



**FireServiceRota**

**A Buyer's Guide to  
Planning & Alerting  
Software for Firefighters**

# About this guide

This guide will help you:

- Identify the features you should be looking for when selecting planning and alerting software for firefighters. The brochure is intended for wholetime, retained and mixed crew fire stations.
- Understand how integrating wholetime and retained firefighters under the same software can add flexibility and resilience to the Fire and Rescue Services.
- Understand what benefits smart alerting, confirmation of attendance and re-alerting may bring to your organisation.
- Evaluate FireServiceRota as a potential provider of availability planning, alerting and scheduling software.

For over a decade, we have specialised in software designed to give firefighters flexibility and a better work-life balance while ensuring appliance availability and peace of mind to managers at Fire Stations.

After reading this guide, you will be able to identify the most important decision criteria when choosing software dedicated to optimise crew management in both retained and wholetime stations.

Cor Klaasse Bos & Ruben Stranders  
Founders

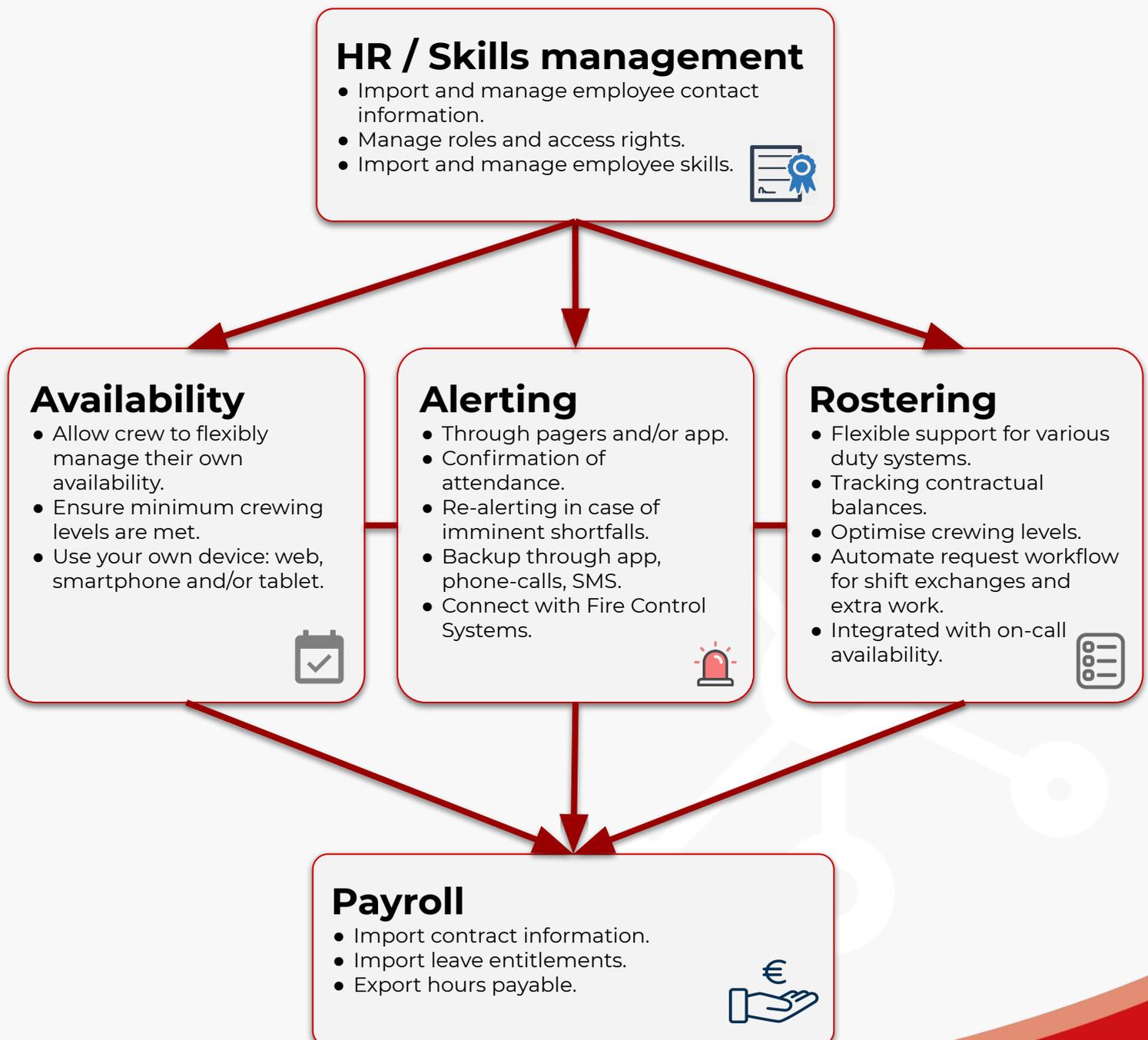


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# Effective processes through integrated systems

In a modern Fire and Rescue service, many processes are connected. So should the systems supporting them. Services looking to change their resource management systems should consider which modules should be an integrated part of the system itself, and which connections with outside systems should be made. Below, we provide an overview of how Resource Management modules are connected.



# The purpose of Availability Software

Fire and Rescue Services have been dealing with diminishing financial and human resources demanding innovative solutions to provide the highest level of service to the public. Among the challenges that Fire and Rescue Services have to deal with, is the challenge of optimising the efficiency and effectiveness of staff and appliances.

Times have changed and the lifestyle and responsibilities of firefighters are no exception. More people are commuting, work schedules are more flexible and, in general, balancing work and life commitments has become harder. This means that the availability of staff has become less predictable and harder to control.

Both wholetime and on-call fire stations look for more effective crewing models that ensure appliances are kept available while providing more flexibility to firefighters and optimise performance.

**In the end, it all comes down to having the right people, at the right place, at the right time. This is where Availability Software comes in.**

Availability Software allows fire authorities to effectively and flexibly manage resources. It ensures the readiness and resilience of stations and provides tools to firefighters to manage their own availability and shifts.

It also allows you to store, manage and report on all the information generated by the users and use it to make smarter, more informed decisions.

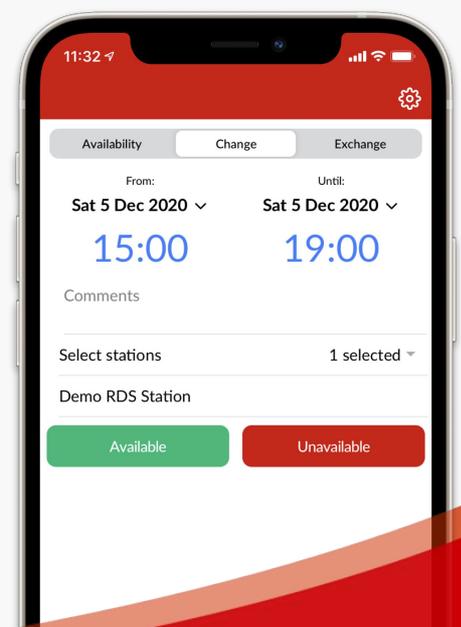
# Decision criteria for the Retained Duty System

What exactly makes for good Availability Software? We outline the essential features Availability Software for Retained (or on-call) Stations should have: Crewing Levels Assurance, Employee Management, Internal Communication Tools, and Station Performance Reporting.

## Crewing Levels Assurance

Managers should have insight into the availability status of their station. This means that Availability Software must:

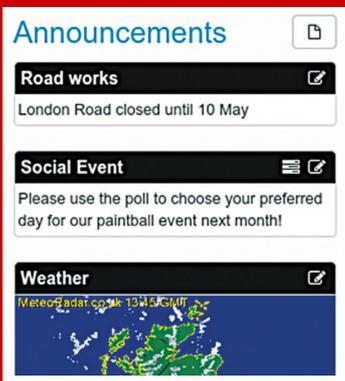
- Allow the organisation to manage crewing requirements for all emergency vehicles. Minimum crewing levels are based on staff numbers, roles and skills.
- Allow all retained personnel to manage their availability to a 15-minute granularity through different channels, such as web, mobile apps and smart pagers.
- Warn the users when they are about to cause crewing shortages (take the pump off the run) by becoming unavailable.
- *bonus*: Automatically warn firefighters when they are on-call and move too far away from the station.
- Warn managers through email, push notification and/or SMS in case of (imminent) understaffing.
- Connect with Fire Control software to feed the live availability status of the emergency vehicles.
- Offer configurable station or regional dashboards displaying:
  - a list of available personnel
  - the live and forecasted availability status of all emergency vehicles
  - weather forecast, roadworks and station announcements
- Provide business intelligence and reports about when crewing issues occurred, with detailed insight about which skills were deficient.



## Employee Management

The ability to manage employees' contracts and skills is essential to effectively manage a station. Therefore, Availability Software should also:

- Track and display contractual targets of individual employees. Inform users about their fulfillment of contractual obligations.
- Export staff availability and attendance information to payroll systems.
- Allow managers and supervisors to manage employee skills.



## Internal Communication Tools

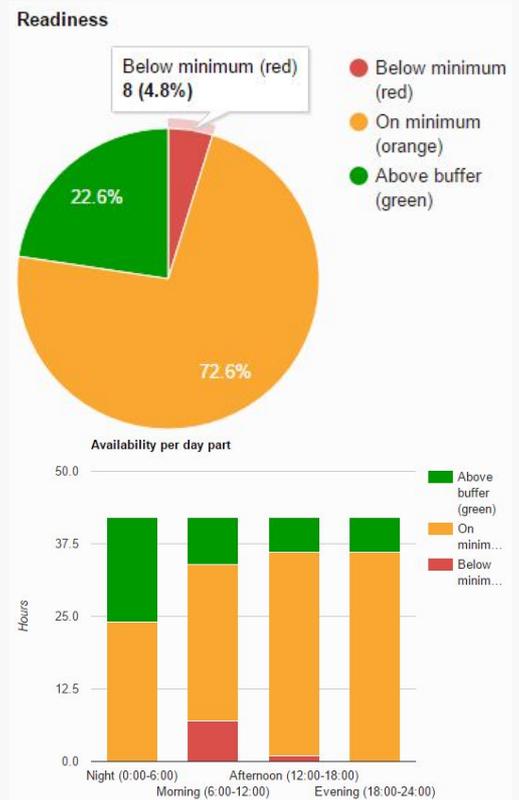
Efficient and powerful communication tools are key to improve the performance of stations, so software should also:

- Allow to broadcast messages to firefighters via web, email, push notifications and SMS messages.
- Let users send/receive messages via mobile app.
- Create polls, surveys, and organisation-wide messages.

## Station Performance Reporting

To improve over time, fire authorities must have access to actionable data to make smarter, more informed decisions. That is why Availability Software must be able to:

- Analyse and report on availability and performance of firefighters and vehicles. This includes number of hours/shifts worked, and how often firefighters were critical in keeping the appliance available.
- Help focus recruiting and training effort based on the moments that particular skill is frequently causing staffing issues.
- Show statistics about crew availability during different times of day and week.
- Provide contractual compliance reports.
- Produce statistical information required by government supervisory authorities, such as the HMICFRS.



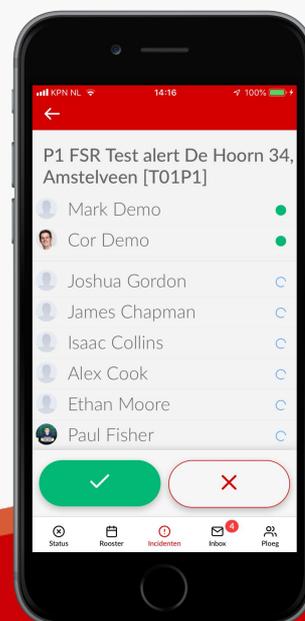
# Alerting the right crew at the right time

Planning the availability and shifts of firefighters is all about **getting the right crew at the right place at the right time**. This requires knowledge of the units mobilised, required crew levels, staff availability and their skills. The process below outlines how a Resource Management System can support a reliable, fast and efficient alerting process:

1. A real-time integration with your Command & Control software (i.e. Vision, SEED, IHM or GMS) provides live information about the units mobilised. In the event such mobilising software is experiencing issues, units can be mobilised from within the Resource Management System instead.
2. The planning and rostering system uses intelligent routing to alert firefighters on their smartphones as a push notification, (smart) pagers, SMS and/or phone calls.
3. Firefighters confirm their attendance to incidents. By confirming they are on their way to the fire station, they providing assurance to managers and control rooms in seconds after the alarm.
4. In case imminent shortfalls are detected, the system automatically (re>alerts additional crew. This increases the unit's response reliability and reduces the overall response time by minutes.
5. Ideally, only the minimum required (available) crew is mobilised. Extra crew is only mobilised in case their attendance is required to restore crewing levels. Unnecessary disturbance and traveling is avoided, fairness is ensured, COVID risk is reduced and the cost of mobilising supernumerary crew is prevented.
6. The predicted and actual availability status, based on confirmed attendances, is shown on station dashboards. This may include additional information such as the alarm message, route to the incident and StreetView image. The integration to Fire Control software provides real-time information about a unit's ability to respond, and whether backup is needed.



Dedicated smartphone apps provide a serious extension, a backup, or even an **alternative to pagers**. Their ability to monitor their connection and respond to incidents with a confirmation opens up many new benefits to firefighters, Fire Control and the communities they serve.



# Decision criteria for the Wholetime Duty System

Stations that work under the Wholetime Duty System have been faced with constant budget constraints for the past 10 years. As a result, fire authorities have been looking for solutions to optimise resources and make the Fire and Rescue Service more efficient. Below we outline some of essential features the software must have.

## Roster optimisation

Earlier, we mentioned that Availability Software was meant to ensure that the right people are available at the right place and at the right time. Sometimes wholetime duty stations are crewed over optimal staffing levels to achieve resilience. However, this can create cost inefficiencies and put pressure on the work-life balance of firefighters.

Flexible rostering allows fire stations to optimise their crew distribution and prevent paying out overtime by rostering off people above optimal crewing levels or redeploy them during times of crewing shortages.

Implementing flexible rostering software can be of great benefit to Fire and Rescue Services if it provides the following features:

- Manage various operational roster types, such as Flexible Crewing, Wholetime, or Day Duty.
- Support various types of duty systems, such as 2-2-4, three shift (Metropolitan) and 5-watch shift.
- Allow managers to specify minimum crewing requirements for each appliance.
- Allow detailed specification of the firefighter role down to the appliance seat.
- Alert users when they are about to breach the crewing rules of the station.
- Move crew members from one station to another and warn if the move causes crewing issues.
- Automate a request-and-approval workflow for shift exchanges between users.
- Automate a request-and-approval workflow for requesting personnel to work an extra shift.
- Audit all shift modifications.
- Allow for the capture of various special shift codes, such as leave, TOIL, sickness, resilience.

Week	Shift	Mon	Tue	Wed	Thu	Fri	Sat	Sun
5	Day shift	30	31	01	02	03	04	05
	Night shift							
6	Day shift	06	07	08	09	10	11	12
	Night shift							
7	Day shift	13	14	15	16	17	18	19
	Night shift							
8	Day shift	20	21	22	23	24	25	26
	Night shift							
9	Day shift	27	28				04	05
	Night shift							

Effective Rostering Software supports various types of duty systems, such as the 2-2-4.

	Special skills			
Wed 09 Dec				
Duty	1	2	2	3
Thu 10 Dec				
Duty	3	1	2	3
Fri 11 Dec				
Duty	2	2	1	1

Monitor the availability of specialist skills, flexi duty officers and other teams.

## Robustness and flexibility

When evaluating different providers, it is important to consider how specific goals can be accomplished: from managing multiple operational staff roster types to sending information to the organisation's payroll solution. Look for software that can help with several aspects of personnel management. In more detail, software should:

- Allow users to manage and view their roster online and by mobile app.
- Hold employee personal details, such as address, pay reference number, rank, phone numbers and comments.
- Have plannable and non-plannable profiles, the latter of which allows administrative members to make timely and appropriate changes.
- Allow managers and supervisors to manage employee skills.
- Manage all aspects related to leave, overtime, time off in lieu (TOIL) and public holidays according to the policy of the organisation, or that of individual stations.

## Payroll integration

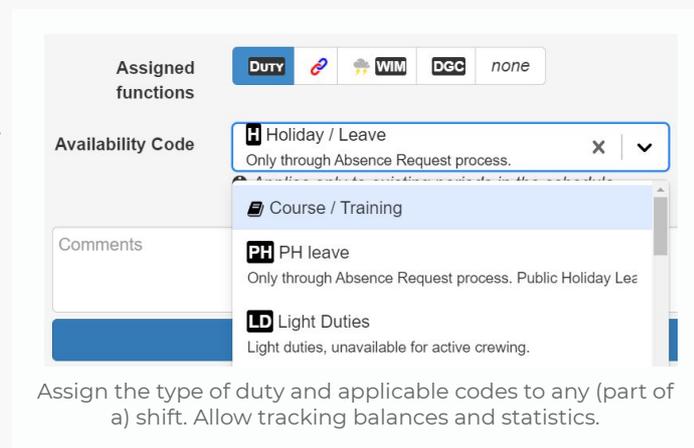
Cost efficiencies can only be registered and audited through a system that:

- Calculates the number of shifts worked, broken down into shift type, hourly value and booking code.
- Manages leave based on the number of shifts or a period of time.
- Allows overtime to be claimed as a payment or as Time Off In Lieu (TOIL).
- Requires all overtime transactions to be authorised by managers.
- Integrates with the organisation's existing payroll solution.

## Reporting Tools

The ability to measure is the first step towards improvement, so the chosen system should provide a wide set of reporting tools that support decision making. The essential features are:

- Report on all aspects of an employee's performance, including leave, sickness, overtime and shift adjustments.
- Track and audit contractual targets.
- Apply filters and selections to tailor individual reports.
- Export reports to PDF, Excel or CSV formats.



# Operational efficiency: Wholetime and Retained stations working together

The next level in operational efficiency can be achieved through the cooperation between Retained Duty System and Wholetime Duty System staff.

Call in wholetime personnel for on-call stations that are temporarily under strength. Allow on-call personnel to cover resilience shifts for wholetime stations. Collaborative planning provides the ultimate flexibility and resilience for fire authorities.

A cutting edge planning and rostering system, such as FireServiceRota, helps select the most suitable candidates to work an extra shift or to exchange a shift with. Once a duty-candidate accepts, rotas are automatically updated. This automated request-and-approval workflow uses clear messaging and keeps track of all transactions. It reduces administrative work, speeds up the process, and offers more flexibility to on-duty crew.

### Request extra shift

**Period**  
From: Tue 10 Jan '17 12:00  
Until: Tue 10 Jan '17 18:00 (6:00)

**Comments**  
Looking for extra cover..]

**\* Functions**  
Commander | Driver | Firefighter

**Candidates for duty**  
Find candidates | Select all | Select available | Clear selection

Full Name	Skills	Readiness	Member of	Comments	% performed / allocated
<input checked="" type="checkbox"/> Harry	🚒 Co	🔴	2-2-4 Demo Wholetime Station		9.2 / 91.6%
<input type="checkbox"/> Anthony Spencer	Co	🔴	2-2-4 Demo Wholetime Station		11.1 / 92.7%
<input type="checkbox"/> Ruben Demo	🚒 Co	🔴	2-2-4 Demo Wholetime Station		
<input type="checkbox"/> John Hill	🚒 Co	🔴	2-2-4 Demo Wholetime Station		10.0 / 91.6%
<input checked="" type="checkbox"/> Finley Macdonald	🚒 Co	🟢	2-2-4 Demo Wholetime Station		10.0 / 91.6%
<input type="checkbox"/> Mark Demo		🔴	Demo Station 2-2-4 Demo Wholetime Station		11.1 / 92.7%

Look for the optimal candidates, invite them to provide extra cover, and capture their responses through a smartphone app.

FireServiceRota manages retained and wholetime staff within the same system, meaning that the organisation can integrate different personnel to allow more personal flexibility and provide resilience when the organisation is under strength.

# IT infrastructure considerations

Besides the scope of the functionality looked for in software, there are many technical considerations that should influence the decision making process. One thing to have in mind is to avoid getting generic one-size-fits-all software that pretends to 'do it all'. Instead, look for specialist solutions that integrate with other specialised solutions. No software is built the same, so it's important to pay attention to specific details.

## Accessibility and availability of the system

Look for service instead of servers. Most modern software is delivered via the cloud, meaning that it should be accessible through any device with an internet connection. This is called "Software-as-a-Service" (SaaS).

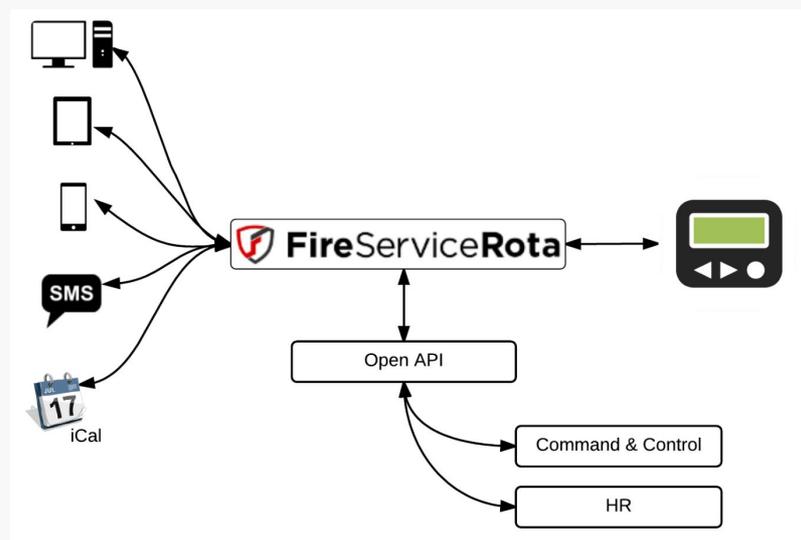
SaaS removes the need to install and maintain dedicated servers or allocate costly resources from the IT department. Look for software that provides regular updates and technical support to ensure that servers are maintained, secured and backed up.

Reliable SaaS must be able to guarantee 99.9% uptime and state-of-the-art software can expect 99.99% annual system uptime.

## Integration with other systems

We recommend getting software that is able to interface with existing Command & Control (i.e. Vision, SEED, IHM or GMS), Payroll, HR, Incident Management, and other systems.

Look for software that has an open and well documented XML/JSON Application Programming Interface for retrieving reports, user data, rosters, etc. Make sure the provider can guarantee that data is protected and secured with the latest security standards.



Availability Software should have an open API to integrate with other systems at low cost and with great flexibility.

## Security

Since availability, payroll and rostering software holds sensitive information, it is imperative that the provider is protecting all data with the highest security standards.

Look for a system that complies with the Data Protection Act, uses up-to-date server software and encrypts all communication using TLS/SSL to keep the data safe against prying eyes.

The supplier should host and backup the system in servers within the European Economic Area in ISO 27001 certified Data Centers.

## Version Updates

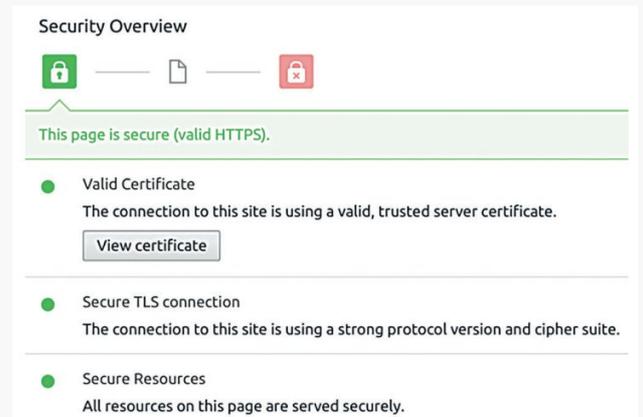
Getting Availability Software should not be a one time transaction without user guarantees and support. Look for a system that provides regular, free-of-charge, automatic updates to the system to improve security, performance and provide new functionality. Without causing any downtime for your organisation.



# ZERO DOWNTIME

## Support

The best software provider should be able to fix issues before the customer is confronted with them. A provider should have real-time error capturing and use automated tests to ensure that the system performs correctly. In addition, users should be able to contact system administrators regarding possible errors and faults. The provider should commit to fix any critical problem within hours, regardless of time and day.



Availability Software holds sensitive data, so it must comply with the highest security standards.

# Why does FireServiceRota offer the best value?

FireServiceRota takes pride in being software created by firefighters, for firefighters. **It complies with and exceeds most of the expected features mentioned in this guide.** However, we believe that software needs to be flexible to adjust to ever changing business processes and requirements. This is especially true for Fire and Rescue Services who are faced with changing policies, the need to collaborate with other blue light services, and to remain resilient with ever changing resource availability.

We strongly believe in a long-term partnership with the customer before, during and after implementation. By working as one team with our customers, FireServiceRota can guarantee not only to meet existing requirements, but to continue to do so through the evolving scenarios and challenges afterwards.

We collaborate with customers using the Agile approach. This approach increases the speed and quality of software development by working in small, manageable increments (sprints), and incorporate the frequent feedback of customers. Each sprint has inspection, testing and sign-off built in. It also ensures that functionality with the highest business value is delivered first, thereby maximising return on investment.



The Agile approach increases the speed and quality of software development.

# What customers say about FireServiceRota

We have extensive experience with delivering our software in an agile way. This is what our customers have to say:

*“[Shropshire F&RS] have worked closely with [FireServiceRota] throughout the past four months and it is really impressive how rapidly they have introduced new features. This has enabled us to introduce a new and quite unique working pattern in Shropshire with the confidence that the software has the flexibility to allow us to change in future.”*



**Sally Edwards**  
ICT Manager  
Shropshire F&RS



**Martin Swinden**  
Resource Manager  
Warwickshire F&RS

*“Since April 2018, Warwickshire Fire & Rescue Service (WFRS) have formed an excellent relationship with FireServiceRota (FSR). With great communication we have been able to build (and continue to develop) a product that has surpassed our expectations. FSR's open and agile approach has resulted in WFRS receiving an efficient and dynamic rota management system.”*

# Conclusion

Achieving efficiency while providing the highest level of service to the public has become an increasingly difficult task. However, fire authorities can get back in control and optimise crew management for retained and wholetime stations as well as officers and support staff. A well integrated and user-friendly system helps optimise your processes in the areas of Availability, Alerting, Payroll and Rostering.

The objective of this document was to provide a scope of the criteria to keep in mind while evaluating software for the Fire and Rescue Service. We acknowledge that every single station has its own challenges and conditions. This is why we encourage you to search for a system that has the flexibility to adapt to the specific needs of your organisation.

FireServiceRota can become a valuable partner to your Fire and Rescue Service by tailoring our software to meet your current requirements, and continue to do so through the ever-changing times.

You don't have to take our word for it. We would be very happy to connect you to our other customers to share experiences. You can also get hands-on and try out the software in a free trial period. Or, schedule a demonstration meeting and discuss what FireServiceRota can do for you.

Contact us on [info@fireservicerota.com](mailto:info@fireservicerota.com)





[www.FireServiceRota.com](http://www.FireServiceRota.com)