

SAFETY, RISK & SPECIALTY CARE

Detect emerging conditions earlier — and give the right person enough context to respond

How connected sensing, location context, alerting, remote verification and governed response turn distributed property risk into an operating workflow — and where the boundary sits between operating awareness and certified life safety.

Many serious building events begin as small conditions nobody knows about yet. A few drops of water below a mechanical fitting. A pipe leaking in an unoccupied room. A valve left open. A perimeter sensor changing state after hours. A lone worker activating a duress device.

The first event is small. The consequence becomes large because of what happens next: nobody sees it, nobody knows exactly where it is, nobody knows who should respond — or the alert arrives without enough context for anyone to decide what to do.

Existing buildings are especially exposed, because the highest-consequence locations are usually outside the BAS footprint entirely: guestrooms, apartments, risers, utility closets, kitchens, bathrooms, mechanical spaces and remote equipment areas. The objective is not another sensor. It is to shorten the path from condition, to understanding, to the responsible person, to a verified response.

Detect earlier. Add location and context. Escalate deliberately. Verify remotely. Support an appropriate response.

THE BOUNDARY

Risk awareness and operating response — not certified life safety.

This document describes an operating-risk application. It is worth being precise about what that excludes, because in this category imprecision is a liability rather than a marketing softener.

LEXI is not a listed fire alarm control unit, nurse-call system, emergency-call system, medical-monitoring system, or other certified life-safety system. Dedicated systems may be subject to codes and standards such as NFPA 72 and, depending on their function, product certification or listing standards such as UL 864, UL 1069 or UL 2560. LEXI does not claim those listings or certifications unless separately obtained for a specific product or application.

Integration is not certification. The platform can receive information from, and add context and workflow around, supported fire, smoke, CO, security and emergency systems. Doing

so does not make it those systems, and does not relieve a building of the requirement to have them.

What the application does own is the operating layer: detecting property-risk conditions earlier, establishing where they are, routing them to whoever is responsible, letting that person verify remotely, and supporting an approved response. Water risk is the current, deployable centre of it. Broader safety and care-oriented workflows carry different maturity — set out explicitly in Current availability at the end rather than left to inference.

THE RISK-RESPONSE LOOP

Detect, locate, assess, alert, verify, respond.

A sensor event is not yet an operating response. A leak sensor detects moisture; the application needs to know the event is in Room 814, beneath the bathroom vanity, on Floor 8 of Building A — and then get it to the person responsible for that property.

1 • Detect

Different risks need different observations. For water, supported inputs include point leak sensing in a defined location; rope or distributed sensing along a longer run or perimeter; flow information identifying movement unusual for the current operating context; valve state showing whether a connected valve is open, closed or responding; temperature and environmental context where it helps interpret the event; and equipment state associating the risk with a likely source.

Other workflows start elsewhere — a perimeter contact, an approved wearable, a duress input, an access event or a partner-provided analytic. Use the sensing method appropriate to the condition, and do not claim a signal tells you more than it does.

2 • Locate

“Water detected” is an alert. “Water detected under the sink in Room 814” is an operating event. A facilities team cannot respond efficiently if the application knows a sensor ID but not the physical place it represents.

Sensor 3F79 = Wet → Property A • Building 2 • Floor 8 • Room 814 • Bathroom • water detected

The same location model makes escalation precise and gives a central operator useful dispatch context before anyone travels.

3 • Assess

Not every sensor event deserves the same response. What matters is what the event means given what the building already knows: which room, zone or equipment is involved; whether the condition is still active and how long it has persisted; whether related sensors changed; current valve or equipment state; whether the location is normally occupied; whether maintenance is underway; whether an

earlier alert from the same place is still unresolved; and whether the sensor itself is communicating normally.

Most of this is rules rather than inference, and that is appropriate. Water detected for a configured period creates an event. Water detected with a valve open elevates the context. A sensor still wet after mitigation keeps the event open. A device that stops reporting produces a loss-of-visibility condition rather than an assumption that the location is fine.

An event must never become “safe” because the sensor disappeared. Loss of information is not evidence that the risk went away, and a stale state is not a current state. Less certainty should produce less confidence — not a more reassuring conclusion.

4 • Alert

A useful alert answers four questions: what happened, where, how urgent it is, and who owns the response. The last is the one most systems omit, and it is the one that determines whether anything actually happens.

Escalation is a workflow, not a larger font. An unresolved condition moves through an intentional path — initial notification to the responsible operator; a persistence check establishing whether the condition is still active; secondary notification to an additional person or team if it remains unresolved; operational acknowledgement recording that somebody has accepted responsibility; and response tracking that keeps the event open until the condition clears or an operator closes it under the workflow.

5 • Verify

An alert says something happened. Verification says what is happening now. For a water event that draws on leak-sensor state, event duration, related sensors, valve state, flow information where available, associated equipment state, device health, the event history for that location, and whether anyone has acknowledged it.

Not every installation provides every signal. The point is to use whatever trustworthy information the building exposes so an operator can distinguish three different things: a signal occurred, the condition is still active, and the condition appears mitigated.

6 • Respond

Detection creates value only when it changes what happens next — notifying an operator with the location and context needed to investigate, dispatching maintenance directly to the affected space, escalating an unresolved event under policy, initiating an approved mitigation workflow such as a shutoff where compatible equipment is deployed, and then observing sensor, flow or valve state afterwards to confirm the result.

The word approved carries weight. A leak sensor detecting moisture does not confer authority over a building's water system. Where automated mitigation is deployed, control policy defines which valve or equipment the workflow may affect, under what conditions, and with what operator or verification

requirement — so a room-level response can be authorized without granting authority over unrelated zones or a building-wide water service. Protected Control & Resilience governs that boundary.

RELIABILITY

Local action and remote notification fail differently.

Risk applications are usually described as though connectivity loss affects them uniformly. It does not, and the distinction determines what can honestly be promised.

Local physical action	Where a deployment is configured and authorized for it, mitigation logic such as a shutoff can execute at the building edge without a cloud round trip. The action is local, so the loss of a wide-area connection does not prevent it.
Remote notification	Alerting, escalation and portfolio visibility depend on the notification path being available. There is no local substitute for telling somebody who is not in the building.

That asymmetry matters most for duress and worker-safety workflows, where the value depends on a remote notification reaching a person. A notification-dependent workflow should not be commissioned as a relied-upon safety mechanism unless the notification path, delivery confirmation, acknowledgement and escalation behavior, and fallback response have been defined and validated for that deployment. Local execution cannot substitute for a notification path that is unavailable.

That distinction is also why these capabilities remain in a non-life-safety scope. Where supervised signaling, listed annunciation or other life-safety-grade performance is required, a dedicated system designed and certified for that purpose is the appropriate system of record. LEXI can add operating context and workflow around supported systems without standing in for them. The deployment should clearly distinguish continued local protection from loss of remote visibility.

A WORKED EXAMPLE

Water leak in an unoccupied hotel room.

Detect	A wireless leak sensor beneath a bathroom fixture detects water.
Locate	The application resolves it to Hotel A · Floor 6 · Room 617 · Bathroom rather than a sensor identifier.
Assess	The condition persists past the configured event criteria; sensor health is current, and related valve or flow state is included where available.
Alert	The event routes to the hotel operations or engineering team with location and context attached.
Verify	The operator checks whether the sensor is still wet, how long it has persisted, whether related information suggests continuing water movement, and whether anyone has acknowledged it.
Respond	The operator dispatches. Where a compatible shutoff device and an authorized mitigation workflow are deployed, the approved control path can support shutoff under the property's operating policy.

The value is not the leak sensor. It is the time removed between the first detectable evidence of a problem and a response by somebody who knows exactly where to go and what they are walking into.

WHY WATER IS THE ANCHOR

Concrete, distributed, deployable — and expensive to get wrong.

Water risk demonstrates the wireless argument better than anything else in the building, because the locations that matter most are precisely the ones conventional control systems never reach. Wireless sensing extends visibility into guestrooms, mechanical areas and risers without running a control wire to every point. It also demonstrates the platform model: the Gateway, building hierarchy, alerting, roles and cloud infrastructure deployed for water risk do not become a water-only stack, and compatible applications reuse them later.

Water risk also has a direct property-risk and insurance dimension

Water losses can create substantial remediation, business-interruption and deductible exposure. Depending on the property, carrier and market, monitored leak detection may also be relevant to underwriting, risk-engineering recommendations or insurance terms.

The useful owner-specific questions are concrete: What has the portfolio historically lost to water events? What is the deductible? What revenue or occupancy is lost during remediation? And does the property's broker or carrier recognize monitored leak detection or automatic mitigation in its underwriting or risk-management program? Those property-specific answers are more useful than a generic return figure.

BEYOND WATER

Same operating model, different sensing and different limits.

Intrusion and perimeter	Supported door, contact and perimeter events associated with building location and routed into monitoring or response workflows where deployed.
Worker safety	Supported wearable or duress inputs signalling that a worker needs attention, with location context where the deployed technology provides it — subject to the notification-path requirements above.
Emergency-adjacent workflow	Routing approved notifications, equipment states and operational workflows around an emergency condition, without becoming the system responsible for detecting or declaring that emergency.

The pattern holds across all of them: observe the condition, add location and context, route the event, verify, support the response. What changes is the sensing and, more importantly, the consequence of getting it wrong — which is why the scope limits above are stated per capability rather than once at the bottom of the page.

SPECIALTY CARE

A roadmap area, described as one.

Senior living sits at an interesting overlap: the building already contains rooms, environmental sensing, occupancy signals, wearables, communications infrastructure and staff workflows. Connecting selected information so staff receive better operating context around conditions deserving attention is a natural extension of everything above.

It is also a materially higher-consequence workflow than building automation, and the operating pattern is the same only up to a point. A supported sensor, wearable or partner application produces an event; the event is associated with the appropriate room or operational context where permitted; a configured workflow decides whether it is noteworthy; it routes to an authorized staff member; supporting information is used rather than treating one sensor event as certainty — and then a qualified human makes the care decision.

Sensor observation is not care interpretation. Care interpretation is not clinical judgment. A care-oriented sensor supports awareness; it does not diagnose a condition or determine a clinical response.

In this domain false positives matter, false negatives matter more, missing data matters, who can see the information matters, and how long it is retained matters. Specialty care should support the people doing the work rather than quietly displacing their judgment — and the final decision belongs to trained staff. Senior Living Care is roadmap functionality and appears as such in Current availability.

RESIDENT AND PERSONAL DATA

Collect what the workflow needs, not what the sensor could expose.

A leak sensor raises little personal-data concern. A resident-oriented wearable is a different matter, and as applications move toward individual safety and wellbeing the data model has to become more disciplined rather than less. The questions to settle at design time are what state is actually required, who needs to see it, whether the application needs identity or only room and location context, how long the information must persist, and whether a partner integration exposes more raw information than the workflow uses.

Most facility-risk workflows do not require health information

Water risk, environmental conditions, equipment condition and building-safety workflows can generally operate on room, location and equipment context without resident health information. Keeping those applications purpose-limited reduces unnecessary personal-data collection and helps keep facility-risk workflows separate from future care-oriented data flows.

Where it does — the position on Business Associate Agreements

Resident-worn sensing and in-room fall detection are different, and they remain roadmap capabilities rather than shipping ones. When a future care workflow causes LEXI to create, receive, maintain or

transmit protected health information on behalf of a HIPAA covered entity or business associate, the compliance posture changes and should be established before that data enters the workflow.

Where LEXI creates, receives, maintains or transmits protected health information on behalf of a HIPAA covered entity or business associate, and LEXI therefore acts as a business associate or subcontractor business associate, LEXI will enter into the appropriate Business Associate Agreement before protected health information is handled through that workflow. A customer's facility label alone does not determine that status; the applicable role and data flow do.

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There is no HHS-issued or HHS-recognized certification that makes a vendor "HIPAA certified." Where HIPAA applies, compliance is an ongoing legal and operational obligation that depends on the applicable safeguards, policies, risk management, contractual arrangements and other requirements of the HIPAA Rules rather than on a certification badge.

Designing to keep the regulated surface small

Even where a Business Associate Agreement applies, workflow design determines how much regulated data LEXI needs to handle. The design goal for care-oriented capabilities is to minimize resident-identifiable information wherever the operating workflow permits it - for example, keeping event and location context in LEXI while allowing the operator's system to retain resident identity mappings where practical. That does not remove a Business Associate Agreement when one otherwise applies, but it can reduce the amount of protected information in scope.

Consent, identity handling, access control and retention become explicit deployment requirements in these settings, and the application should expose only the identity and context an authorized user needs for the configured workflow. Outside the United States, other privacy and health-data laws may impose different requirements, which are addressed through the applicable deployment, contractual and privacy framework. Connectivity & Integrations describes the underlying purpose-binding and retention model.

ALERT QUALITY

An application that cries wolf eventually stops protecting anything.

A risk deployment has to be commissioned around eight things, and skipping any of them shows up later as either noise or silence: whether the sensor placement can actually observe the intended condition; what event criteria make a reading actionable rather than transient; whether location accuracy is good enough that the responder knows where to go; whether routing reaches the correct team; what happens if nobody acknowledges; how the operator determines whether the condition persists; what constitutes closure; and how the system distinguishes no event from no data.

That last one is the difference between a risk application and a sensor feed. A deployment succeeds when it improves response discipline — not when it generates the most notifications.

Remote verification changes triage, not outcomes

Distributed portfolios create a specific problem: a central operator receives an alert from a property hundreds of miles away. With connected state that operator can first establish whether the sensor is still active, whether the device is healthy, whether the condition persisted, whether related equipment is operating, whether anyone on site has acknowledged it, whether an approved mitigation action occurred, and whether the condition has cleared. Not every situation can or should be resolved remotely — but better evidence makes triage better and field response better informed.

Context also changes meaning. Water detected in a guestroom bathroom suggests a plumbing leak; in a mechanical room it may point to a pump, valve or piping system; near a water heater it suggests equipment leakage; in a normally wet area it may call for different placement and different event rules altogether. The sensor describes the condition, the building context explains it, and the workflow determines the response.

ACROSS PROPERTY TYPES

Different risks, one connected-response model.

Hospitality	Guestroom and mechanical-space leak detection, distributed alerting, supported mitigation, selected safety monitoring.
Multifamily and student housing	Unit and common-area water risk, remote property visibility, perimeter and access-event integration where deployed.
Senior living	Water risk and building safety today; resident-safety and wellbeing workflows as roadmap capability.
Office and CRE	Restrooms, mechanical rooms, tenant areas, water systems and selected perimeter workflows.
Retail and distributed sites	Water events, after-hours property conditions and remote exception handling across many locations.
Warehouse and industrial	Leak and environmental risk, worker-safety inputs, and monitoring in large or difficult-to-observe areas.
Healthcare facilities	Facility-focused leak, environmental and non-clinical operating risk. Not clinical or patient monitoring.

CURRENT AVAILABILITY

Stated per capability, because the maturity differs.

Capability	Status	Scope note
Water leak detection	Available now	Live in LEXI Cloud. Supported shutoff or other physical mitigation depends on compatible equipment, configuration and authorization.
Intrusion and perimeter	Partially available	Depends on connected devices and application scope.
Emergency-response integration	Partially available	Non-life-safety scope. Adds workflow around emergency systems; does not detect or declare an emergency.
Worker safety, lone worker, duress	Partially available	Non-life-safety scope. Notification-path reliability, delivery confirmation, acknowledgement, escalation and fallback behavior are deployment-specific and must be defined and validated for the intended workflow; not a substitute for a listed emergency-call system.
Fire and life-safety integration	Partially available	Non-life-safety scope. Integration only; not a listed fire alarm system.
Senior living care	Roadmap	Not a live application. Described here as a future direction.
In-room fall detection	Roadmap	Not a live application. If a future workflow makes LEXI a HIPAA business associate or subcontractor business associate, the appropriate Business Associate Agreement is required before protected health information is handled.

Behaviour during loss of cloud connectivity is deployment-specific and should be defined in the project configuration — including, for any notification-dependent capability, what happens when the path is unavailable. No capability described here replaces required life-safety, emergency-response, clinical or medical systems.

WHAT THIS MEANS

For the people responsible for the property.

Building owners	Risk events become visible earlier and arrive with location and operating context rather than as isolated notifications. The case can start with one high-consequence blind spot - usually water - with operational, property-risk and insurance considerations evaluated together, then extend across compatible applications on the same infrastructure.
Operators	Alerts become workflows: what happened, where, whether it is still happening, who owns it, and what occurred after the response.
Systems integrators	Sensor selection and placement remain decisive. The SI still has to understand the physical risk, choose the sensing method, commission the location model, validate notification and escalation paths, and verify any connected mitigation equipment.
Senior-living and specialty operators	A foundation for future approved resident-safety workflows, with the distinction between connected awareness and clinical or life-safety responsibility maintained rather than blurred.

THE CORE IDEA

Risk reduction starts with knowing sooner — and knowing enough to act.

A sensor detects the condition. Building context establishes where it is. Operating logic determines whether it deserves attention. Alerting gets it to the responsible person. Remote verification shows what is happening now. Governed workflows support the appropriate response. And the same connected infrastructure extends from today's property-risk applications into selected safety and future care-oriented workflows without another isolated stack.

Detect the condition. Locate it. Understand what it means. Get it to the right person. Verify what is happening now. Support a response — inside the limits of what this application is, and is not.

Capabilities vary by application, connected equipment, sensor technology, software release, configuration and deployment. LEXI risk and safety workflows complement rather than replace dedicated life-safety, emergency-response, clinical or medical systems. LEXI does not claim life-safety listings or certifications unless separately obtained for a specific product or application. Senior Living Care is roadmap functionality.

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