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## Sussex County Proves the Value of Its Early Move to NG9-1-1 in Rural New Jersey

With a Fully Integrated, Geo-Diverse Solution From Solacom, Sussex County Is Always Future-Ready





It was late 2014 when Solacom announced that Sussex County, New Jersey, had completed installation of the company's Guardian Next Generation 9-1-1 (NG9-1-1) call handling and management solution. The upgrade came after the State of New Jersey actively encouraged its 9-1-1 centers and public safety answering points (PSAPs) to increase the efficiency and cost effectiveness of 9-1-1 services by consolidating operations.

The team in Sussex County took the opportunity to leap ahead of the curve in 9-1-1 service delivery, and installed an NG9-1-1 solution that would serve the municipalities

of Branchville, Frankford, Fredon, Green, Hampton, Lafayette, Montague, Sandyston, Stillwater, and Walpack.

It was a bold move. At the time, Sussex County staff were dispatching resources when sheriff and other law enforcement personnel were required to provide assistance, but they weren't answering 9-1-1 calls. Nevertheless, the Sussex County team was committed to becoming NG9-1-1-compliant. "We knew that NG9-1-1 was the future and we wanted to be ready for whatever requirements we were going to have to meet down the road," recalls Sussex County Sheriff, Michael Strada.

## Portrait of a Rural Leader in NG9-1-1

Founded in 1753 and named for Sussex, England, Sussex County is the northernmost county in New Jersey and part of the State's Skylands Region for economic growth and tourism.

The County covers more than 500,000 square miles of land and its nearly 150,000 residents live in the 24 municipalities that comprise the primarily rural area.

# CHALLENGE

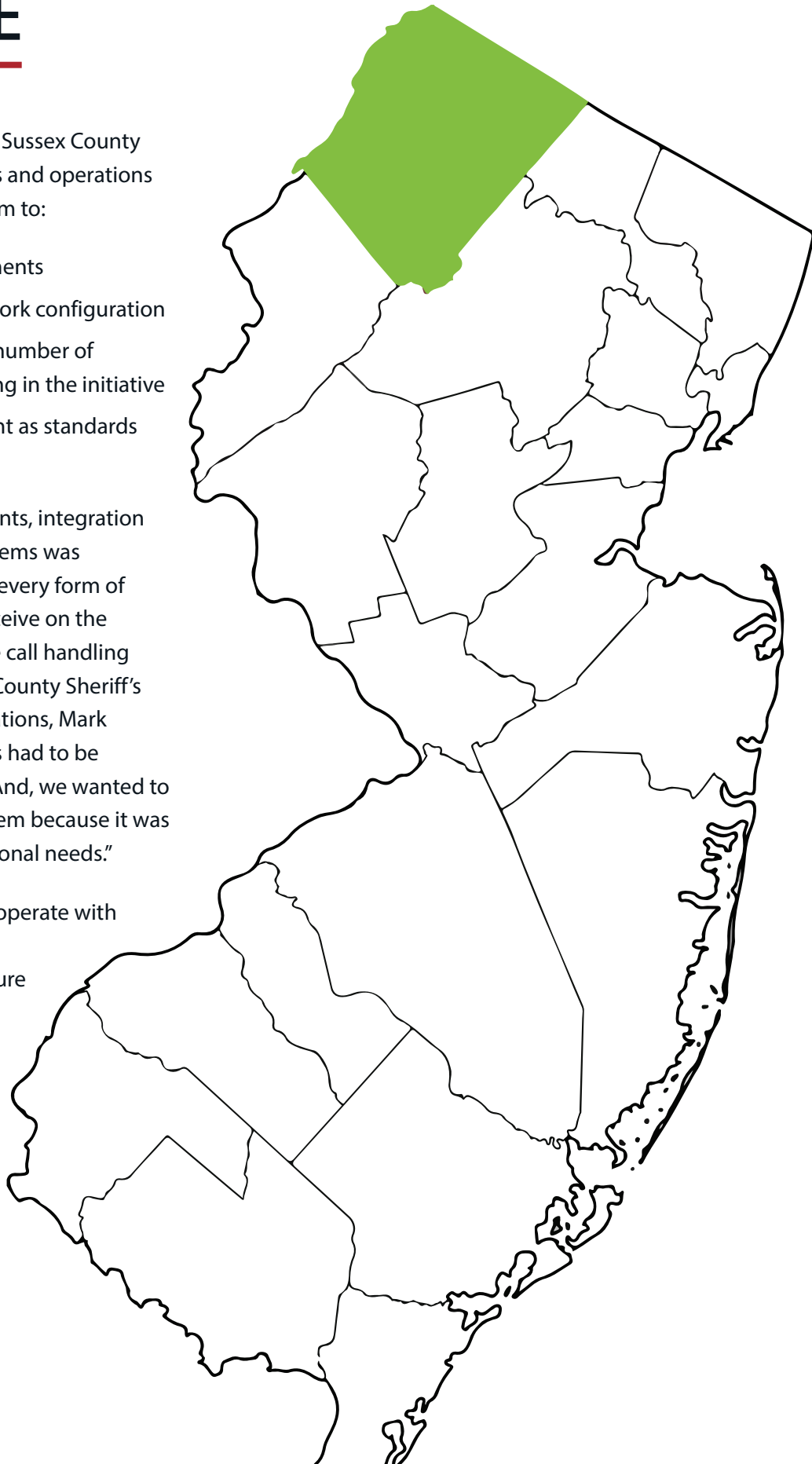
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The challenge for the team in Sussex County was to evolve its technologies and operations in a way that would allow them to:

- Leverage existing investments
- Deploy a redundant network configuration
- Continue expanding the number of municipalities participating in the initiative
- Remain NG9-1-1 compliant as standards emerged and evolved

To leverage existing investments, integration between new and legacy systems was essential. “We had to capture every form of communication we would receive on the phone side and put it into the call handling application,” explains Sussex County Sheriff’s Office Director of Communications, Mark Rozek. “All of our old landlines had to be integrated into the solution. And, we wanted to reuse the existing phone system because it was still meeting all of our operational needs.”

The solution also had to interoperate with the county’s computer-aided dispatch (CAD) system to ensure that automatic location identification (ALI) data and other location details would be sent directly from the call handling system to the CAD.





“Backwards compatibility was crucial,” says Rozek. “We use our CAD solution for mapping and that information is available to everyone on the system, so the call handling solution we chose had to be able to forward data to the CAD without fail.”

Undersheriff, Keith Armstrong, emphasizes the importance the team placed on ensuring that no 9-1-1 calls would be dropped. “Our 9-1-1 service must be up and running at all times,” he says. “We couldn’t afford to have a single point of failure, so we needed a solution that could operate from multiple locations, providing redundancy in case of network issues and increasing our overall call capacity.”

While 10 municipalities initially joined the consolidated effort, the goal from the beginning was to continue adding municipalities when their existing contracts expired. And, with the team’s commitment to NG9-1-1, ongoing standards compliance was key.

With such a wide range of requirements and a vast area to serve, the team knew it might be a challenge to find a single vendor that could deliver all of the capabilities needed.



# SOLACOM SOLUTION

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A multi-disciplinary working group was created to evaluate solutions from different vendors. After narrowing the field to three potential solutions, the team chose to partner with Solacom, and deployed the company's IP-based networking solution and the Solacom Guardian 9-1-1 Call Handling solution. Despite its challenging combination of requirements, the team had found a single vendor that could provide everything they were looking for.

## Standards-Compliant Today and Tomorrow

"One of the main reasons we chose Solacom was because they were able to verify their networking solution complied with the NENA i3 standard at the time and would continue to be standards-compliant as NG9-1-1 requirements evolved," explains Sheriff Strada. "Other vendors were saying they would wait for the State to mandate requirements before determining how their solutions would comply."

The NENA NG9-1-1 architecture standard, Detailed Functional and Interface Standards for the NENA i3 Solution (commonly known as i3), is the universally acknowledged basis for public safety deployments of NG9-1-1 systems.



## Combining Redundancy and Backwards Compatibility

The geo-diversity capabilities in the Solacom solution were another key factor in the decision. With the Solacom solution, the Sheriff's Office could install one host in the new 9-1-1 Communications Center that was being built in Frankford and another in a second location within the county. Each host site can support the entire network in the event the other site becomes unavailable. "But, we were looking beyond redundancy," says Armstrong. "Because of the way the system is designed, we can run both sites at the same time and double our capacity." Because the Solacom solution supports backwards compatibility, the Sheriff's Office could also meet its requirements to interoperate with legacy equipment. The solution supports 9-1-1 calls arriving over traditional phone lines along with those arriving over the new IP-based network. And, it will support future call capabilities as they are standardized by telecom service providers.



# BENEFITS

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More than four years after the Solacom network and call handling solutions were deployed, Undersheriff Armstrong confirms the move has been a success. “Everybody — call takers, emergency responders — are very happy with how the system works. We have a number of call takers who work at more than one emergency response location in the county and they’ve told us that our equipment and software are much easier to work with than the older technology that’s still out there.”

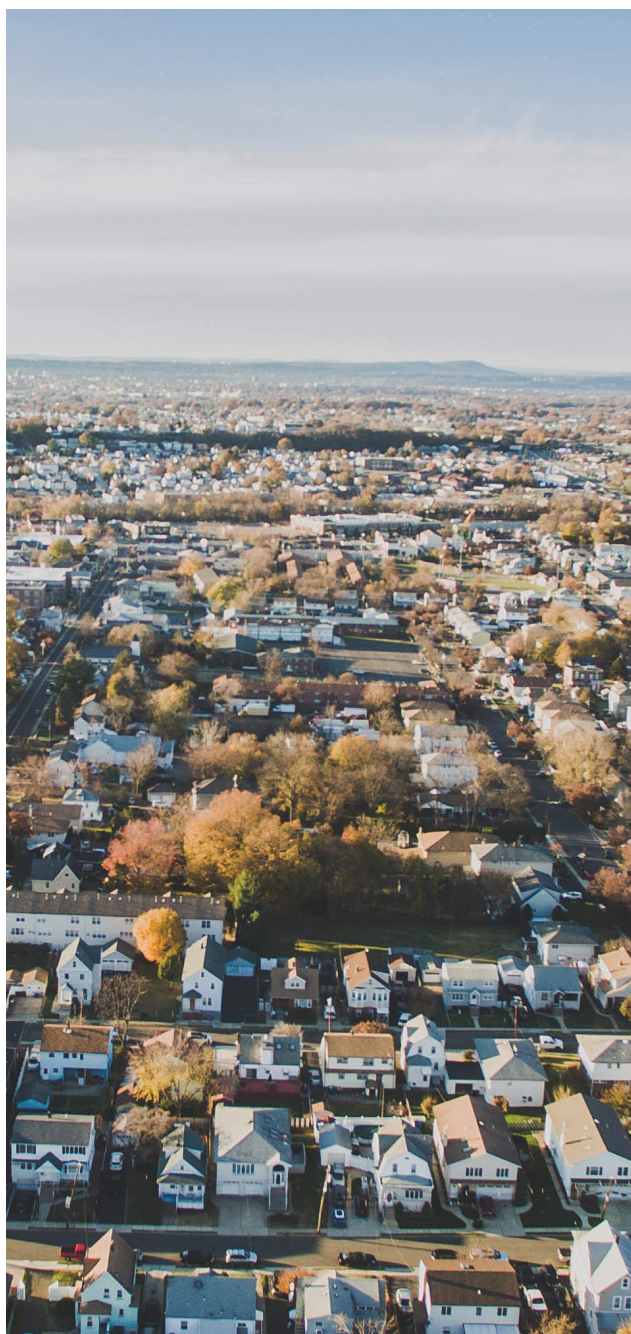
## An Intuitive and Fully Integrated Solution

Integration and interoperability with legacy systems has enabled the Sussex County Sheriff’s Communications Center to seamlessly incorporate its existing phone system, CAD, and analog phone lines into the NG9-1-1 solution. “We have three call takers working 24/7,” explains Undersheriff Armstrong. “Because the solution components are so well integrated, they can work as a team on any 9-1-1 call. With unified response capabilities, we can be much more efficient and effective when responding to calls.”

The simplicity and intuitive design of the Solacom solution has also minimized training requirements. “Solacom provided training for system administrators and IT personnel, and it was very straightforward,” recalls Rozek. “The system and software were very intuitive, so it was easy to understand how to administer it. And, any time we ran into an issue, Solacom’s support line was very helpful.”

Today, the Sussex County Sheriff’s Communications Center trains new call takers itself. “Operating the software is very simple,” Rozek adds. “The complexity of the job is how to deal with the content of the phone call, not the process of answering it.”

Solacom staff also worked with the Sussex County team to ensure they could generate the required monthly reports on call statistics.





## Ready for Expansion

And, expansion is underway. Since the initial rollout, an eleventh municipality — Byram Township — has joined the system. In addition to supporting 9-1-1 calls from Byram residents, a phone located just outside the police department's main entrance provides a direct line to the Sussex County Sheriff's Communications Center. Call takers can also see a live video feed of the person making the connection.

"With the Solacom solution, we're in an ideal position to support the remaining municipalities in the county in whatever way they need, when they're ready," concludes Sheriff Strada. "We never have to worry about adding municipalities, call takers, or back-end hardware. The Solacom system was designed to support the entire county from day one."



**For more information about Solacom Technologies and the Solacom Guardian 9-1-1 Solution, visit:**

**[www.solacom.com](http://www.solacom.com)**





## Partner With an Industry Innovator

At Solacom (a subsidiary of Comtech Telecommunications Corp.), public safety communications management is not a sideline, it's our single focus. Our 9-1-1 call handling and management solutions are built on more than 30 years of research and innovation in the application of advanced hardware and software technologies for public safety. Today, our 9-1-1 solutions support thousands of agencies affecting millions of lives annually. From dense urban environments to statewide deployments, our solutions are trusted to streamline 9-1-1 call handling and management processes and enable more efficient collection of critical information in emergency situations.

### To Find Out More, Contact:

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