, significant lessons learnt in deploying D-DRT platforms and confidence in using the technology. ECC's practical expertise is augmented by extensive market research, having met and discussed technical capabilities of D-DRT platforms with no less than ten companies, including Spare Labs, Moovit and ViaVan. Procurement frameworks are available to enable a swift process for mobilisation.

This expertise in digital platforms, and knowledge of the EV market, will be underpinned with an effective, below-the-line marketing strategy. Using internal resources that successfully delivered a National Local Government Communications Bronze award (2019) for driver recruitment, ECC will deploy a targeted campaign that will involve direct contact with prospective passengers through paid-for and organic social media, events, PR¹⁵ and SEO¹⁶ tactics; seeking to create strong relationships and brand trust with the public. This will be co-produced with local stakeholders to ensure maximum reach in a sparse and rural area, including those who may not be digitally confident/literate and require extra support to access the scheme. An OASIS¹⁷ plan will be used, with clear outcomes, evaluation and metrics established to measure impact.

To complement the marketing strategy, and enhance the future sustainability of the service, opportunities will be explored with key local businesses and organisations to integrate the D-DRT scheme into their Travel Plans. This, combined with use of the Electric Forecourt, and other expanding 'mobility hubs' for onward travel, provides a sound basis for future commercialisation beyond the funded period.

By taking the approach of using ECC's in-house operator, Ugobus, to deliver the scheme, we will have access to existing processes and resources to enable a swift mobilisation period. Long-established recruitment processes, a highly competent management structure and an existing relationship with a dependable driver agency, offer the necessary assurances that this scheme can be delivered.

Finally, the impact of Covid-19 will be explored in Stage 2, although it is ECC's belief that D-DRT will be an integral and prominent part of the rural public transport solution in response to Covid-19 and beyond.

4.2 Timescale for implementation

Please set out your indicative timetable for implementation in the table below. You should include key milestones on:

- Staff recruitment*
- When vehicles will be on the road.*
- Marketing*
- Expected initial take up and progression*
- Any other relevant milestones*

¹⁵ Public Relations

¹⁶ Search Engine Optimisation

¹⁷ OASIS is a series of steps that can help bring order and clarity to planning campaigns, which can sometimes be a complicated and challenging process. The aim is to help make the planning process simpler and easier to remember.

Timeline below assumes funding awarded by 1 November 2020.

Milestone	Expected completion date
Funding awarded	Autumn 2020
Draft vehicle specifications	Mid-November 2020
Scheme management in place	Mid-November 2020
Vehicle procurement via framework and order placed	Early December 2020
Legal agreement with Braintree District Council, detailing arrangements around reserved land for minibus depot, in place	End December 2020
Draft D-DRT platform specifications	End December 2020
OASIS marketing plan drafted	End December 2020
Marketing agency procured via framework	Mid-January 2021
Fares set and agreed	End January 2021
D-DRT platform procurement via framework	End January 2021
Marketing content created, in liaison with external marketing agency	Mid-February 2021
Driver & back-off staff recruitment (including compliance)	End February 2021
D-DRT platform setup	End February 2021
Set up of vehicle depot and back office, including the telephone hotline	End February 2021
Launch of marketing campaign	Monday 1 March 2021
EV's delivered	Early March 2021
Install sensors on vehicles (electric and diesel) to collect vehicle & operational data for analysis	Early March 2021
EV testing and driver training, combined with testing the D-DRT platform in a real-world setting with a closed group of participants	Mid-March 2021
Second testing phase and training session on EV's and D-DRT platform, with refinements made	Third week of March 2021
Operations signed-off to commence	End March 2021
D-DRT scheme launch	Monday 5 April 2021
Continual collection of data (eg number of trips quoted, booked and completed)	Daily throughout pilot
Delivery of marketing tactics	Ongoing throughout pilot
Optimise service to customers (data collected will be reviewed and analysed; carry out any potential improvements or refinements and optimisation of service)	Monthly
Optimised charging regime implemented based on 6 months of data gathering and analysis.	October 2021
Final pilot evaluation report shared with stakeholders and other Local Authorities (highlighting lessons learned, data analysis and customer experience)	End March 2023

4.3 Partnerships

Please provide details of partners involved in the project, and explain how they will contribute to the success of the project. Examples can include expertise, reduced duplication of services, enhancement of opportunities for operators to trial DRT services and efficiencies.

Please limit your response to 500 words.

The scheme enjoys internal and external widespread support, support from industry experts and local engagement; all vital to its success.

Braintree District Council have committed to reserve a piece of land on their Horizon 120 business and innovation park, immediately adjacent to the GRIDSERVE electric forecourt, as a depot for the EV minibuses. This asset has a value of £200,000 and therefore is a significant contribution to the D-DRT schemes success.

BDC, along with CCC and UDC, will also lend their knowledge, business intelligence and links to the local communities to promote and enable the success the scheme. Furthermore BDC, as the developer of Horizon 120, will actively encourage businesses that setup there to advertise and make use of this proposed scheme.

The service area also covers a number of local parish councils. The Parish Councils of Little Waltham, Felsted and High Easter have submitted letters of support for the scheme, seeing potential for substantial benefits to the residents they serve, with a commitment to actively promote use of the service once it is live and co-produce the marketing strategy with ECC.

GRIDSERVE is a tech-enabled energy services company which develops, builds, owns and operates sustainable energy solutions for critical power infrastructure. They are building the UK's first Electric Forecourt (see Annex 4.3), which will be housing a minimum of 24 ultra-rapid chargers. It will be capable of delivering up to 350kW of power and potentially charging a vehicle to full capacity in 30 minutes or less, supported by the on-site capacity for 5 megawatts of battery storage. GRIDSERVE has provided their significant expertise in this industry to support the development of this bid. They will be a key partner in Stage 2 of the process and implementation of the scheme, via further expertise input and promoting the scheme.

Complimenting GRIDSERVE's contribution, AVL (a large independent company specialising in development, simulation and testing of vehicle powertrain systems, particularly electric), have contributed vehicle data collection and simulation expertise to this bid. They support and share ECC's objective to undertake primary research during the lifetime of the scheme, that will enable robust assessment, monitoring and evaluation of electric minibuses. AVL will continue to provide this expertise into Stage 2.

Ringway Jacobs (RJ, a consortium between Eurovia and professional services provider, Jacobs), a leading highways service provider in strategic partnership with ECC, have also supported the development of this bid. Building on the existing, strong relationship developed through the implementation of the D-DRT pilots in 2018/19, RJ have contributed data analytics, demand modelling and technical expertise to Stage 1 of the bid, and we will continue this collaboration into Stage 2, to ensure the project's success.

Additionally, ECC is delighted to have secured the support of Mid&South Essex NHS Trust (Broomfield Hospital), Anglia Ruskin University, Rural Community Council of Essex, Community Agents and Marshgate Developments for this bid, who agree with the vision and desired outcomes of the scheme and have lent their backing to promoting the scheme upon its implementation (see Annex 5 for letters of support).

4.4 Monitoring

Please provide indicative details of how monitoring and evaluation will be used to ensure learning about the project and inform future schemes. A detailed monitoring and

evaluation plan is not required at this stage but should explain how the approach to delivering services will ensure that future learning is maximised.

Monitoring and evaluation will be carried out over the two-year pilot, at six monthly intervals after introduction of the service.

Technical and operational implementation

Anonymised demand and operational data will be collected from the platform, for example:

- o Number of registrations
- o % of ride requests met with an offer
- o % of ride requests where an offer is accepted and ride completed
- o Availability of driver hours
- o % of vehicle downtime
- o Average passengers per driver hour

Internally the data will be used to manage/refine the service, optimise route choice and to help determine the number of vehicles needed at different times of the day / different locations. Broad usage statistics (including trip length, vehicle occupancy) will be compared to the level of comparable provision which would be required from a conventional bus service, allowing the cost of implementation (on a “like for like” trip basis) to be understood relative to the cost of implementing the D-DRT. These will inform future expansion/contraction of the service.

Financial

As well as a financial comparison of the level of provision, a review will be undertaken against previous DRT and conventional public transport interventions to understand the relative take up of the service in trips / £ spent. This will continue the process of building a picture of the use of D-DRT in Essex and so help to inform a targeted approach to future D-DRT interventions – allowing for an understanding of when D-DRT is appropriate, and where conventional bus services are likely to provide better financial returns.

Welfare/Societal Impacts

Predicted patronage and average journey times will be compared against actual patronage and journey times to understand whether the scheme has met its targets, and so to demonstrate the realisation of the anticipated travel benefits. Working with stakeholders (including local employers, residents and community/health providers) we will undertake user surveys which will give a qualitative assessment of the service. The outcomes of the surveys can be used to improve elements of the service (e.g. user-interface of the app, driver interaction).

Environmental

ECC is committed to electrification and at the same time, we aim that the evolution of the D-DRT scheme in the future to be data-led. To this end, we will undertake vehicle data collection and analysis. Our objective is to install sensors on vehicles to collect real-world data and compare with diesel vehicles used in other ECC non-digital-DRT schemes. The outputs of this exercise will include an emissions comparison and charging optimisation. The aim is to support the forthcoming ECC electrification strategy and to inform future fleet vehicle purchases by the Authority.

Our monitoring plan will give a fuller picture of people's motivations for using the service and perceived benefits. Coupled with the anonymised data extracted from the platform, this would give a complete picture of direct user impacts and option use value impacts. Passenger surveys will also be used to monitor whether the pilot service has had success in bringing about mode shift away from car and the extent to which the typical passenger has access to a car.

4.5 State Aid

Please confirm you have received advice on EU State Aid rules, and provide a summary of that advice to confirm how your transport offer will fit in with state aid rules.

Please limit your response to 500 words.

There are no immediately apparent State Aid implications given the information provided within this bid.

Generally, article 107 of the Treaty on the Functioning of the European Union states that impermissible State Aid is “[a]ny aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods [. . .] insofar as it affects trade between Member States [. . .].”

Based upon the information provided in this submission, with the exception of the electric forecourt charging, ECC is proposing to undertake procurement in line with the Public Contract Regulations 2015 or by using framework agreements that were let in accordance with those regulations. As these contracts will have been through an open competition in line with the regulations, there will be no distortion or threat of distortion of competition.

With regard to the forecourt charging element, ECC's current assessment is that the provider is the only current electric forecourt operator within the region. Initial financial estimates suggest that if the bid proposal is awarded and the scheme progresses, the estimated value of the electric vehicle charging element would be de minimus in line with State Aid thresholds. No contractual commitments are envisaged as being necessary, though ECC will keep this under review as the bid progresses to determine if a procurement becomes necessary to comply with procurement law or State Aid requirements.