

# THE SANTA ANA COLLEGE FIRE TECHNOLOGY PROGRAM

Removing Barriers to Firefighter Health and Wellness

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## ABOUT SANTA ANA COLLEGE FIRE TECHNOLOGY

**Santa Ana College Fire Technology** (SAC Fire Tech) provides training, education, and certifications for aspiring and incumbent fire and emergency service professionals. The SACFIT Wellness Program partners with more than 30 fire departments in the Southern California area and currently services more than 4,000 students. The SACFIT Wellness team consists of over 90 instructors with uniquely specialized backgrounds and focuses on improving the fitness and wellness of potential and incumbent firefighters.

Over the last 30 years, they've collected health, fitness, and wellness data using standardized assessments for Body Fat, Flexibility, Muscular Strength and Endurance, Pulmonary Function and Cardiorespiratory Fitness. SAC Fire Tech also administers the Biddle Physical Ability Test (PAT) and is home to one of oldest community college Fire Academies in the state.

## OVERVIEW- THE SAC FIRE TECH & FUSION SPORT PARTNERSHIP

### Opportunity

SACFIT's innovative leadership team saw an opportunity to help firefighters stay healthy throughout their careers and into retirement. They believed that if they could effectively analyze 30-years of firefighter fitness, wellness, and health data, they could further optimize firefighter wellness efforts. SACFIT also saw the potential to provide insightful original research to influence how the industry supports the health and wellness of First Responders.

### Challenge

The success of SACFIT Wellness outpaced the capabilities of a legacy data solution. The massive amounts of data existed in a rigid, spreadsheet-based, flat-file system, making it difficult and time-consuming to capture, manage, and visualize it in a meaningful way. The volume of information, the prospect of changing systems, and developing and adopting new protocols was projected to require an inordinate amount of time and additional resources.

### Solution

In close partnership with Fusion Sport, SACFIT data was migrated to **Smartabase**, a Human Performance Platform. Paper-based data and spreadsheets were replaced with mobile-friendly input forms and custom dashboards for real-time data reporting and visualizations. The SACFIT Wellness team was empowered to make changes as they needed to support the wider rollout and evolve with growing needs.

### Impact

Today, students, prospective firefighters, academy students, working firefighters, and departments interact with their data to better understand the factors that impact their health and wellness. By monitoring a range of metrics, personalized training programs are developed to help users maintain their levels within firefighter-specific norms. The flexibility of Smartabase allows SACFIT Wellness to evolve their solution and continue to address and mitigate barriers to firefighter's health and wellness.

## THE OPPORTUNITY

*Using Historical Data to Drive Firefighter Health & Readiness*



We have one of the largest databases of firefighter health and fitness data in the country. Our vision is to use it to help firefighters have long and healthy careers and enjoy a vibrant retirement.

When the Santa Ana College (SAC) Fire Technology Wellness program (SACFIT) began administering field-based assessments, all the data was captured on paper and manually entered into Excel spreadsheets, with paper copies kept as a back-up. Over the course of 30 years with thousands of firefighters, police officers, and lifeguards coming through their program, the boxes of paper piled up.

Despite the highly manual process, Kris Ross, Coordinator of SACFIT Wellness, and her team saw the tremendous value of this historical data. With the right system, the team believed firefighters could track their progress over time, get to know their own bodies and minds better, and receive personalized fitness programs to optimize performance, reduce risk, enhance a healthy career, and enjoy a long retirement. At an aggregate and de-identified (anonymous) level, departments and stations could look at trends, assess risks and needs, and identify specific opportunities to further support personnel.



## THE CHALLENGE

*When Your Data Systems Can't Keep Up*



We often had to contact a third party to get the report we needed. When you're so busy, and you have to rely on someone else, it often just didn't happen. Or by the time we did get what we needed, it was irrelevant because we'd already made a decision and moved on.

Over the 30+ years, the SACFIT program grew to support more than 30 fire departments, and over 5,000 users. They'd also developed firefighter-specific health and fitness norms – a cornerstone of their program. SACFIT Wellness also employs more than 90 instructors and schedules them to deliver courses or administer exams at multiple locations across Southern California.

Everyday tasks, such as matching instructors with a course and location took several hours. When they needed data to help them make a decision or answer a question, they often couldn't get it in a meaningful format and timely manner.



So began their search for a new data solution. Based on SACFIT's unique needs and the size of their existing data sets, they required a flexible, sophisticated, fast, and secure solution. They also wanted a partner who could help them realize the value of their historical data and empower their internal team to evolve the solution as needed.

Specifically, the SACFIT Wellness Team was looking for a partner to help them:

- Present data in a dynamic, visual, and interactive way
- Provide aggregate data in a timely fashion and meaningful format
- Stay engaged with users when they weren't physically at the college
- Reduce and optimize the time required to manage data and administer their program

## THE SOLUTION

*Flexibility to Meet Current Needs and Jump on New Opportunities*

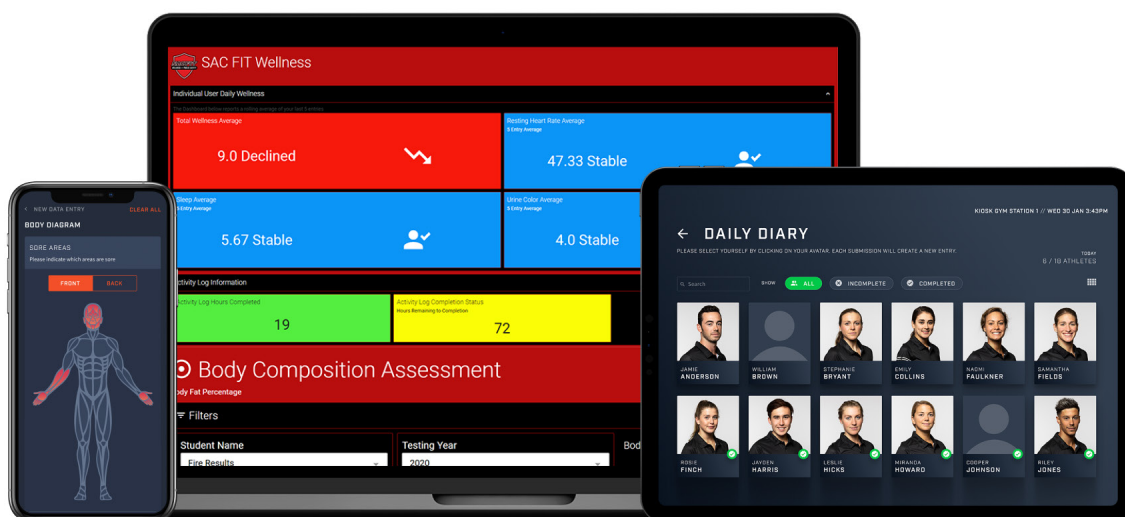


We knew Fusion Sport provided the best options for our program. But change is hard – some stakeholders felt it was easier to keep doing what we were doing. But once they saw Smartabase in action, they realized the potential and shared our excitement to grow and evolve.

The SACFIT team vetted several vendors – most of which offered canned forms and norms. However, because SACFIT Wellness had an existing combination of assessments and wanted to further build upon the norms they'd created using decades-worth of their own data, it was apparent other vendors were not a good fit for the needs of the program.

At an industry conference, Ross was introduced to Fusion Sport. Between sessions, one of Fusion Sport's Sport Scientists pulled out his laptop and showed her how Smartabase could benefit the SACFIT Wellness Program. After more due diligence, evaluating options, and speaking with peers who had experience working with Fusion Sport, the SACFIT Wellness Program knew they'd found the right partner.

Since then, the SACFIT Wellness Team has worked closely with Fusion Sport's **Sports Science Consulting team** to implement Smartabase. The massive data migration was successfully completed and norms uploaded. Input forms for assessments, daily wellness checks, and instructor availability were created. Custom workflows, reports, and interactive dashboards with data visualizations were built and deployed to bring the data to life for all.

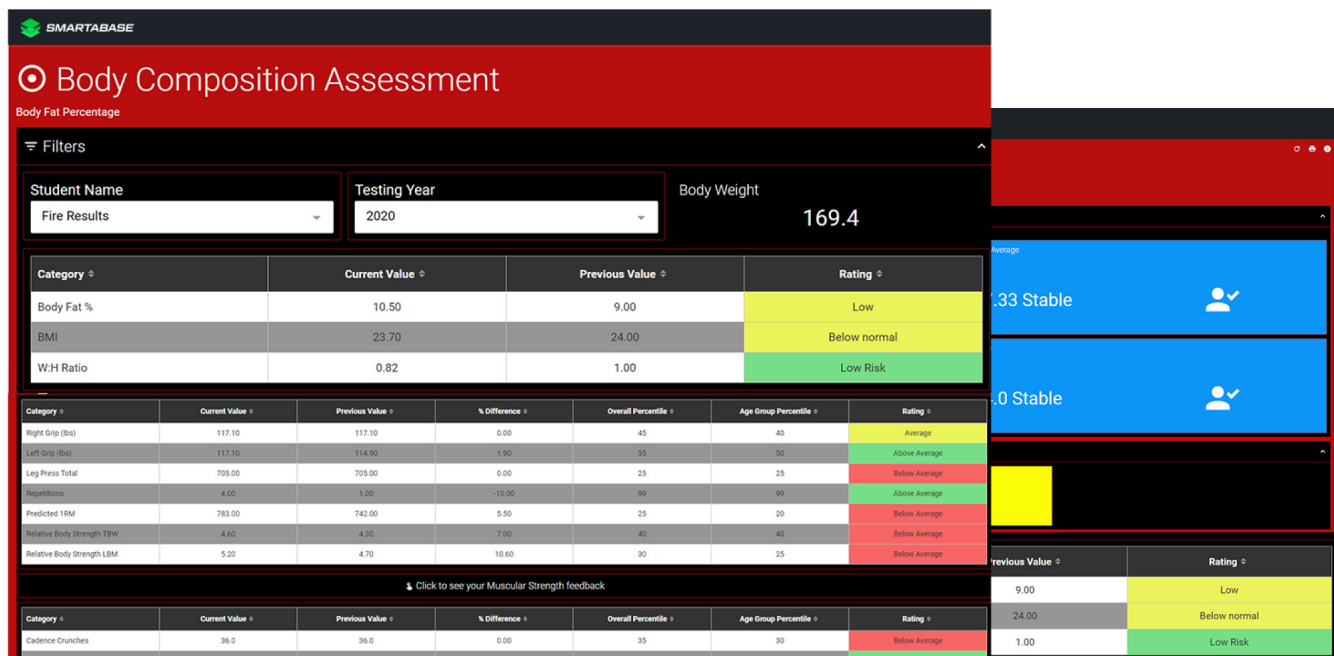


The roll-out began with a few early-adopter departments in the Santa Ana region. With support from the SACFIT Team, these working fire agency “beta” sites field tested the new system under real-world conditions, and provided the feedback required to work out any wrinkles. This iterative approach expanded to more than 30 departments and over 5,000 users.

Most importantly, when the SACFIT Wellness Team identifies opportunities to create a better user experience or have a greater impact, the flexibility of Smartabase allows them to quickly build, test, and deploy a solution – often within seconds or minutes.

In one of many examples, SACFIT Wellness piloted a new data input kiosk with one of their agencies. During the pilot, the SACFIT Team realized the added benefit of capturing two measurements at each skinfold site. To ensure both measurements were taken, a prompt was easily added to the workflow within minutes.

On another occasion, the SACFIT Wellness Team needed to limit the number of departments participating in a blood draw. They quickly added a field and updated the dashboard to show when a blood draw was at capacity. Many more examples demonstrate that Smartabase allowed the SACFIT Team to adjust on the fly as events shifted.



## THE IMPACT

### *Removing Barriers to Firefighter Health & Readiness*



Because of the flexibility of our solution, we can quickly make changes that help remove barriers to firefighter health and readiness. Sometimes it's as simple as adding a button or creating a new field that's the difference between a firefighter getting the help and resources they need or not.

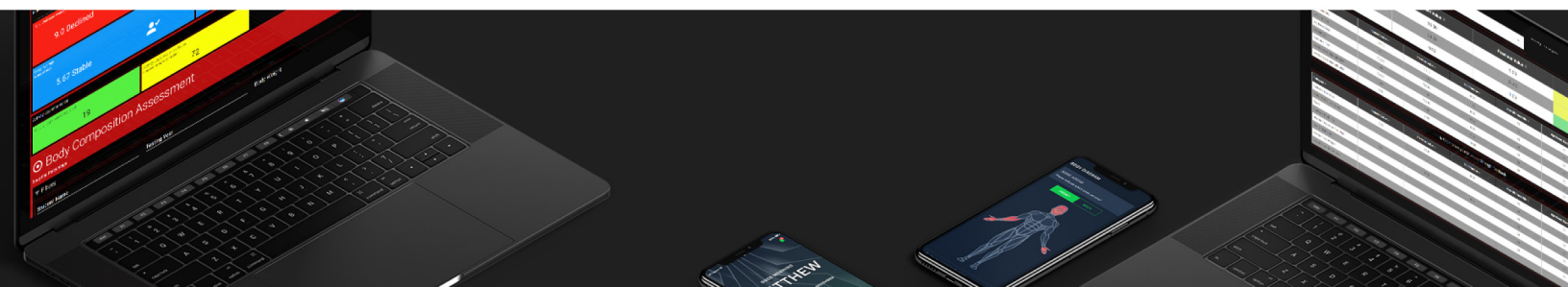
Yes, there is value in not having the headache of entering and filing paper scorecards or weeding through emails for hours to match instructors with locations. But these efficiencies were only a part of what the SACFIT Wellness Team wanted to achieve with the implementation of Smartabase.

Now that processes have been automated, the bigger impact comes from what the team CAN focus on. Going back to the original vision – making this data accessible, interactive, and meaningful to all users, SACFIT Wellness can help firefighters stay healthy during their careers and well into retirement.

Using Smartabase, firefighters and departments working with SACFIT Wellness can see current health and fitness scores and how they evolve over time. Users are provided a confidential alert when any metric, from blood glucose and cholesterol to flexibility and recovery, falls outside of the SACFIT Wellness norms. Armed with this awareness, the proper steps can be taken to get firefighters back toward optimal performance. In addition, firefighters can print their own health data from the system and share it with their personal physician to help inform further health efforts, diagnosis, and treatment.

On a larger scale, SACFIT Wellness can now efficiently conduct more original research faster around issues affecting First Responders using the data. For example, in partnership with Dr. Rozenek of Cal State Long Beach, the SACFIT Team examined [coronary risk factors for firefighters and identified early warning signs](#). The SACFIT Wellness norms are also a high-value asset, since firefighters can more accurately be evaluated against their own data, peers, and agency versus general population data.

The insights uncovered from analyzing their own historical data not only helps SACFIT Wellness improve their own programs, but also influences the industry as a whole in furthering innovative solutions that improve the health and wellness of firefighters and first responders.





# ABOUT FUSION SPORT

Fusion Sport is a global leader in human performance solutions and enterprise data management. Our customers include many of the world’s highest profile sports teams, national sporting federations, Olympic committees, research, government, and military organizations.

To discuss how we can help you can realize the full potential of your data and improve first responder health and wellness, contact us.

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