

nickleeder

guide

Industry 4.0 ignition guide

Seize the Industry 4.0 imperative in 2024, ignite your transformation and win.

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The home of this guide, with a summary and related reading: nickleeder.com/resources/industry-4-0-ignition-guide-siri/

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Seize the Industry 4.0 imperative in 2024

The future of manufacturing isn't waiting: it's roaring past at high speed, powered by the engine of Industry 4.0.

Your competitors embrace automation, data-driven optimisation and agile production. Staying in the slow lane with outdated practices is a recipe for obsolescence.

2024 is the year to shift gears and ignite your factory's transformation. Knowing where to start and what to focus on is the fuel for your ignition.

94% of executives consider Industry 4.0 critical to keep operations running, yet 74% of digital transformation projects fail to scale from the pilot phase. We call this the pilot trap.

That's why IgniteIt! uses the Smart Industry Readiness Index (SIRI) to connect your business priorities and the digital maturity in your factory, to help prioritise where to start with what has the greatest impact on your bottom line.

IgniteIt! is about the business results and not just the technology. This avoids the pilot trap. You'll win because you will realise the benefits faster than your competition.



The benefits are real

20 to 50%

Faster: reduced process times

10 to 20%

Leaner: reduced waste and defect rates

15 to 30%

Optimised: increased output

10 to 20%

Productive: reduced labour costs

10 to 20%

Assured: improved product quality

Metrics have been compiled from CIMdata, Aberdeen Group, Gartner Group, IDC and PTC.

The benefits are real for Industry 4.0, but you need to know where to look and what to do to release them. This is where many Industry 4.0 projects fail to be adopted and scaled.

Embrace the imperative, use IgniteIt! and build your factory's future today. We hope you enjoy reading this Industry 4.0 Ignition Guide!

2024 is the tipping point. Delaying your Industry 4.0 transformation is no longer an option. Don't become a museum exhibit in the annals of manufacturing history.

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01

Why Industry 4.0?

Industry 4.0 isn’t just a fancy buzzword. It’s a lifeline for industries facing a competitive tsunami.

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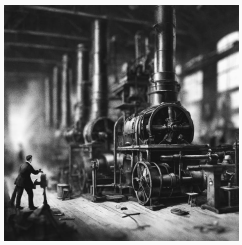
What is Industry 4.0?

Industry 4.0, also known as the Fourth Industrial Revolution, is the ongoing automation and data exchange in manufacturing technologies and processes.

It integrates the human, machine and digital worlds, blurring the lines between the real and virtual. Think of it as a smart factory where people, machines and systems talk to each other, optimise production and make decisions with minimal human intervention.

Each industrial revolution has brought about profound changes in the way we live, work and interact with the world around us. The ongoing Fourth Industrial Revolution has the potential to be even more transformative, but it also raises important questions about its impact on our future.

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01

1st industrial revolution

Mechanisation of production, replacing manual labour with machines powered by water and steam.

1760 to 1840



02

2nd industrial revolution

Mass production with assembly lines and interchangeable parts, new energy sources like electricity and petroleum.

1870 to 1914



03

3rd industrial revolution

Introduction of computers, electronics and automation. Increased focus on services and knowledge-based industries.

1960 to 1980

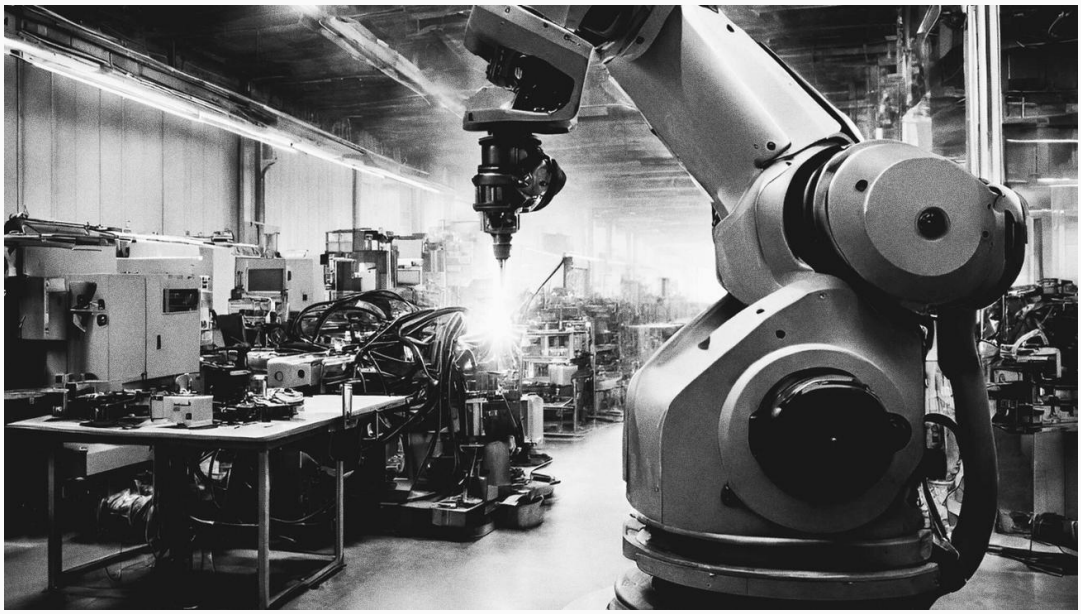


04

4th industrial revolution

Advanced robotics and automation, and intelligent systems through the Internet of Things (IoT) and artificial intelligence (AI).

Now



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What are the benefits of Industry 4.0?

There are a lot of buzzwords and hype surrounding Industry 4.0. But for those companies that embrace the opportunities, the benefits are real.

Industry 4.0, the ongoing digital transformation of manufacturing, boasts a vast array of potential benefits, affecting businesses, customers and even the environment.

Benefit	How	Typical gain
Reduced process times	Through workflow streamlining and automation	20 to 50%
Reduced waste and defect rates	Real-time data and process control can improve yield and reduce waste	10 to 20%
Increased output	Optimised workflows and automation can boost production capacity	15 to 30%
Reduced labour costs	Automation can replace repetitive tasks, leading to labour cost reductions	10 to 20%
Improved product quality	Real-time monitoring and defect detection can improve product quality	10 to 20%
Reduced customer complaints	Improved quality translates to fewer customer complaints	15 to 20%

Benefits span efficiency, productivity and quality. Metrics have been compiled from CIMdata, Aberdeen Group, Gartner Group, IDC and PTC.

However, it's important to acknowledge that Industry 4.0 also presents challenges like potential job displacement due to automation, cybersecurity threats and ethical considerations surrounding data privacy. To fully reap the benefits, businesses need to invest in upskilling the workforce, ensuring data security and developing ethical frameworks for this transformative technology.

Why do we need to ignite Industry 4.0?

Automation, data insights and interconnected systems act like a supercharged engine, boosting efficiency and slashing costs. Gone are the days of guesswork and waste.

Imagine defect-free products, personalised on the fly and delivered in a flash. That's the reality of Industry 4.0.

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Staying competitive

Industry 4.0 technologies can significantly improve efficiency, productivity and flexibility, allowing businesses to adapt to changing demands and keep up with global competition.

Ensuring quality and reliability

Industry 4.0's focus on real-time monitoring, feedback loops and proactive adjustments helps in early defect detection, reducing waste and ensuring customers receive consistently high-quality products.

Driving innovation and growth

Industry 4.0 fosters a culture of innovation by facilitating the development of new products and service models. These innovations can unlock new revenue streams and drive business growth.

Optimising processes to reduce costs

Industry 4.0 streamlines production processes, minimises wasted resources and optimises resource allocation. This can translate into significant cost savings.

Adapting to a changing global landscape

Industry 4.0 technologies enable businesses to become more agile and adaptable to changing market trends, resource availability and environmental regulations.

Addressing workforce challenges

Industry 4.0 presents opportunities for upskilling and reskilling the workforce and retaining talent. New jobs emerge in Industry 4.0 areas, requiring different skills than traditional roles.

Industry 4.0 is not just a technological upgrade, but a fundamental shift in how industries operate. By embracing these technologies, industries can enhance competitiveness, drive innovation, ensure quality, optimise processes and adapt to a changing world, ultimately securing their future success and contributing to a more sustainable and efficient global economy.

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02

Igniting your Industry 4.0 journey

Introducing the SIRI assessment: your Industry 4.0 scorecard.

02

Igniting your Industry 4.0 journey

Introducing the SIRI assessment: your Industry 4.0 scorecard.

The SIRI assessment

It gives you a clear X-ray of your factory's digital transformation health.

Smart Industry Readiness Index (SIRI)

SIRI is an assessment framework that benchmarks a factory's Industry 4.0 readiness across 16 dimensions of process, technology and organisation, and turns the results into a prioritised roadmap.

Forget guesswork: this rapid and deep dive analyses processes, technology and how your team operates, highlighting strengths and weaknesses. Think personalised roadmap to boost efficiency, quality and innovation.

It's like a competitive edge scanner, telling you exactly where to optimise and dominate the Industry 4.0 race. Get your SIRI score and leave the competition in the dust!

The Smart Industry Readiness Index (SIRI) Assessment is like a comprehensive check-up for your factory's Industry 4.0 readiness. It's not just a thumbs-up or thumbs-down: it's a detailed X-ray of your processes, technology and organisation. Imagine a superhero who scans your factory and pinpoints exactly where you're shining in efficiency, quality and innovation, as well as where you need a power-up.

Nick Leeder & Co's approach combines the official assessment and gives you a personalised roadmap to guide your priorities on your Industry 4.0 journey. Think of it as your competitive edge scanner, revealing the precise optimisation points to leave the competition in the dust. So ditch the guesswork and get your SIRI score: it's time to supercharge your factory and win the future of manufacturing!

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SIRI in numbers

4K+
Assessments completed to date

50+
Countries have contributed

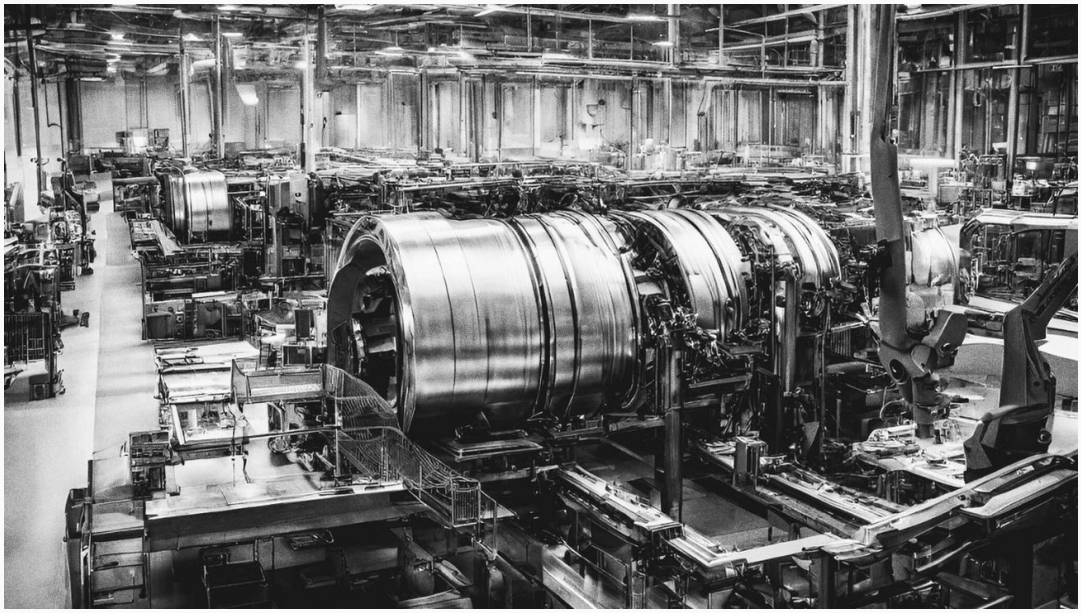
14
Distinct industry benchmarks

What the assessment involves

2
Days on site to complete the assessment

16
Industry 4.0 dimensions are assessed

1
Crystal-clear roadmap for your Industry 4.0 journey



Know your Industry 4.0 priorities

Companies need to define their unique “why” for Industry 4.0.

Industry 4.0 projects which fail typically do so because they start in the wrong place: the technology, a solution looking for a problem.

Starting an Industry 4.0 project is an exciting adventure, but like any journey, it needs a good roadmap and must be firmly rooted in solving key problems to help you get ahead.

Start with what is important to you

/ Understanding the 14 financial drivers and their make-up in your factory.

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/ Connecting these drivers and your KPIs to the levers you can pull, which maximise the return of your transformation.

The approach needs to define the relationship between different areas of your transformation and how they affect your goals. Start with understanding the bottom line of the business or facility and drive deeper into your business objectives. Turn digital transformation on its head, by being clear about what needs to be affected.

By starting with your priorities and understanding your cost basis, you give your Industry 4.0 transformation clear goals and objectives before you dive into the technology solutions which can enable it.

Assess which Industry 4.0 levers to pull

Forget one-size-fits-all: SIRI gives your factory an Industry 4.0 microscope.

It zooms in on 16 critical dimensions, across your processes, technologies and organisation. Think efficiency laser beams, quality spotlights and innovation boosters, all tailored to your unique factory.

Ditch the guesswork: your factory is benchmarked against each of these dimensions to understand your competitive advantages and opportunities.

Comprehensive assessment

Provides a detailed examination of a factory's readiness for Industry 4.0 across 16 key dimensions.

Data-driven insights

The framework uses a standardised assessment methodology, generating data-driven insights into a factory's current state. This allows for objective comparisons between different factories and facilitates the identification of specific areas for improvement.

Benchmarking and competition

Allows manufacturers to benchmark their performance against other factories in their industry or region. This provides valuable insights into industry best practices and enables manufacturers to identify areas where they lag their competitors.

By using this powerful framework, manufacturers can gain valuable insights, develop strategic roadmaps and ultimately improve their performance and competitiveness in the future of manufacturing. Source: INCIT.

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Align the opportunity with the value

The Prioritisation Matrix for SIRI dimensions is your secret weapon!

It's not enough to know where you are better or worse than your competition. The Prioritisation Matrix connects the dots between your cost drivers and KPIs and each of the 16 Industry 4.0 dimensions.

This supercharges your Industry 4.0 transformation into the four priorities which will create the greatest impact and value in your factory.

01

Compare your maturity

The industry benchmarking highlights the opportunities against your peers.

02

Gather the inputs

Combine your priorities, financial drivers, KPIs and transformation time frames.

03

Review the opportunity

The Priority Matrix calculates the 16 dimensions which have the greatest opportunity and value.

04

Ignition initiatives

Determine the initiatives against the SIRI framework to ignite your Industry 4.0 transformation.

You are clear on your prioritised initiatives, aligned to your business objectives and goals to measure your success against. This will be the ignition of your Industry 4.0 journey: your unique "why". Source: INCIT for the SIRI report outputs and frameworks.

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03

An Industry 4.0 roadmap to success

You need a GPS for your factory, mapping out the most impactful route to success.

03

An Industry 4.0 roadmap to success

You need a GPS for your factory, mapping out the most impactful route to success.

Your Industry 4.0 roadmap supercharges every corner of your operation. No more technology pilot dead ends or scattered investments: this roadmap cuts through the fog, pinpointing the high-impact moves that'll leave the competition in the dust.

A crystal-clear plan

The roadmap charts your course to a future of lean, mean production machines. It keeps everyone focused, ensuring every action fuels your factory's transformation to success.

A plan everybody gets behind

Break down those factory silos! This roadmap gets everyone singing from the same sheet music, fostering collaboration and turning your crew into an unstoppable Industry 4.0 dream team.

Adapt and conquer

The future's never static, and neither is your roadmap. It's flexible enough to handle curveballs, letting you adjust on the fly and stay ahead of the ever-evolving tech game.

Your Industry 4.0 roadmap is not just a document; it's a catalyst for change. It empowers you to navigate the complex world of digital transformation, ensuring you unlock the full potential of Industry 4.0 and secure your future success.



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Now is the time to ignite your journey

The future of manufacturing belongs to those who embrace Industry 4.0.

The SIRI assessment is your key to unlocking this potential and securing your factory's success in 2024 and beyond.

Stay ahead of the curve as Industry 4.0 gains further momentum in 2024 and capitalise on the growing traction of Industry 4.0 technologies and practices. Early adopters are already reaping the benefits, and waiting any longer might put you at a competitive disadvantage.

As the momentum of Industry 4.0 continues to accelerate, manufacturers in 2024 face a crucial juncture. To remain competitive and unlock the future potential of their operations, a proactive approach to digital transformation is imperative. The Smart Industry Readiness Index (SIRI) assessment offers a valuable tool in this endeavour, providing a comprehensive and data-driven analysis of a factory's readiness for Industry 4.0 implementation.

The SIRI framework delves deep into three key areas: processes, technology and organisation. Each dimension is meticulously assessed, providing manufacturers with a detailed picture of their strengths and weaknesses across critical elements such as process optimisation, data analytics and workforce skills. This granular insight goes beyond mere buzzwords, offering actionable recommendations for improvement and a personalised roadmap for successful digital transformation.

2024 presents a particularly opportune moment for manufacturers to use IgniteIt! and the SIRI assessment. Increased governmental support for Industry 4.0 initiatives, combined with the framework's continuous evolution to reflect the latest technological advancements, make this year an ideal time to embark on the digital transformation.

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Don’t just hear the Industry 4.0 buzzwords, ignite your future now!

Industry 4.0 isn’t just a technology fad: it’s a revolution redefining manufacturing.

Efficiency soaring, innovation exploding and productivity reaching warp speed: that’s the Industry 4.0 promise. But where do you grab the wheel and steer your factory to success?

Ditch the guesswork and dive deep with Nick Leeder & Co’s IgniteIt! This isn’t just more buzzwords and hype: it’s a personalised roadmap tailor-made for your factory’s potential and aligned with your business priorities.

Imagine

- / X-raying your processes to uncover hidden efficiency leaks and unlock untapped power.
- / Pinpointing the perfect tech investments that ignite productivity without burning a hole in your pocket.
- / Future-proofing your workforce with the skills and mindset to thrive in the Industry 4.0 era.

Don’t wait for the competition to overtake you. This assessment is your chance to chart your course, fuel your engines and blast off into a future of unprecedented success.

Remember, the future belongs to those who dare to explore it. Take the first step today and claim your place in the Industry 4.0 revolution!

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About Nick Leeder & Co

Nick Leeder & Co is a team made up of industry veterans with decades of experience in defining, leading and executing adopted and lasting transformations in operations, manufacturing and engineering.

We work at the intersection of business and technology, always focused on the value and outcomes, and work with enabling processes and technologies beyond the buzzwords. We help manufacturing businesses **see** the opportunity with digital transformation and Industry 4.0. We support these organisations to **transform**, acting as their co-pilots with the complex organisational changes. Finally, we help our clients **grow** by improving operating margins and launching new products and services faster and better than their competition.



Ignite your Industry 4.0 journey

Find out more at nickleeder.com/ignite, or book a conversation with us.

Book at meetings.nickleeder.com
hello@nickleeder.com / +44 (0)1275 772 422

Scan to book

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Questions this guide answers

What is Industry 4.0?

The Fourth Industrial Revolution: the ongoing automation and data exchange in manufacturing technologies and processes, integrating the human, machine and digital worlds.

What is the pilot trap?

The pattern where digital transformation projects fail to scale beyond the pilot phase, often because they start with the technology rather than the business problem.

What does a SIRI assessment involve?

Around two days on site, assessing 16 Industry 4.0 dimensions across processes, technology and organisation, benchmarked against industry peers, leading to a clear roadmap.

How do you prioritise Industry 4.0 initiatives?

Start with your business priorities and financial drivers, compare your maturity with peers, then use a prioritisation matrix to find the dimensions with the greatest opportunity and value.

About the author

Nick Leeder is the founder of Nick Leeder & Co. An engineer by background, he has led, and been accountable for, transformation programmes in senior management roles at Dyson, SKF and Philips, across Europe, North America and Asia. He is certified in the Smart Industry Readiness Index (SIRI) and its CoSIRI framework, and is recognised by organisations including the World Economic Forum. Nick Leeder & Co is a multi-award-winning advisory and coaching business that helps manufacturing leaders turn enabling technology into measurable operational results.

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Complexity delivers nothing.

At Nick Leeder & Co, we exist to restore clarity, confidence and control for manufacturing leaders navigating digital transformation.

Our mission is to help industrial businesses unlock the real value of enabling technologies, not through hype, but through practical action that improves productivity, profitability and sustainability.

We have seen too many businesses fall into the pilot trap. Too many strategies built on buzzwords instead of business outcomes. We believe manufacturers deserve better. So we help leaders cut through the noise, uncover what really matters and build a transformation path they can trust, so they get results that stick.

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