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MARKET UPDATE

# Embracing New Technologies



INDUSTRY  
INSIGHTS

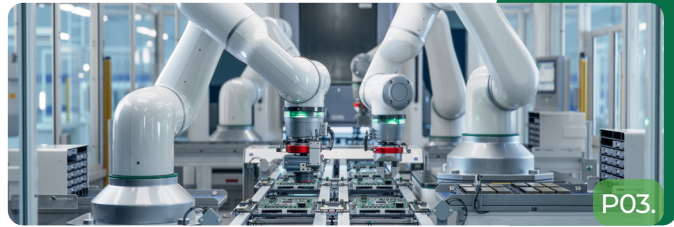
A guide for modern  
engineers and the  
companies that hire them

USA  
Report



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## Introduction

**The engineering industry is undergoing significant changes.** From upskilling teams to integrating new tech, there are a range of pain points that employers and employees alike must navigate in order to keep up with the demanding shifts in technological advancements.

At LVI Associates, our talent consultants are, on a daily basis, exposed to how these challenges impact both the companies and the people they employ differently, so we brought together experts at Inductive Automation and Skellig Automation to share insights into what top talent is looking for with this regard, and what hiring managers can do to attract them to their firm.

Inductive Automation (IA) is the creator of Ignition software, the first and only universal industrial application platform that allows organizations to achieve total system integration across their plant floors. Skellig Automation is a systems integrator consultancy that provides comprehensive engineering services throughout the project lifecycle, primarily within pharmaceutical automation, process, and project controls. Skellig partners with LVI Associates for support in sourcing niche engineering talent that can meet the demands of the clients they serve.

The experts at Skellig bring to the conversation a deep understanding of the importance of having a highly-trained workforce that can service clients like IA, while our experts at LVI Associates have the benefit of understanding what top-tier talent is looking for when exploring different career opportunities and are able to advise companies like Skellig on how to attract them to their organization.

The conversation revealed that the best engineers in the world are searching for firms that will provide them with the educational resources required to keep them on a path toward continued career success. In fact, a **recent poll** conducted on LVI Associate's LinkedIn page showed that 70% of engineers rank upskilling opportunities as "very important" when considering their next career move. Only 1% reported deemed it "unimportant."

In this report, you'll learn how LVI Associates is able to balance the interests of both parties by providing hiring managers with solutions for motivating teams to embrace new technologies, promoting sustainable employee engagement in order to retain top engineering talent, and cultivating a workforce that consistently drives innovation. It will also equip engineering professionals with the tools they need to stand out in a competitive talent pool, supercharge their career progression, and secure long-term career satisfaction.







## Meet the Experts

In the summer of 2024, LVI Associates brought together experts from Inductive Automation (IA), Skellig and LVI Associates to discuss their knowledge and experience of how an upskilled workforce can have a positive impact on nearly every step of the value chain.



Bonnie Gauss

**Head of Communications for Skellig Automation**



Who better to facilitate communications between engineers than another engineer? Bonnie is hyper-focused on making sure company culture aligns with long-term business strategy. She leads cross-functional teams of technical resources, support staff, and content creators in order to drive business development and industry recognition.

Paul O'Sullivan

**CEO and Founder at Skellig Automation**



Paul O'Sullivan is the CEO of Skellig, a systems integrator specializing in the life sciences industry. An automation engineer since 2006, he founded Skellig in 2010 with a vision to foster innovation and excellence. Paul's passion lies in supporting great engineers to do great work.

Travis Cox

**Chief Technology Evangelist at Inductive Automation**



Travis has been in the automation industry for 18 years and has extensive experience working with companies to help build robust and scalable architectures, apply best practices, integrate solutions, leverage edge and cloud computing, and learn how to fully utilize the Ignition platform.





## Meet the Experts

Ben Zorab

**Associate Director – Head of Digital Transformation, Automation / I&C at LVI Associates**



Ben has a deep understanding of the challenges as well as opportunities that hiring managers and professionals alike face, having recruited for the automation and electrical sectors for integrators and consultancies since 2018.

Kianni Brown

**Head of Automation / I&C Engineering at LVI Associates – West Coast**



Kianni has spent the last 5 years recruiting senior-level specialists across a commercial and technical sphere in the water/wastewater and process industries, hiring for roles like Control System Engineers, MES Engineers, I&C / Automation Design Engineers, Electrical Engineers and more.





## Navigating Slow Hiring Processes

*Kianni Brown: How can integrators navigate slow hiring processes in engineering while ensuring rapid response and adaptation, while also mitigating risk in fast-paced industries?*

◆ **Paul O'Sullivan:** Engineers want to work on cool stuff they're interested in, says Paul. But maybe you have a rough job description that's very generic. How are you going to find those couple of people that are going to be exceptionally excited about that problem? We need to do more understanding of the nature of the problem, and I think the crux of that is to do more communication and broadening. That's what's worked well between us and LVI Associates.

Maybe if we're seeing slowness, we need to broaden the access and open up to you guys [LVI Associates] a bit more and ask, What are the pain points you're seeing from engineers that we're really not mitigating against? What are the things that we, as systems integrators, can do better to position ourselves in a way that's more helpful to that engineer understanding the problem? Because engineers want to work on cool stuff that they're interested in.

If you just have a rough job description that's very generic, how are you going to find the people that are going to be exceptionally excited like you are? So I think we have to do more sharing of information and understanding of the nature of the problem at hand. It's that communication and broadening. Bonnie, would you add or subtract from that?

◆ **Bonnie Gauss:** Yeah, I would tend to agree. I think that the hiring process itself, being so slow, can be very frustrating for engineers who are looking for new jobs, especially with how turbulent the job market feels. It can be really difficult to navigate on the system integrator end. We get projects we immediately need to hire for, and if we don't have the staffing required, then we come to LVI Associates to look for those engineers.

The problem is getting them excited though, because you don't want to just hire someone for just one project. You want to hire someone who's going to contribute to your business in a very meaningful way over the long term and that, I think, is the most important thing to keep in mind whenever you want to be able to adapt to a changing industry. You're making sure that you're not just hiring someone for a single project, you are hiring for your business.

When I was brought on here, I don't think I was hired with an immediate project in mind. Ben, you were my recruiter! I don't think there was a specific project in mind, but I was immediately placed on a project. Then that project ended, and it's been almost 3 years since I started here at Skellig, so, being able to contribute to the business in different ways is something that's kept me excited.



◆ **Benjamin Zorab:** Yeah, I think that's the part from my side that's been difficult when you don't have the right client for it. You need a very open-door policy, and open lines of communication to make sure the alignment is there. Because there's no point putting someone in a position that is ultimately going to result in them being unhappy in their job. That doesn't give them the progression they're looking for. Bonnie, you're a perfect example of it—having flexibility and mobility within your staff to offer those sorts of opportunities. Travis, anything from your side on that?

◆ **Travis Cox:** Yeah, I'll come at it from the vendor's perspective. We work with a lot of system integrators, they're key to the success of our business. We're focused on helping their customers be successful and empower them to do more. Empowerment is a really important thing that has to happen these days—not just across partnerships, but with organizations empowering their people to pursue passions, to go forward and to do more.

There are two major challenges that integrators are that are faced with. One, of course, is that the landscape is changing so rapidly. As you said, the skillsets that are required to deliver projects today are so different than they were 15 years ago. In terms of the digital transformation efforts we're seeing, there is now a need for data scientists. There's a need for understanding how to bring data to the cloud, machine learning, and to some degree, now getting into AI to be able to build language models and use all these skills that are outside the realm of operational technology.

We've been talking for a long time about this operational technology vs information technology divide and how that that's not going to help a business move forward. Well, now we're seeing these roles change and these worlds coming together. This means that, unfortunately, integrators have to be the expert in a lot of different areas in order to deliver projects, because they're the ones guiding the customer in that journey. Our challenge is trying to formulate what those roles are exactly. What do these teams look like? How are they adapting over time? And I think the empowerment is really important, because these are the people going into the factories solving problems. They'll have the ideas of where they need to go, and you just need to let them do that and give them the ways.

The second challenge is that nobody is really talking to the next generation about this. I've gone to a lot of universities, and nobody is really talking to them about the opportunities that exist in the automation arena, especially different verticals. Nobody knows that this industry exists and that there's so much opportunity. That means it's up to us as vendors, and LVI Associates I know you're doing a ton of work in this arena, to show how much opportunity is here and encourage them to train accordingly. That way when they come in, they'll be able to provide a lot more value. The investment that we put into that next generation is really important. We need to be able to adapt so that we can deliver value for our customers.





## Implications for Companies Lagging in Ignition Adoption

*Kianni Brown: This next question fits quite nicely into this, Travis, so this one will be for you. What are the implications for companies lagging in Ignition adaption right now, given its widespread use? And how did Ignition enable modernization of processes and systems?*

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- ◆ **Travis Cox:** Companies lagging in Ignition adoption may struggle to modernize their processes and systems. Ignition enables integration of OT and IT technologies, facilitating data transfer to databases, data lakes, and the cloud. This modernization allows remote access and collaboration, which is crucial for staying competitive. It's an ever-changing environment, but you have to want to adapt and bring these systems in place.
  - ◆ **Paul O'Sullivan:** Ignition is a really great example of enablement. When you bring in technologies that enable data transfer and movement, now you have this ability to move toward real, sustainable solutions. That's why it's taken off so much and why it's so relevant.
  - ◆ **Benjamin Zorab:** Amazing, for sure. The part that is quite intriguing which, Paul, I know we spoke about, is the importance of taking the opportunities that technologies like Ignition bring and implementing them quickly so that you don't fall behind the curve. That's where a lot of clients and engineers get it wrong. If the last 18 months have shown us anything, it's that people need to be mobile and they need to diversify. They need to make themselves valuable, whether it is at a macro level or a micro level.
  - ◆ **Paul O'Sullivan:** That's 100% the biggest thing for your integrator, engineer, or vendor—it's that mindset. Hoarding knowledge is the old way. The new way is sharing knowledge, iterating, building on ideas, sharing information, being open. That's the future.





## Encouraging Engineers to Enhance Skills and Embrace New Technologies

*Benjamin Zorab: That was dead on, and it flows very nicely into my next question. What proactive strategies can companies employ to adapt to industry changes, and how can said companies encourage their employees to go on that journey with them?*

- ◆ **Travis Cox:** You've got to be able to take some risk in a way of bringing in technologies that have never been done before. To be able to do that in a successful way, that's going to take talent. It's going to take organizations coming together, bringing in the right teams and skillsets to solve that. If we don't do it, somebody else will.
- ◆ **Paul O'Sullivan:** That's the way I see the world too, Travis. Companies can encourage employees by providing training and development opportunities, promoting a culture of innovation, and demonstrating the practical benefits of new technologies through demos and real-world applications.

**50%** of respondents to a poll hosted on LVI Associates' LinkedIn page reported that their current company does not offer any upskilling opportunities. Twelve percent of respondents said they were not sure, and **38%** said their company did provide this.





## Effective Approaches to Driving Technology Adoption

*Benjamin Zorab: What effective approaches drive companies to embrace new technologies and methodologies, considering the industry, and mobility's impact on recruitment and talent development?*

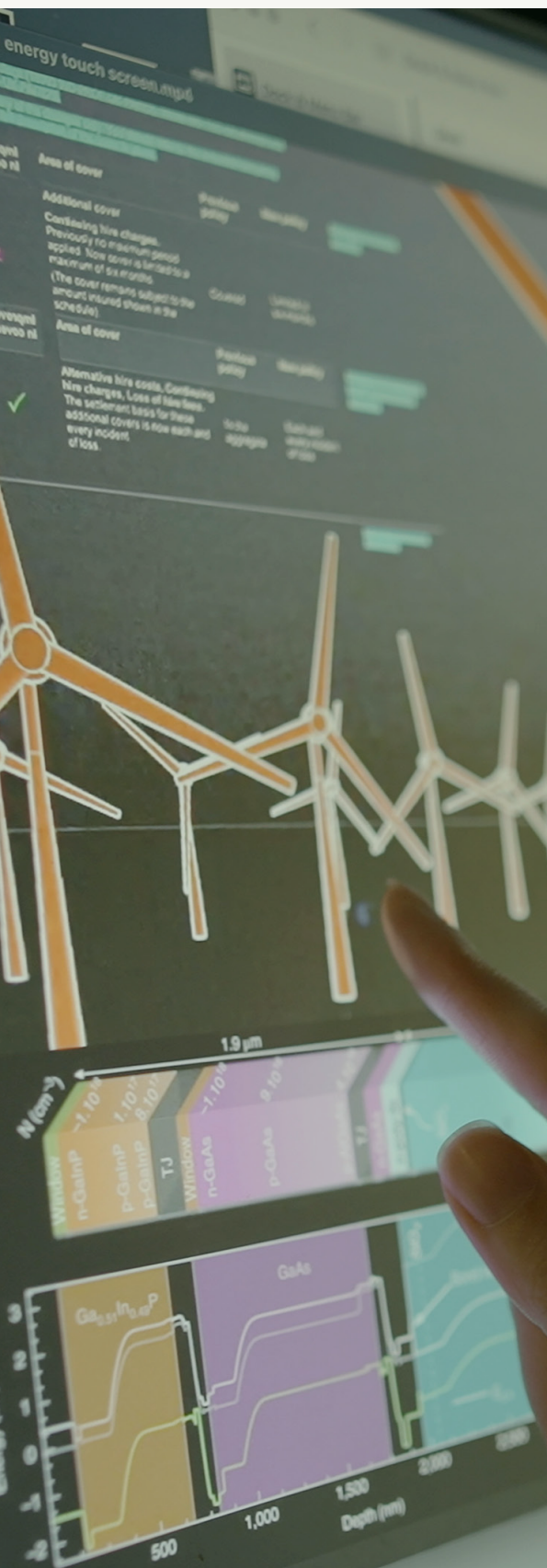
- ◆ **Bonnie Gauss:** I could start us off there. One of the most effective things that companies can do is ensure that they have paths of internal development for new technologies, especially with how rapidly things are changing now. A year ago, no one needed to be an AI engineer and a systems integrator working in life sciences. Fast forward to today, and look how in-demand that is becoming. Not only do we need to have someone with their finger on the pulse of the industry willing to develop their engineers and keep their engineers current, but we also need to be able to place our people on projects that are actually utilizing those skills so that they can develop them.

With the way the industry has been lately, you're seeing a lot of people who really want to learn new technologies. You're seeing education become more accessible every day with things like Tulip. Engineers have the opportunity to learn all these new skills, but then you have to be able to provide them with the projects to actually use these skills they're hoping to focus on.

- ◆ **Paul O'Sullivan:** Spot on. I would add that's it's just another iteration of that learning mindset we've been talking about. If we're looking for candidates, we're going to be very excited about the ones that want to be part of change. They want to solve problems. They have to have that engineering mindset where they want to discover ways of fixing things and making things better. That's the right mindset, and you can build something really great with that mindset. We want to get really good at recognizing those individuals.







◆ **Kianni Brown:** From a recruitment standpoint, when we're speaking to these engineers about why they want to leave their current company, they often feel they aren't challenged enough. That's why it's so important for clients to upskill their engineers and to keep them. They're not being technically challenged, and the employers are stuck in their old ways because they've got existing clients stuck in their old ways.

It's 2024 now, we need to change. Companies should be implementing comprehensive training programs and focus on new technologies and methodologies to upskill their current employees. This will ensure the workforce will stay, is kept entertained, and kept advancing.

◆ **Travis Cox:** Absolutely. For integration companies, there's got to be a mindset shift that's all about getting our staff trained up and making it a part of the DNA of the culture of the company. If you don't do that, engineers are going to go somewhere they can get that opportunity. If you do train these people, think about what more you'll be able to offer your customers and what other value you'll be able to bring to them.

One of my favorite things that I've been lucky enough to do over the years is to go on site to a customer and just walk the floor and talk about the challenges with operators, plant managers, and C-level people. It helps me understand what they are dealing with and what problems they're all trying to solve. It's all about that discovery, and again, it comes down to empowerment. If we empower our people, they're going to want to rise to the occasion and do things that are above and beyond, which is pretty amazing.

Another poll conducted on LVI Associates LinkedIn page revealed that **44%** of engineers feel "Not at all challenged" in their current role. Just **13%** felt "Very challenged."



## Principals for Cultivating Adaptable, Knowledgeable, and Empowered Workforces

*Kianni Brown: The last question from me is, what do you think are the key principles for cultivating an adaptable, knowledgeable, and empowered workforce to drive automation and innovation?*

- ◆ **Bonnie Gauss:** The answer is to listen to them. Your workforce is going to tell you what drives them, what inspires them, what they want to know, and what skills they want to bring up. You need to listen and then put that into action. You can't just ideate. You have to move it along.
- ◆ **Paul O'Sullivan:** Absolutely. I also wonder sometimes if it's worth thinking about the problem in terms of what won't change? You still need great people with great process control knowledge. But maybe the canvas is different in the future.
- ◆ **Kianni Brown:** I think the most important thing is ongoing training programs for employees. It's the engineers that want to keep on advancing and improving their technical ability. Regular training programs that include the latest industry developments ensures that employees are always equipped with current skills and knowledge. That's what's going to keep them retained and engaged.
- ◆ **Paul O'Sullivan:** That's 100% the biggest thing for your integrator, engineer, or vendor—it's that mindset. Hoarding knowledge is the old way. The new way is sharing knowledge, iterating, building on ideas, sharing information, being open. That's the future.

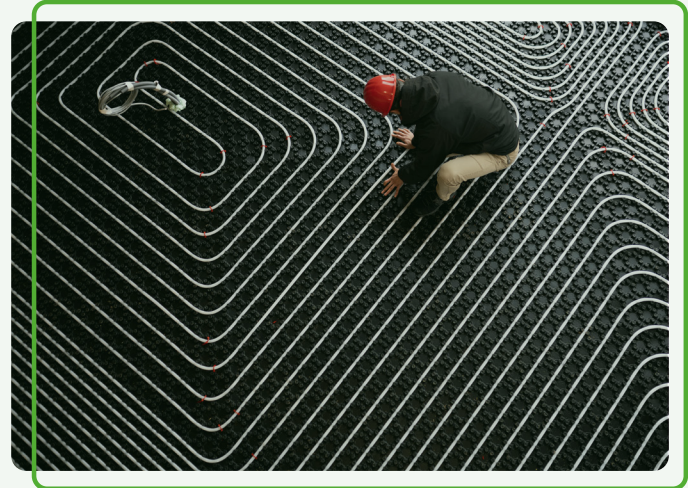




◆ **Paul O'Sullivan:** And consider moving toward enablements like Ignition. Training is free. Enable your engineers and encourage them to get access to that. There are platforms that will change your mindset if you can get into seeing how they solve problems. Come up with a way for the system integrators to not put up walls and shut down that access.

◆ **Benjamin Zorab:** That was going to be my follow-up point. I think the most important thing is being able to communicate it in the correct way to all employees across all levels so everyone knows what's going on, and they know what opportunities are available to them.

When I look at why engineers decide to leave companies over the past six years that I've been doing this, yes there's the training and development aspect, but also it comes down to them not feeling as if they've been in the conversation about what's going on in the company. That's where a lot of attrition comes from. Some of the best companies that we work with have regular forums on a monthly basis that lets their employees know what's actually going on in the business—the good, the bad, and the ugly—so that people feel like they're part of the end goal and the journey for that company. Communication is a really key part of cultivating that engaged workforce.



◆ **Kianni Brown:** I agree. Travis, do have anything to add?

◆ **Travis Cox:** One thing I wanted to mention is something we've talked about before Kianni, and that's how a lot of engineers who have been in the game for a while don't necessarily advertise what they're doing or what skillsets they have when we're trying to find them.

◆ **Kianni Brown:** Yes, 100%, it's always been a topic of ours and it confuses me. Employers should be encouraging their engineers to post about their accomplishments, like their Ignition certifications. People should be expressing that they've gone out their way to learn something. That makes you an asset to the industry, so showcase it!







## How to know if you're on the right career path as an engineer

*Paul O'Sullivan: Before we go, Ben, I just have one question I'd like to get your perspective on. What do you think are things that engineers should invest in to lead to more fulfilling jobs?*



- ◆ **Benjamin Zorab:** What I find with more junior engineers is that, up until that point, your head is down charging up the mountain with blinkers on, and you're not really looking outside the job that you have. You're given a project, and that's your focus for six months, 12 months, 18 months. Not knowing what else is out there and what other companies are doing can be detrimental to career prospects. My advice to individuals that aren't looking at Ignition or Tulip or whatever it may be, would be to lift your head up above water and look at the industry a bit more broadly to see what other people are doing and have these conversations. Engineers need to be a bit more cautious about having tunnel vision in their careers.
- ◆ **Kianni Brown:** Engineers also need to be involved in industry networks. They need to stay informed of emerging trends and to contribute to the development of industry standards. Don't get pigeonholed by your managers. If they're not listening to you on how to improve a process, then start thinking if you're in the best environment to help you improve yourself.



## Summary

The automation engineering landscape is rapidly evolving, and there are no signs of slowing. To keep pace, it's essential that industry leaders are cultivating a workforce that feels empowered to seek the knowledge and skills necessary to drive their business—and their own careers—forward.

Professionals, in turn, must remain vigilant in advocating for their own professional development and maintaining open lines of communication with their employers. Companies and professionals must work together to stay on top of technology and the opportunities to

learn about them—because the only thing that's constant in the world of automation engineering, is change.

If your business needs help connecting with top automation engineering talent, LVI Associates has a team of expert consultants that are equipped and ready to support your unique needs. Conversely, if you're a skilled engineer looking for an opportunity to work for a company that promotes continuous learning, LVI Associates can connect you with the innovative companies for which you've been searching.





## About LVI Associates

Energy & infrastructure plays a critical role in creating a future that works for everyone, which is why it is essential to work with the right talent partner who can source and deliver extraordinary people that make a difference.

Providing bespoke talent solutions from our hubs all over the world, we cover the full life cycle of energy & infrastructure projects, across Architecture, Engineering, Construction, and Post-Construction.

As a strategic advisor with a proven track record in helping businesses scale through our services, we are integral to the energy & infrastructure ecosystem, focusing on the talent solutions needed to let organizations get back to what matters – building a better world.

## Our Specialisms

- ◆ Architecture
- ◆ Automation & Controls
- ◆ Building Diagnostics
- ◆ Building Services
- ◆ Civil
- ◆ Construction
- ◆ Data Centers
- ◆ Environmental
- ◆ Investigations & Disputes
- ◆ Power Delivery
- ◆ Renewable Energy
- ◆ Technology

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