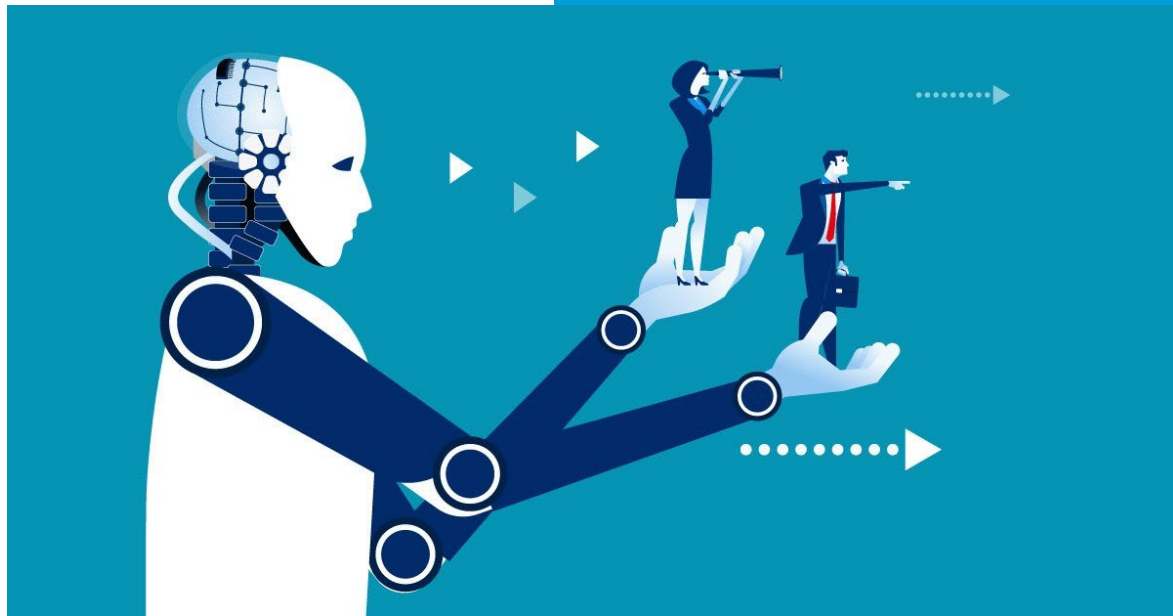


NextLEIx



Confidence in the Age of AI — Turning
Insight into Bold & Smart Action

Introduction

In the rapidly evolving technological landscape, organizations face unprecedented challenges in product development. The increasing complexity of systems, coupled with AI's transformative impact, necessitates a shift in engineering and design methodologies. Traditional plan-driven approaches often struggle to address the dynamic and uncertain nature of modern development environments. To navigate this complexity, organizations must adopt adaptive strategies, integrating AI to enhance resilience and responsiveness in decision-making.

"Future development demands a shift in methodology."

At the core of these challenges lies a critical leadership attribute:

Confidence

Confidence plays a dual role in decision-making and project management—driving bold actions, innovation, and calculated risk-taking, while unchecked overconfidence can lead to poor risk assessment, inadequate planning, and project failures.

Organizations must leverage AI and embrace risk-aware strategies to thrive in an unpredictable environment. This study is based on a publication at the INCOSE Symposium in 2019 [1] and was repeated in 2024 with the aim of looking at the development of decision making and confidence worldwide and comparing it with LEIxCN's project experience.

"AI and Agile increase the importance of confidence level into people."

Trends: Navigating The Future Of Product Development

The world is changing faster than ever, and businesses must evolve to keep pace. Shifting market demands, disruptive technologies, and heightened complexities are reshaping industries, creating both opportunities and challenges for development teams and leadership. In this landscape, success depends on adaptability, innovation, and a willingness to rethink traditional approaches. This shift in product and service development requires organizations to build resilience in a riskier, more dynamic world. To navigate fragile systems and rising uncertainty, organizations must adopt adaptive strategies that balance resilience with responsiveness. This shift is not just about reacting quickly — it's about being able to adapt with confidence in increasingly complex environments.

"Markets and business models are changing faster and need resilience in decision-making."



Figure 1: Reference [2]: INCOSE Vision 2035 - Trends

Agile Development

The shift from traditional, plan-driven methodologies to agile and hybrid models empowers self-organized teams to quickly adapt, innovate, and shape future systems. By delegating decision-making to these teams, organizations foster a culture of confidence and mutual respect — treating both the organization and each project as collaborative teams working together. This approach streamlines development, boosts responsiveness, and ultimately delivers more tailored, market-ready solutions.

"From rigid plans to agile autonomy, empowered teams and collaborative confidence drive future-ready innovation."

AI supports the Development

Artificial intelligence (AI) is fast becoming indispensable for developing future-ready solutions, driving automation, insights, and personalization. Yet, this integration brings complexity — demanding refined data management, ethical oversight, and interoperability. As AI increasingly pre-selects and decides which data to use, organizations must build confidence and develop their competency to critically evaluate its outputs, especially in the introduction phase of AI. While AI empowers teams and people, overreliance on its perceived infallibility can lead to 'confidence inflation, risking misguided decisions.

"Competence in the evaluation of AI is essential."

However, there is a risk about the use of artificial intelligence (AI), as according to an EY study from the beginning of 2025 [3], only 27% of Germans check the results of AI.

The real challenge is not between Development and AI but effectively integrating AI to strengthen human judgement and turn complexity into a catalyst for innovation.

Impact on Industry and Companies

This evolution in development requires organizations to be more resilient, adaptable, and empathetic. Agile approaches and AI are transforming industries, but also demand trust, ethics, and critical thinking to stay competitive and future-ready in a rapidly changing landscape, where traditional processes are giving way to hybrid and innovative strategies, and companies must develop new skill sets, maintain transparency, and navigate complex relationships with customers, partners, and stakeholders to succeed.

"Adopt to become future-ready!"

Integrating AI In Future Decision Making

Integrating AI into decision-making poses several key challenges for development teams and organizations. A major concern is ensuring algorithmic fairness and transparency. AI systems can unintentionally reinforce existing biases from their training data, leading to inequitable outcomes. Additionally, the "black box" nature of some algorithms complicates understanding their decision-making processes, raising issues of trust and accountability. Organizations must establish oversight mechanisms to address these ethical concerns effectively.

"AI-driven development demands smart decisions—balancing innovation, fairness, and security for sustainable success."

In today's fast-paced and complex environment, teams and leadership face numerous challenges when making decisions across various aspects of development. These decisions can have far-reaching consequences and impact the success of the project.

Key Decision Areas of the Future:



Figure 2: Key Decision Areas overview

- Engineering: Navigate trade-offs during the development, balancing factors such as variant & modularity, performance, maintainability, reliability, availability, sustainability, lifecycle cost (LCC), etc.
- Safety-related: Ensuring the safety of users, customers, and the organization is paramount.
- Security: Protecting against cyber threats and data breaches is a top priority.
- IT Technology: Choosing the right technology stack, tools, and platforms to support the projects
- Project Management: Make or buy, time, cost & quality and other business aspects.
- Organization: Strategy & portfolio, resource allocation and prioritization, Change Management and adaptation to new business models, e.g. leasing, Pay per Use, SaaS, etc.

Confidence In Decision-Making:

“91% of decisions rely on judgement”

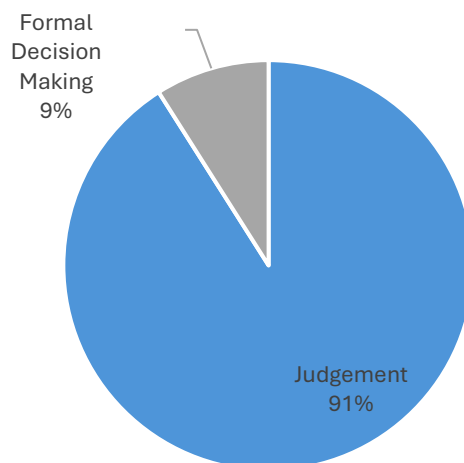


Figure 3: Techniques use to make decisions

“A trend to make people related decisions than structured analysis and traceable results”

From projects and discussions, the behaviour and decision-making processes as well as the lack of systems thinking in teams and organisations are increasingly being reported as a risk factor. This can also be seen in [4] from the statistic that 91% of decisions are based on personal judgements and not on formal methods. In the end, it also becomes visible to the public in terms of project duration, costs and user acceptance. Topics become very long in development discussions and decisions are postponed or lead to wrong decisions due to overestimation and thus to project delays and new rounds in the evaluation of situations in both process models.

The desire to orientate oneself towards formal methods and to base decision-making on a common, solid foundation is seen as too costly and

time-consuming, both in projects and organisations for decision-makers. A balance needs to be struck between making decisions based on knowledge and using formal methods.

“Balance between judgement accuracy and formal decision making is key”

Effective decision-making relies on the self-awareness and confidence of the individuals and teams involved.

The Confidence Factor: Key to better Decision-Making

At the core of these challenges lies confidence — not as simple boldness, but as a nuanced skill linked to self-awareness and judgment accuracy. Research from the INCOSE paper, “The Good, The Bad, and The Ugly” [1], reveals that decision-making quality is deeply influenced by the alignment between confidence and actual abilities.

The Role of Confidence: Boldness is often celebrated in leadership, but unchecked confidence can lead to:

- Misaligned resource allocation
- Poor risk assessment
- Inefficient and wrong project outcome

Self-Awareness as a Multiplier

Self-awareness bridges the gap between overconfidence and hesitancy, enabling decision makers and leaders to make judgments aligned with reality.

The Bold, the Humble, and the Self-Aware

In any organization, leaders and teams can often be categorized into three profiles based on their confidence and self-awareness [5]:

- The Self-Aware (0.8-1.2): Aligned confidence and judgment, making them trusted decision-makers and they know when to ask experts or approach the team for decision making
- The Bold (>1.2): High confidence but often overestimate their capabilities and tend to be overconfident with the risk to make wrong decisions
- The Humble (<0.8): Undervalue their abilities despite high accuracy and confidence to have a valid decision, but will never show up

Key Results - Moving To Overconfidence

At LEIxCN, we are working with people and teams to develop systems and deploy new ways of working. During the last years we recognized that due to the above-mentioned circumstances a shift in decision making based on

intuition and not relying on a structured and traceable analysis could be recognized. Time for decision preparation and taking is reduced. This appears on all levels of the organization. Especially the move to self-organized agile teams and the related trust to stay insight the business case and company strategy increases the need of good decision making. Our latest analysis reflects a clear shift: people are becoming overconfident in their self-assessments.

Confidence is Rising — But so is the Risk

Our latest results from 2024 show a trend: across all genders, people are becoming bolder in how they perceive their decision-making skills. Compared to 2019, self-assessments have grown more confident — but that confidence isn't always grounded.

Women now show a broader range of self-perception, from highly cautious to strongly assertive, while men remain more consistent. Yet overall, the gap between genders is closing — and everyone is trending toward stronger self-belief.

“Confidence is rising faster than accuracy worldwide — independent of the gender.”

This growing boldness is powerful — but it also carries risk. Without self-awareness, rising confidence can lead to blind spots. To make sound decisions, confidence must stay calibrated.

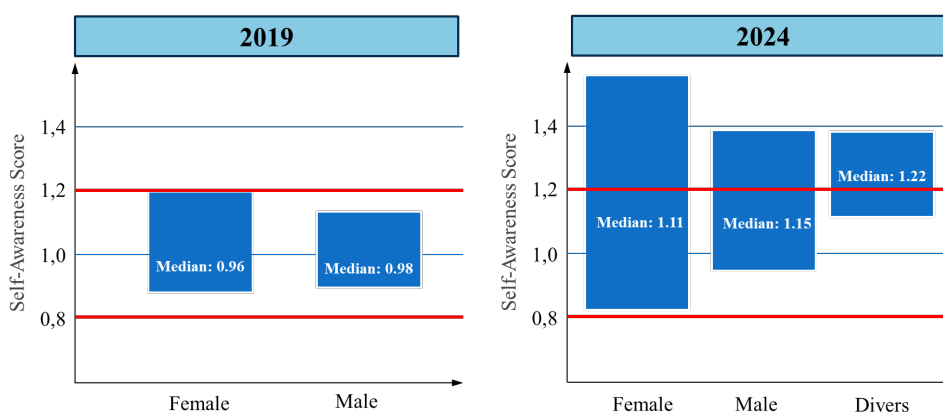


Figure 4: Trend to become BOLD in self-awareness

The Prejudice against Young People

Younger professionals — especially those under 25 — tend to get it right. They're self-aware, ask when they need help, and make decisions with a clear understanding of their limits.

As people gain experience, their confidence often grows — but not always their accuracy. Mid-career professionals show more variation: some balance it well, others less so.

The older the group, the more pronounced the boldness becomes. But bold doesn't always mean better. Without regular reflection or feedback, confidence can outpace reality.

“Under-25s show the most calibrated confidence.”

What does it mean for leadership: regardless of age, the real strength lies in knowing when to pause, challenge assumptions, and involve others.

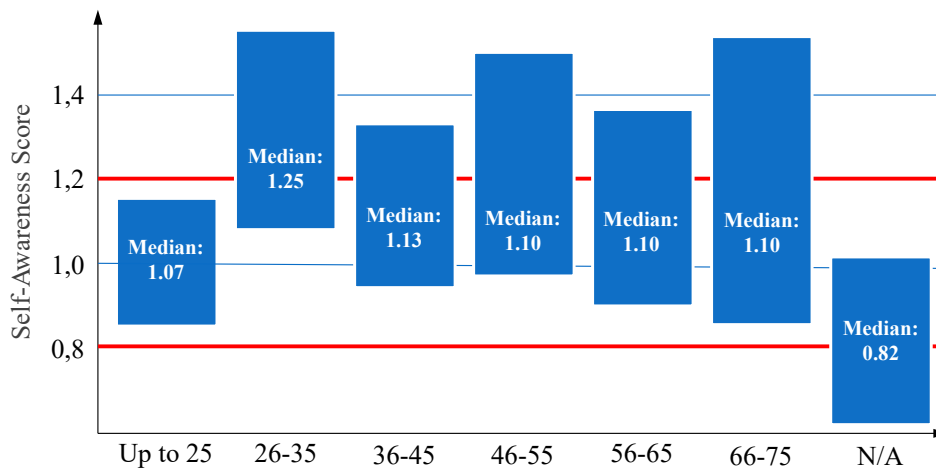


Figure 5: Calibrated self-awareness in age

“True strength is balancing confidence and adaptability.”

Driving Success through Balance

Boldness is on the rise, and for organizations driving innovation and be competitive. At LEIxCON we believe calibrated self-confidence is essential, it empowers teams to take decisive action, challenge norms, and push boundaries. Experience alone does not guarantee better decisions - our findings show that younger individuals often exhibit more calibrated confidence, while mid-career and older professionals face a higher risk of overconfidence. Gender is not a differentiator in decision-making ability; what truly matters is the ability to balance confidence with self-awareness and adaptability.

The Enabler To Success

To enable better decisions, we focus on strengthening self-awareness through targeted leadership support and training. This builds a foundation where decisions aren’t just fast — they’re informed. When self-awareness is paired with structured decision-making tools, teams operate with clarity and confidence. They know when expert input is needed, and how to use it to reach practical, optimized outcomes. At LEIxCON, we empower leaders to combine agility with discipline. The result: teams that act boldly, think critically, and drive sustainable progress — even in uncertain conditions.

“Competency and self-awareness are essential foundations for successful projects, enabling informed decision-making, effective leadership, and organizational resilience.”

Why AI matters:

AI isn't here to replace human decision-making — it's here to support it. In fast-changing environments, where complexity and pressure collide, AI helps leaders and teams focus on what really matters: solving the right problems, at the right time.

By combining human judgment with AI-driven insights, organizations gain clarity, reduce noise, and make faster, more focused decisions. But this only works when confidence is calibrated, and teams understand both their strengths and their blind spots.

At LEIxCON, we believe self-awareness and judgement accuracy is just as important as technical skill. It's what enables teams to trust each other, lean on data when it counts, and involve the right people at the right moment. Success today isn't about choosing between humans and machines — it's about creating the right balance. Agile, aware teams powered by smart tools are the ones turning complexity into opportunity.

“AI is an enabler — not a replacement.”

Summary - Building Successful Projects

Awareness and competency are the foundation of effective decision-making and project success. This study shows that self-awareness isn't just a personal strength — it's a leadership skill that can be cultivated across teams to align confidence with clear, well-informed decisions.

When self-awareness is part of the decision-making culture, organizations build stronger teams, reduce risk, and stay resilient over time. Agility is essential in dynamic environments — but not every decision should be instinctive. Taking time to apply a structured approach and document key choices leads to better accountability, smarter decisions, right first time and continuous improvement on a mature basis.

By combining calibrated confidence, self-awareness, and data-informed judgment, teams can act with speed and confidence — while staying aligned with strategic goals. And with AI as an enabler, not a replacement, organizations can navigate complexity more effectively, using risk-aware strategies to drive meaningful and lasting success.

Organizations can leverage AI and embrace risk-aware strategies to thrive in an unpredictable environment.

Glossary

AI (Artificial Intelligence)

The simulation of human intelligence in machines, enabling automation, data-driven insights, and enhanced decision-making processes. AI plays a crucial role in product development, improving efficiency, and supporting human judgment.

Agile Methodology

A flexible and iterative approach to project management emphasizes adaptability, stakeholder collaboration, and rapid development cycles. Common frameworks include Scrum, Kanban, and SAFe.

Confidence Calibration

The ability to align one's confidence with actual judgment accuracy, ensuring that decision-making is neither overly cautious nor recklessly overconfident.

Decision-Making Framework

A structured process used to evaluate choices, risks, and outcomes in projects and organizations. It ensures decisions are well-informed, traceable, and aligned with strategic goals.

Hybrid Development Approach

A combination of plan-driven (Waterfall) and Agile methodologies that balances structured planning with adaptability, allowing teams to respond efficiently to changing requirements.

INCOSE (International Council on Systems Engineering)

A global organization dedicated to advancing systems engineering principles, including decision-making strategies, competency development, and AI integration.

Resilience Engineering

A discipline focused on designing systems, processes, and organizations that can adapt, recover, and thrive in uncertain, high-risk environments.

Risk-Aware Decision-Making

An approach that incorporates risk analysis, scenario planning, and uncertainty management to ensure well-informed business and engineering decisions.

Self-Awareness in Decision-Making

The ability of individuals and teams to accurately assess their capabilities, biases, and limitations, leading to more balanced and effective decision-making.

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About LEIxCOn:



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