



Banks and logistics

Workflow Optimization

magenta
_technology



19

Years of experience

Know how

scheduling algorithm

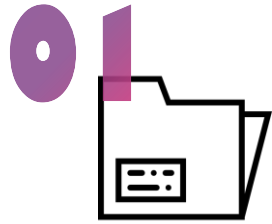
350 000

routes a day

300+

customers

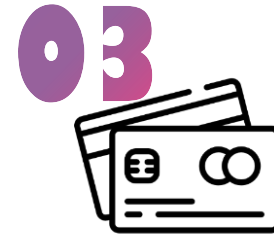
Tasks of transport logistics in the banking industry



Debt collection



Cash and Valuables
in Transit



Internal logistics
and card delivery



ATM services



Offsite audit and line
audit



Field customer service



Field sales

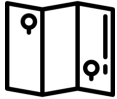


Field service engineering

DEBT COLLECTION



Planning



Automatic planning and route optimisation with the consideration of:

- portfolio of clients, assigned to each employee
- client availability, depending on the type of address (work / home)
- multifaceted priorities of visits
- calls, assigned and other activities for each employee
- remote collection areas



Manual route adjustments available



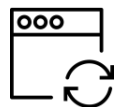
Execution



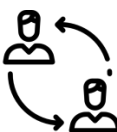
Transfer of information about all customers from the portfolio to the employee's mobile device (including photo and history of communications)



Navigation to the client's location



Registration of the results of the activity in the standardized form and prompt delivery of the information to the *backend* system



Possibility to contact the debtor by any of the known phone numbers in one click. One touch dial In functionality



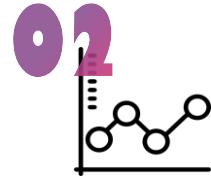
Ability to add additional visits to the clients from the portfolio



Control



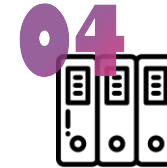
Real time monitoring of the performed activities, displayed on the map



Information on the actual length of the route



Control of client visits, including meeting duration

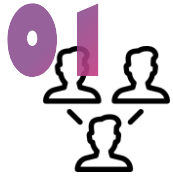


"Plan-vs-actual" analysis reports, generated for each day

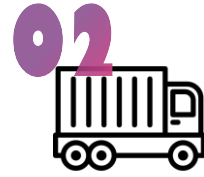
Cash and Valuables in Transit



Allocation of jobs by route



Building routes for collection points
Build optimized collection routes for cash-and-valuables-in transit operations.



Consider type of transport requirements:

- Enhanced protection
- Increased cross-country ability
- Restrictions on the type of transport
- Limitations on the transport capacity (bags, cassettes, amount)



Consider special territory admission rules



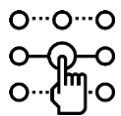
Consider the professional skills of the crew members, needed to work with ATMs / terminals

Route planning



Build an optimal sequence of visits with the consideration of:

- time windows of cash collection
- working schedule of Cash Transportation Officers
- the current graph of the road network and the statistical speed of traffic
- time of pre-trip inspection and instructing, the completion of the shift
- maximum length of the route
- service time of each point (taking into account the history of cash collection)



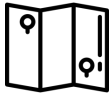
The ability to manually adjust the route with automatic detection of violations or restrictions



Route planning



Build "game" routes
"What if?"



Optimize route with the ability to fix the
collection points



Select service options for a new cash collection
point, taking into account financial parameters



Consider special aspects, such as the order of the
visits (for example, cash
settlement center at the beginning)



Cash transportation cost prediction



Automatic calculation of the cost of the route, based on:

- route length
- fuel consumption & vehicle type
- Working time, including the duration of pre-trip briefing, receiving / giving up guns at the beginning and end of the shift
- crew type (reinforced / conventional)



The possibility of including indirect costs in the cost of production



Automatic calculation of the increase in the cost of the route while adding a new collection point



Control



Intelligent vehicle tracking with the ability to be kept informed about emergency situations*:



Automatic notification of the dispatcher in case of deviation from the planned route or delay / advance of the schedule



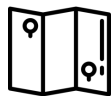
Operative control of the timeliness of visiting the collection point



Formation of a consolidated report "Plan vs actual" for the day

* while integration with the tracking system

Execution



Printing of paper route sheets for cash collection teams



Step-by-step navigation taking into account the actual traffic situation



Registration and sending to the team of unscheduled applications / refusals from collection points



Control of the bar codes of bags and cassettes when receiving / dispensing



Clarify the location of the point in the mobile application of the collector upon completion of collection



The possibility of using photo fix at the point of collection



Execution



Adding comments on the mobile app about the reasons why a collection failed



Possibility to transfer digital ATM key details to the mobile application used by the Cash Transportation Officer



Notification of clients by text message and email:

- Confirmation of the collection points on the day's route
- departure to the collection point from the previous location
- *N*-minutes before arrival to the client



Forecast of ATM and cash collection



Analysis of the current process of filling ATMs, using methods:

- collection and structuring of data
- clustering



Forecasting the filling of ATMs using one or more methods:

- machine learning
- interval-correlation analysis
- mathematical statistics

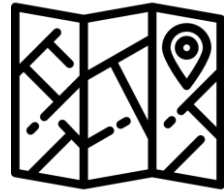


Reporting



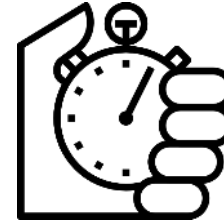
01

Daily routes



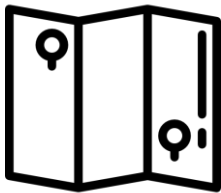
02

Deviation from routes



03

Route start / end time



04

Deviation of the actual duration
and length of the route from
the planned one



05

Number of successful /
unsuccessful collections

INTERNAL LOGISTICS AND CARD DELIVERY



Logistics system



Maintaining the card life cycle:

- list of possible statuses
- transition rules between statuses



Fixing the passage of cards and pin-envelopes according to the regulated statuses:

- request to issue the card
- processing
- card production and transfer to the point
- card delivery to the customer

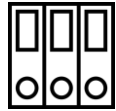


Logistics system

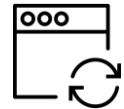


Logistic planning:

- trunk routes
- *last mile*



Formulation of registers and reports: the register of cards for issue, extradition, etc.



Integration with front and back systems



Card Delivery



Express delivery of bank
cards

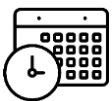


Delivery of corporate bank
cards

Planning



Allocation of deliveries to couriers



Building optimal routes,
With the consideration of:

- delivery time windows
- working hours of specialists
- Flexible lunch breaks



Route planning using public transport and
walking routes



Ability to prioritize public transport



Additional functionality for the delivery of corporate bank cards



Intelligent resource planning
taking into account:

- actual resources for the planned day
- level of qualification and access of staff
- the number of cards to be issued



Using historical traffic data



Calculation of arrival time to the
department behind the card package



Control



Two-factor control of delivery:



Controlling the order of deliveries



Generating a consolidated report "Plan-vs-actual" for the day



Operational control of staff movements

Execution



Text / email notifications to the clients about:

- scheduled delivery time
- the courier's departure to the address



Navigation of the courier to the client's location



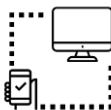
Read barcode and QR-codes, envelopes in a mobile application



Possibility to attach a photo of the document, the customer with the card



Automatic online card activation



Two-way integration with backend systems



Reporting

**01**

Customer Service Level

**02**

Daily Routes

**03**

Productivity of couriers

**04**

Delays

**05**

Total accuracy of arrivals

ATM services



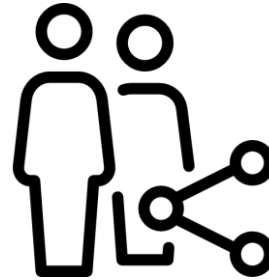
ATM service

01



Service
engineers

02



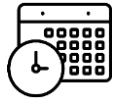
Managers

Planning



Allocation of departures taking into account:

- type of equipment to service
- skills of specialists
- availability of access to the territory
- “black” list of employees
- maintenance schedules and inspection of ATMs



Route planning based on:

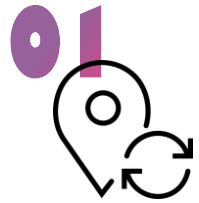
- working hours of specialists
- flexible lunch breaks
- real time graph of the road network and the statistical traffic speed



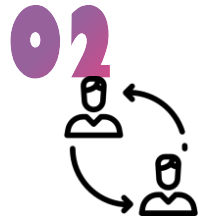
Route planning using public transport and walking routes



Operational planning

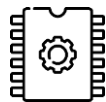


Distribution of emergency work taking into account the current location of employees and the status of their work



Assignment of jobs between employees

Service engineers



Standardization of ATM servicing activity



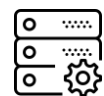
Time accounting for scheduled maintenance



Possibility of photo - fixing the "work" and / or the detected malfunction



The ability to identify the ATM by scanning the bar code



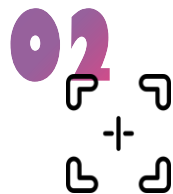
Fixing used spare parts materials and a list of spare parts necessary for troubleshooting



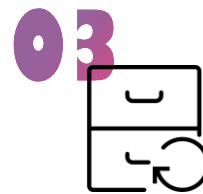
Managers



Inspection and completion of
check-lists



Ability to download / view the
photo of the ATM installation site



Accounting for the initial loading
of "empty" cassettes

Control



Control of visits
and duration of work



Creation of a consolidated report on the
performance of work in the "Plan-vs-actual" mode
for the day



Operational control of staff movements



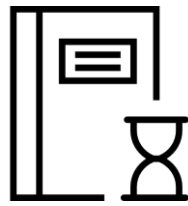
Photo album of the results of visits



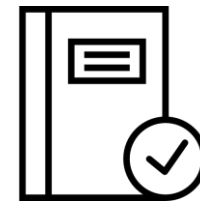
Reporting

**01**

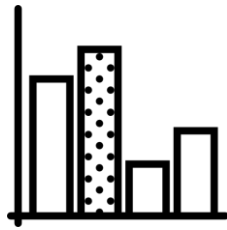
Report of
visits by ATM
location

**02**

Report on the actual mileage
and time of work

**03**

Reports on
completed checklists

**04**

Statistics of the average
duration of maintenance of the
ATM, with the consideration of
the type of work

**05**

Spare parts list for repair service

Offsite audit and line audit

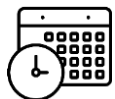


Planning



The allocation of visits, taking into account:

- customer portfolio
- qualifications of specialists
- frequency of repeated audits



The composition of optimal routes based on:

- working hours of appraisers
- a floating lunch break



Planning routes using public transport and walking routes



Execution



Real time information on mobile device:

- list of planned visits
- information about clients and objects of pledge



Navigation to the audit location



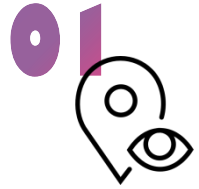
Documenting the state of the security object on the checklist



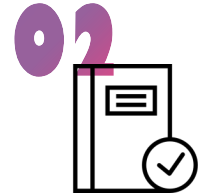
Documenting additional information on the collateral object on site and the ability to attach photos



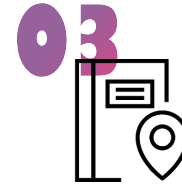
Control and reporting



Control of employee visits



Composition of the
consolidated 'Plan-vs-actual' report



Reports on time spent / route of
movement for calculation of
payment / reimbursement of fuel
and lubricants

Field customer service



Planning



Planning meetings with legal entities and individuals on:

- Opening of settlement and cash services
- Loan
- Delivery of documents



Planning routes with:

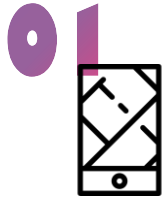
- Time windows of customer availability depending on the type (legal / physical person)
- work schedule of employees



Planning routes using public transport and walking routes



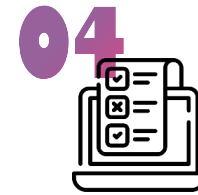
Execution



Online navigation to the meeting place with the client



Providing customer information Control of the visit to the mobile device



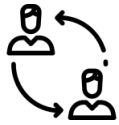
Recording results :

- Photo confirmation
- Checklists / questionnaires, etc.

Field sales



Planning



Job allocation between employees for several days, taking into account the portfolio of applications and skills of employees



Planning routes with :

- customer work time
- schedule of presence on customer territory
- home address of an employee



Execution and control

01



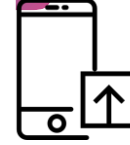
Sending detailed information on the task to an employee

02



Visit control and time spent on site

03



Collecting information on site
(questionnaires / checklists /
applications / ..)

04



Photo confirmation on jobs

05

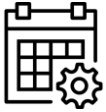


Real time transfer of performance
reports

Field service engineering



Planning



Allocation of jobs taking into account:

- schedule of technical maintenance
- skills of specialists
- priority of applications
- real-time adjustments to the planned route



Route planning based on:

- Available time
- work schedule of engineers
- priority of applications
- type of work



Execution



Navigating to the destination point



Detailed information about the place of work and a description of the problem



Photo confirmation of performed and / or identified issues



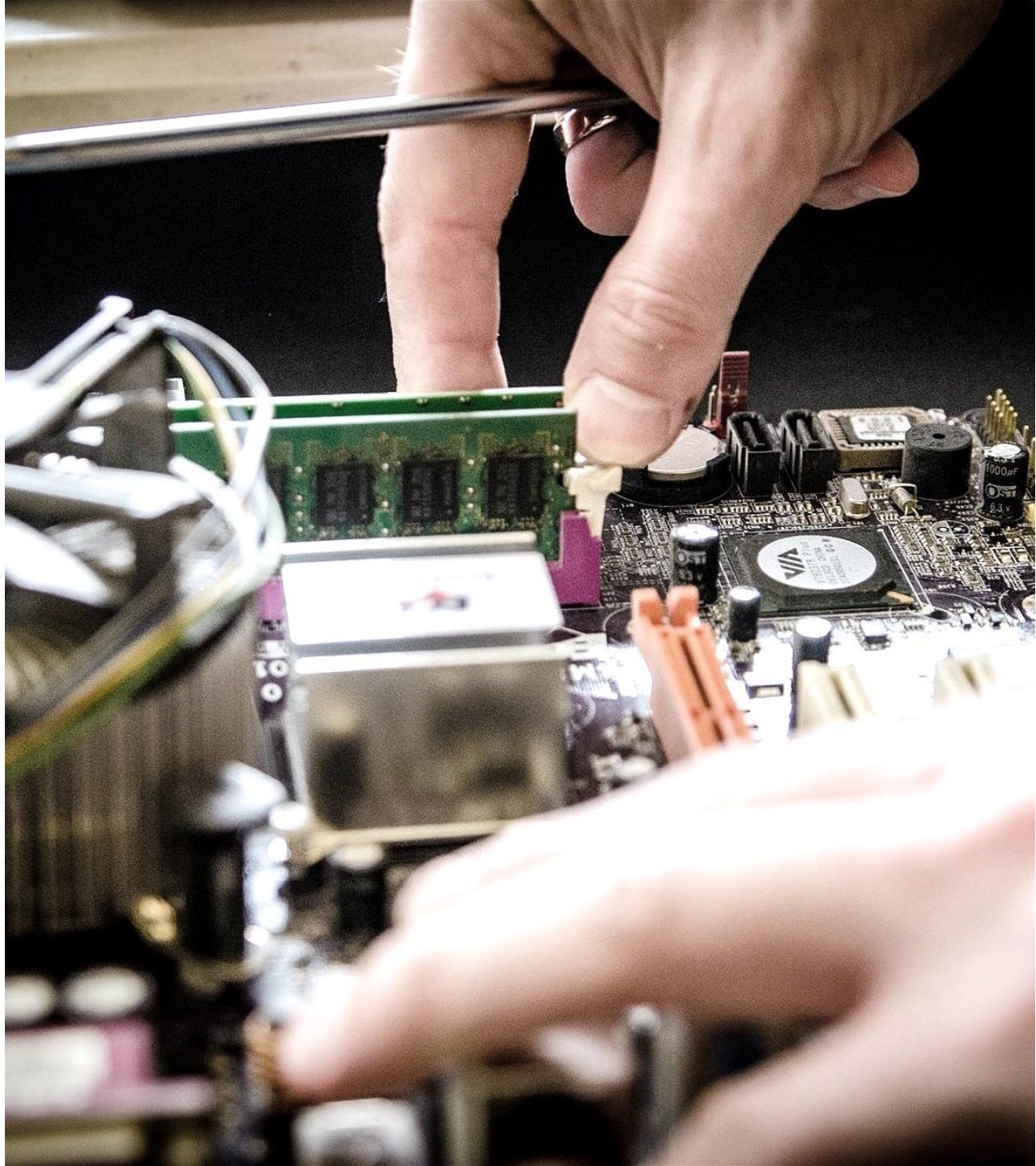
The ability to identify the service object by scanning a bar code



Tools & spare parts list



Checklist of works



Decision



Collection
of information from backend
systems



Mathematical scheduling
algorithms



Optimal schedules and
routes



Transferring
information to the mobile
devices



Integration to the backend
system



Control on employees
location and tasks



Reporting

Additional benefits



Reducing operating costs



Reducing the number of office workplaces



Increasing process transparency



Reduction of the human factor

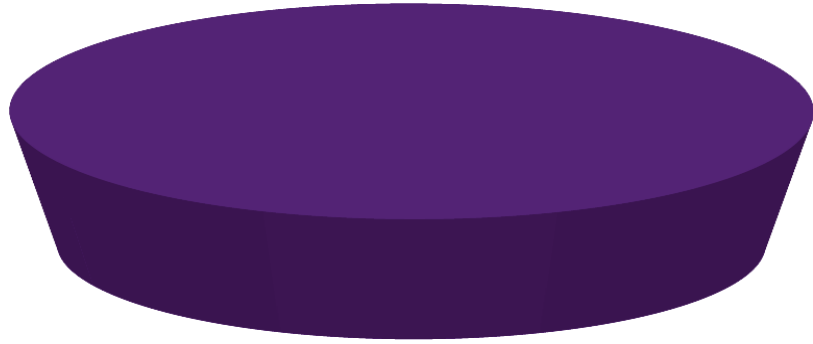


Centralized management and control



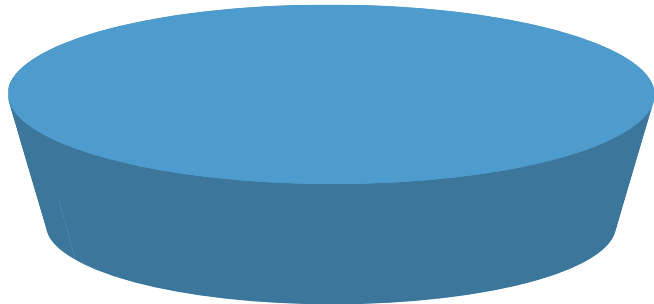
Preventing confidential information leaks

KPIs



Up to 50 %

Increase of visits/jobs per day



Up to 20 %

cost savings



Up to 10 %

additional revenue



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