V ORIGAMI RISK

CASE STUDY

FAST, SIMPLE, EASY

Technology solutions streamline fire-safety processes and improve outcomes at the University of Southern California

We use the system regularly to send inspection reports, issue permits, and track trends in fire safety. Origami Risk is an integral program to our core functions.

At a Glance

Client

USC Fire Safety (Office of Fire Safety and Emergency Planning), University of Southern California

Challenge

Drive efficiencies and improve the tracking of fire safety inspections and hazard corrections, hot work permitting, and other core fire safety activities

Solution Suite

Environment, Health & Safety

Solutions

Investigations, Online Portal, Automated Notifications, Dashboards, and Reports

Results

Streamlined investigation and hot work permitting processes

Improved insight into where pending items stand

Ability to provide university leadership with fire safety metrics

UNIVERSITY OF SOUTHERN CALIFORNIA Fire Safety and Emergency Planning

ABOUT USC AND THE OFFICE OF FIRE SAFETY AND EMERGENCY PLANNING

One of the world's leading research universities, the University of Southern California, has an enrollment of approximately 46,000 students, 4,600 faculty members, and a staff of 16,000. In addition to its main campus in the University Park district of Los Angeles, USC also operates the Health Sciences Campus and various satellite campuses, including the Wrigley Institute for Environmental Studies on Catalina Island.

The USC Office of Fire Safety and Emergency Planning team is responsible for carrying out a number of activities put in place to prevent fires and mitigate fire-related risks to students, faculty, staff, visitors, and all university-owned facilities. These include:

• Conducting inspections of nearly 400 buildings to identify and correct potential fire hazards.

- Overseeing fire safety compliance and enforcing fireprevention rules.
- Providing fire-safety training to campus staff, resident advisors, and those working in laboratories where flammable chemicals are present.
- Conducting building evacuation drills.
- Training the Building Emergency Response Teams (BERT) in fire-emergency and evacuation procedures.

Each year, a description of fire safety systems in place at residential buildings, along with details of fire drill and fire prevention program details, fire reporting procedures, and fire and fire alarm statistics are made available to the public in the university's Annual Security Report.

CHALLENGES

In 2016, Cpts. Robert Forsberg and Jeff Pendley of USC Fire Safety began the process of choosing a replacement for the software the team was using to track inspections and the correction of identified fire hazards.

Driving the decision were limitations with the original inspection database system. Inspection checklists and codes were cumbersome to maintain, the team was unable to upload and attach photos, and the software provided no convenient way to generate detailed metrics related to inspections. Communicating any potential hazards found during inspections meant memos needed to be sent via email to the stakeholders responsible for correcting hazards. This was not a convenient process given the team's responsibility for performing annual inspections for campus buildings, biannual inspections of anywhere from 26-37 residential properties, and follow-up inspections to ensure that hazards have been corrected. The team was also looking to better streamline processes around the university's hot work program, which requires contractors who perform welding, cutting, brazing, and grinding work on campus to apply for a permit and adhere to specific safety measures. At the time, an application and approval processes that involved sending emails and PDFs back and forth limited the team's ability to quickly review and approve permits, follow up on missing details, or quickly pull up a list of active permits for spot checks.

While disciplined, professional, and successful in their work of protecting the USC community, USC believed there was, as is always the case for any fire safety program, room for improvement.

SOLUTIONS

USC selected Origami Risk as the technology solution to undertake these improvements, as well as others that continue to make the USC campus a safer place to study, work, and live.

Demonstrations of automated workflow capabilities, online portals, dashboards, and reports made it apparent that Origami had the right tool for tracking inspections and streamlining the hot work permitting process. The team also recognized the potential for using the system in other ways, including tracking the levels of effort r equired w hen p erforming M aximum Allowable Quantity (MAQ) assessments for USC research labs.

"The key was Origami could promise to deliver the product we needed," Forsberg said.

1

Inspections: The USC fire team can now more efficiently conduct both ad hoc and scheduled inspections from the field via web portal-as well as create inspections and attach photos via mobile.

Hot work permitting: Contractors planning to perform 2 hot work on campus can now more easily apply for a permit by filling out a form on a portal linked from the USC website's Fire Safety & Emergency Planning page. After submitting the appropriate information, details are automatically routed to the Fire Safety team. Permits are reviewed and appropriate safeguards and checklists selected. The completed permit, which lists required precautions, is returned to the contractor via email. The email system has also been set up to generate emails that are sent to members of the Facilities Management department notifying them of approved hot work.

3

Dashboard & Reporting: USC's dashboards and reporting tools now allow increased visibility into ongoing activities and potential hazards. Automated reports, findings, and notifications are sent to specified stakeholders (e.g. facilities management, designated contacts within the Greek community) who need the information or are responsible for hazard correction. Example features include:

- Inspection tracking
- Dashboard for upcoming inspections
- Inspection reports sent to outside contacts
- Daily activity and metric tracking
- Time to close issues
- Trends in types of hazards

r ne oarety & Emergency r famming	Hot work done by: (Type name in box)		
Emergency Planning Fire Safety Event Safety Business Continuity Training	USC Employee or Project Manager? *		
Home + Fire Safety + Hot Work Permit	USC Project Manager Email *		
	Contractor's phone number *		
Hot Work Permit	General contractor's information *		
			ji.
	Permit Requested by: "		
	Person Requested by Email: *		
	Location *		Q
	Exact Location *	e.g., finit floor hallway, room 203	
	Work to be done *	-	
Is there a Safer Way?	Are you applying for an annual permit?	• •	
The purpose of this program is to prevent injury or loss to property while ensuring			
safe work conditions during welding, cutting, brazing, and grinding operations. It is	Permit Signature		
strongly encouraged that work be done (pre-fabricated) outdoors, if at all possible.	Person doing job (name and signature):		
Contractors	Name: *		
f you are a contractor and are planning to perform hotwork on campus you must	Email *		
apply for a permit. Please complete the Hot Work Permit (please check your Email for sporoved hot work permit or your Junk Email folder) by filling in the appropriate	Signature		
information (contractor's name, dates/times, locations, type of work: i.e., brazing,	Roman in a Simulation		
welding, cutting torch, etc) Once you submit the form it will automatically be routed	oupervisor organisme.		
before any hotwork is conducted and route the completed permit back to you with	I have verified that the above location has been		
required precautions. The contractor must display the permit as well as the	inspected and the required precautions and safeguards		
emergency telephone poster at the jobsite. The notification of hotwork will also be	have been taken. Permission is authorized only for the above work		
sent to Facilities Management to avoid any unwanted alarms.	Parmit Start Date *	白	
Note: If any fire system is taken out of service (impaired), the contractor must stay on-			
site as a firewatch at all times while the detection is impaired. Hotwork is NOT	Permit Completed Date *		
allowed while sprinklers are out of service unless special precautions are approved.	Welder Signature:		
I the sprinkler system is impaired or shut down, every effort should be made to avoid			

Users access the portal to enter a hot work permit.

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FAST, SIMPLE, EASY Technology solutions streamline fire-safety processes and improve outcomes at the University of Southern California Technology solutions streamline fire-safety processes and

RESULTS

Time Savings

Instead of "playing email tennis" or using cumbersome paper forms or PDFs, the USC fire team is able to leverage notification and automation features of Origami's platform. "We have a lot on our plate and automation has helped us on those busy days," comments Forsberg. The biggest impact is time savings. Hot work permits can now be approved more quickly and relevant stakeholders can be informed instantaneously. Inspections can be easily entered and submitted, drastically reducing paperwork and follow up.

Given that firefighters must react quickly under incredibly dangerous and stressful conditions, mnemonics are a commonly used training method. For example, fire scene priorities can be recalled using the mnemonic RECEO-Rescue victims, Exposures (stop fire spread), Confine (contain the fire), Extinguish, Overhaul (check for hidden fire spread).

Asked to describe the benefits of Origami for the USC Fire Safety team, Forsberg answered with a mnemonic of his own: FSE. "When we're doing an inspection," he replied, "Origami helps us make things Fast, Simple, and Easy." It is this type of efficiency that is helping the USC Fire Team to spend more time focused on what matters: saving lives.

When we're doing an inspection, Origami helps us make things Fast, Simple, and Easy.

Improved Oversight

Dashboards make items easier to track and provide critical metrics to inform decisions. The team can leverage information in real time to check on any issues, prioritize tasks more effectively, and quickly look to see why tasks are not closed. Additionally, management is kept informed with monthly reports that provide visibility into team member activities and other trends. As a result, compliance is maintained in a more organized way. Information can also guickly be accessed when the team is asked to provide details related to inspections and pending hazard corrections to outside authorities such as insurance underwriters, the Los Angeles Fire Department, and the Los Angeles County Fire Department.

Specific Location	e.g., first floor hallway,	room 203	
lazards			
Hazard		Q	
Hazard Description			
Hazard Code Section			
Corrective Action			
Corrective Actions			
			4
Refer to Facilities Manageme	ent 🗌		
Refer to Housing Departmen			
Corrective Action Status	New	*	
Priority *		24 Hours	
10000			

USC Fire Team can now conduct safety inspections from Origami applications.

Increased Organizational Investment

Reports generated in Origami Risk clearly highlight items for improvement. Once identified and communicated, items can be swiftly resolved at the recommendation of the team. For example, a safety report produced with data in Origami helped inform the decision to install a new fire suppression system in a campus dorm. The team was also able to leverage a level-ofeffort analysis based on Origami-generated reports to make a recommendation to management to hire additional staff to drive further investment in the safety of the USC community.

Your service team has supported our safety team in helping us save lives.

Proof of Compliance

In addition to improvements in terms of time savings, oversight, and metrics, use of Origami Risk has also helped the USC Fire Safety team to improve their ability to maintain and deliver critical, program-related documentation. For example, the team can provide underwriters with detailed information regarding hot work permitting and impairment programs for each building on campus.

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Rather than spending time typing and sending emails, inspection reports and notifications are automatically generated by the system and sent to designated stakeholders.

CONCLUSION

USC's Annual Security Report points to the success of the Office of Fire Safety and Emergency Planning team's efforts. Without question, the most important measure of success is found in a line from the 2019 report: "The university is committed to maintaining excellent fire safety in campus residential facilities, and consequently has never had fire resulting in a serious injury, or fatality in a university residential building." Implementing Origami Risk, the USC Fire Safety team expects to continue to do all they can to keep it that way.

About Origami Risk

Origami Risk was founded by industry veterans committed to designing intuitive web- and mobile-based software that streamlines how risk, safety, and insurance data is collected, analyzed, and shared. Origami provides an integrated platform of products including RMIS, safety, GRC, claims, analytics, and underwriting tools. The most experienced service team in the industry ensures that client success is our central focus.

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