
White paper

**Specification of requirements for an appointment
scheduling system in the housing repairs sector**

Appointment scheduling system requirements

Background

The challenge faced by today's housing repairs organisations is broadly as follows;

- Appoint all appointable work
- Keep every appointment
- Stay and deliver a first time fix, even if the repair takes longer than expected
- Still keep the next appointment
- Ensure best value – demonstrate high levels of productivity
- Ensure all business processes are designed around the customer

Common sense tells us that it is simply not possible to give an individual operative a perfect day's work that will both allow all appointments to be kept – even when some overrun and same day emergencies occur, and also ensure that the operative is kept busy all day.

An appointment system is therefore not really enough, we need a scheduling system that can help meet the dual goals. The scheduling system has two primary jobs;

Help the contact centre make 'Smart appointments'

The objective here is to achieve a schedule that is achievable, flexible and where the workforce loading is driven to the desired optimum level for each organisation. System requirements here are;

- Real-time allocation to operative's diary, not to a static view of capacity with subsequent scheduling
- Route planning and travel optimisation
- Dynamic re-scheduling as each new piece of information is received – this is the only way to ensure workforce loading is correct
- Support for flexible and overlapping appointment windows, variable by contract
- Provide visibility of operative proximity when offering appointments
- Allow remote areas to be time profiled to group appointments
- Support multiple level operative skill definition to allow contact centre allocation rules to be different to second level allocation rules
- Provide visibility of forward loading by any group (trade, area, all etc)
- Provide management information on distribution of appointment types to manage schedule flexibility

Support flexible working to ensure all appointments are kept

The second requirement is a consequence of the fact stated above that it is not possible to fully meet the modern repairs challenge if operatives are given a fixed day's work in advance.

The solution is to move to a more flexible, pool, or team working structure. Here the culture is that the organisation has a set of appointment / promises to keep each day and a team of operatives to keep them. It isn't possible to know exactly how this will be done at the start of the day, but if everyone communicates and works together, then the appointments can be kept AND everyone can be kept busy. System requirements here are;

- Support dynamic re-scheduling on status updates received from operatives
- Recognise different operatives may take different times for the same work
- Constantly route plan when re-allocating
- Always respect
 - The appointment time
 - Operative skill capabilities and usage preferences
- Allow intervention and manual override of any rule
- Allow schedule over-booking if required
- Provide central visibility of potential schedule conflict
- Provide flexible options for the central planning team to determine which jobs to re-appoint if necessary
 - Priority
 - Visit status (first visit, follow-on, previously cancelled, complaint etc)
- Provide central visibility of future appointments that can be pulled forward to help keep an operative busy
 - Skill match
 - Tenant availability indicator
 - Proximity to operative's location

Other considerations:

The above requirements are the core mandatory capabilities needed in an appointment scheduling system, there are several other significant considerations however, arising from the differing operational requirements of today's housing organisations.

The system needs to cater equally well for an organisation with an in-house workforce and one with external contracting arrangements (or a mix of both); it needs to integrate seamlessly and easily into the multiple system environments that are common in these cases and needs to support the fact that many repairs organisations are seeking additional work from external clients, some who will take the initial call themselves.

Mobile working

This is a very significant consideration because it unlocks the full potential of the scheduling system to deliver flexible working, which in turn makes it possible to achieve both high service levels and high productivity.

Whilst a mobile data solution is a highly desirable addition to the scheduling system, it should not be an integral part of the scheduling system for the following reasons;

Strategic platform

Housing organisations are all looking at the potential for employing mobile working across their businesses. Requirements exist for property and void surveys, rent arrears, letting officers, work inspectors and many more. The repairs requirement is simply one of the many capabilities the mobile platform needs to support.

The system should therefore be a strategic extension of the core business systems, but one that is open enough to provide the necessary integration to the scheduling system.

Contractor support

Many organisations have a mix of partners undertaking the repairs work. A well deployed mobile data solution can provide live information on job start and end times, which in turn can drive other business processes; for example, automatic call-out surveys on completion or even SMS satisfaction surveys sent on completion. These processes are only effective if they can be delivered across the service, so a mobile system that can be used by the in-house team but not external contractors is no use.

As organisations move towards larger contractors to support strategic partnering, increasingly those partners will have already invested in their own mobile data systems as part of the added value they bring to the partnership. The scheduling system must therefore easily accommodate integration from any third party mobile data system, whilst at the same time linking to the core mobile platform and even offering SMS support so that ad-hoc individual contractors can provide live updates without any investment.

System requirements are;

- Provide standard integration capabilities for any and multiple simultaneous third party mobile platforms
- Provide standard e-mail and SMS based job detail and status update capabilities to supplement the above for ad-hoc contractors

Integration

The appointment system will need to support a business seeking additional work from external clients, who will have any of the commonly available housing management systems, as well as integration with external contractor systems. It should be understood that these systems are not easy to integrate with.

System requirements are;

- Ability to integrate to multiple, different core business systems simultaneously
- Open architecture with standard APIs for all core transactions
- Standard commercially available interfaces from the main Housing Management Systems and Contractor Systems
- Standard commercially available interfaces from as many mobile data solution suppliers as possible