



Municipal
Technologies

Collective Route Optimisation: Service Definition



Collective: Route Optimisation

Collective Route Optimisation is a cloud-based system that uses AI and real-world operational data to plan efficient waste collection routes. It accounts for road restrictions, one-way systems, resident requests, and operational constraints, while enabling real-time in-cab feedback and route updates for crews.

By optimising routes, monitoring workloads, and integrating with fleet management and council systems, Collective improves collection efficiency, enhances crew safety, and reduces fuel consumption and carbon emissions. Councils benefit from more consistent, timely collections and improved operational resilience, supporting both service quality and sustainability objectives.

Perfect for...

- ✓ Waste collection route planning and optimisation
- ✓ Reducing fuel usage and carbon emissions
- ✓ Improving crew safety and in-cab guidance
- ✓ Managing local road restrictions and access challenges
- ✓ Real-time operational adjustments and feedback
- ✓ Data-driven fleet and resource planning

Why Choose Collective?



Proven Experience

Designed for real-world waste operations, incorporating local constraints and crew feedback.



Modular & Scalable

Tailored to fit Councils of any size, with flexible deployment and customisation options.



Operational Efficiency

Uses AI-driven planning to reduce mileage, optimise workloads, and improve consistency.



Sustainable Outcomes

Supports carbon reduction and fuel efficiency through smarter routing decisions.



Product Overview

An AI-driven module giving Councils greater control, efficiency, and sustainability in waste collection routing:

✓ AI-Driven Route Planning

Optimises collection routes using real-world data, operational constraints, and service requirements.

✓ Real-Time Operational Insight

In-cab telematics and live feedback enable rapid adjustments to routes, incidents, and changing conditions.

✓ Safer, More Efficient Crews

Clear route instructions, workload balancing, and vehicle alerts support safer, more productive operations.

✓ Sustainable, Data-Driven Management

Reduced mileage, fuel consumption, and emissions help Councils meet environmental and efficiency targets.

Collective Route Optimisation turns intelligent planning into real-world results, enabling Councils to deliver reliable, efficient, and sustainable waste collection services every day.



Customer Onboarding, Support & Contract Management

Bartec Municipal Technologies is committed to supporting Councils throughout the full lifecycle of their waste and cleansing operations. From contract award through to business-as-usual, we deliver a structured, collaborative approach that combines industry expertise with proven project management and quality standards. Operating exclusively in the local authority sector, we understand the unique challenges Councils face and tailor our services to maximise efficiency, compliance, and user adoption.

All our implementations are underpinned by **PRINCE II-certified** project management and our **ISO 9001:2015** Quality Management and **ISO 27001** Information Security frameworks, ensuring consistent delivery, risk management, and continuous improvement across more than 100 UK Councils.



Mobilisation and Onboarding

During the mobilisation phase, Bartec works closely with the Council to align expectations, prepare for a smooth implementation and ensure the system implementation begins with clear objectives, defined priorities, and early stakeholder engagement. Key steps include:



Project Initiation:

A kick-off meeting to agree objectives, scope, priorities, and success measures.



Implementation Planning:

A detailed project plan with phased delivery, responsibilities, risk mitigation, and progress tracking.



Roles and Responsibilities:

Clear accountability across Council and Bartec teams, ensuring every stakeholder knows their responsibilities.

These steps ensure minimal disruption to daily operations, early visibility of project milestones/timelines and provides confidence that experienced, local-authority-focused teams are managing the implementation.



Training & Knowledge Transfer

Bartec provides tailored training across all user levels, ensuring Council teams can fully leverage the system.

Training approach:



Desktop Users: In-person or online sessions for admin and management staff, with hands-on practice.



Drivers and Crews: Train-the-trainer model, enabling local experts to cascade knowledge efficiently.



Ongoing Learning: Access to user forums, online sessions, and refresher courses.

This approach builds operational confidence from day one, embeds knowledge locally to reduce reliance on external support, and promotes continuous learning for long-term efficiency and system adoption.



Account Management & Governance

Bartec provides a dedicated Account Manager and Customer Success Manager, offering consistent oversight and proactive support throughout the contract lifecycle. This ensures that the service continues to meet operational needs, deliver value, and evolve with changing local authority requirements.

Governance and Performance Monitoring:

Operational Meetings:

Regular meetings during implementation and early operations to monitor progress and address issues

Performance Reviews:

Monthly reviews during the initial post-go-live period, followed by strategic reviews in subsequent quarters, attended by senior representatives from both parties.

KPI Reporting:

Councils receive performance insights through dashboards and reports, allowing early identification of opportunities and risks.



Account Management & Governance

Customer Success and Continuous Improvement:

Best Practice Advice:

Guidance on process optimisation and leveraging new features.

Support:

Day-to-day functional support and technical queries are provided through our dedicated Helpdesk and Self-Service Portal, as described in the Service Level Agreements section. This ensures rapid resolution of issues while maintaining clear accountability and visibility.

System Health Checks:

Regular assessments to optimise system usage and operational efficiency.

Risk Management Throughout the Contract:

A structured risk management structure is in place from mobilisation to offboarding:

Implementation risks: Staff unfamiliarity, data migration challenges, API integrations, or unavailable key personnel are captured in a Risk Register with mitigation strategies. Operational risks: Ongoing risks such as service disruption, data security, or user adoption are monitored through ISO9001 and ISO27001 frameworks.

User Groups & Collaboration:

Participation in national and regional sessions to share experiences and influence software evolution.

By identifying and resolving potential issues early, enhancing system reliability, and maintaining data security and compliance, operational disruption is minimised.



Offboarding & Contract Exit

Bartec ensures a smooth and secure offboarding when a Council decides to transition or conclude the contract.

Offboarding process:



Full data extract in CSV or encrypted database backup.



Secure deletion of retained data using certified destruction methods.



Technical support for migration to a new provider, if required

Clear, transparent exit procedures maintain GDPR and internal security compliance while providing confidence that operational continuity is preserved throughout the transition.

Service Level Agreement

TotalCare is Bartec's comprehensive hosted software and support package, delivering reliable, scalable service to over 100 UK Local Authority clients, supporting 4,000+ vehicle systems and hundreds of concurrent desktop users.

All service performance, incident handling, and escalation procedures are governed under the TotalCare SLA, which defines response times, priorities, availability, and reporting. All customers receive the following as standard:

- **Dedicated Helpdesk:** 06:00 - 18:00, Monday–Friday (excluding English Bank Holidays).
- **Unlimited support calls:** Registered users can request assistance as needed.
- **On-site support:** For vehicle installation or hardware issues.
- **Security:** Device updates and daily backups of all Collective data.
- **Reporting:** Access to real-time dashboards, regular reports, API access, and ad-hoc reports on request. Up to four free bespoke reports are included as standard.
- **Out of hours:** Extended Hours / Weekend support available as optional add-ons.

Support Prioritisation and Response

Priority Level	Target Response	Target Resolution
P1 - Critical	1 hour	2 hours
P2 - High	2 hours	8 hours
P3 - Medium	4 hours	7 days
P4 - Low	4 hours	14 days
P5 - Informational/Planned	8 hours	By agreement

We offer some of the fastest response and resolution times when compared to similar organisations - particularly for critical and high-priority incidents.

Escalation: Breaches automatically escalate to the Collective Hub Manager, with the Chief Operating Officer maintaining oversight.

Availability: Hosted software guaranteed **at least 98% uptime** (06:00–18:00, Monday–Friday). Service credits apply for SLA breaches.

Performance and Scalability

- Server loads and response times are continuously monitored.
- System capacity can be extended as required.
- Customers define acceptable response times for key transactions.
- Supports hundreds of concurrent users and thousands of devices across multiple authorities.

Data Security and Compliance

- **ISO/IEC 27001** (LRQA, 14/02/2022) and **Cyber Essentials** certified.
- **Penetration testing:** At least every six months by CREST/Tigerscheme-approved providers.
- **Data location:** All data stored and processed in **UK primary and disaster recovery sites.**
- **Backups:** Hourly snapshots, RPO/RTO 1 hour; 24-hourly, 14-daily snapshots locally; six-month retention on DR site; individual database backups for recovery and testing.
- **Data-in-transit:** TLS 1.2+ encryption.
- **Audit:** Real-time user and supplier activity logs; retention 12 months (user/supplier), 6–12 months (system).
- **Data sanitisation and equipment disposal:** Following recognised security standards.

Identity, Access, and Authentication

- **2-factor authentication** for all users.
 - Management access via **secure VPN**.
 - Access restriction testing conducted annually.
 - Customers have real-time visibility of activity logs.
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Operational Security and Change Management

- **Configuration:** Controlled via Bitbucket; lifecycle changes managed via JIRA.
 - **Patch management:** Monthly, critical patches prioritised.
 - **Protective monitoring:** Antivirus, malware protection, isolation and remediation of infected devices.
 - **Incident management:** ISO-aligned reporting, review, and corrective actions.
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Secure Software Development

- Development follows recognised best practice, independently reviewed against **ISO/IEC 27001, ISO/IEC 27034, CSA CCM v3.0**.
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Data Import / Export and Reporting

- **Import formats:** CSV, Excel, XML.
- **Export formats:** CSV, XML, SQL, Access, Excel.
- Options include **Data Warehouse, Azure DB, SFTP**, or bulk extracts via Helpdesk.
- **Analytics:** Transaction throughput, user access, crew engagement, dashboards, regular and ad-hoc reports.



Pricing

How It Works

Modular Pricing

Councils choose the modules they need, whether managing a single service or multiple waste operations. Optional features, such as advanced reporting, enhanced training, or system integrations, can be added as required.

Tiered by Council Size

Councils are grouped into tiers according to population. Larger Councils (e.g., major metropolitan authorities) fall into Tier 1, while smaller Councils (e.g., district or borough authorities) fall into lower tiers. This ensures pricing reflects operational scale and usage.

Scalable & Flexible

Councils can expand service coverage or add modules over time, with pricing adjusting accordingly.

Optional Add-Ons & Support

Additional services e.g. bespoke reporting, enhanced analytics, and integration support with other Council systems, are available to complement core functionality. Support packages can be tailored to operational complexity and service levels, ensuring Councils receive the level of assistance that matches their requirements.

For full pricing information, please refer to the G-Cloud 15 Pricing Document, which includes tier-specific guidance, optional services, and billing structures.



Contact Us

For more information about Collective, module options, or implementation support, please contact our team:

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Our team is ready to provide guidance, answer questions, and help Councils determine the best solution for their waste operations.