PLOTTING YOUR INTELLIGENT SYSTEMS JOURNEY

The DNA of successful intelligent systems thinking, development, deployment, operations and business models for the new machine economy.

Forbes

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PROLOGUE

Plot a pathway to your intelligent systems world

Research with leaders in seven major industries illustrated the desire, the design, and the pressure to put into place intelligent systems capabilities for their products, services, and customers.

This intelligent systems mapping system is based on algorithms derived from 506 in-depth interviews with the C-suite, executives, and leaders in companies that are on their intelligent systems journey.

The models you will see in this report will enable you to do five distinctive things in near real time:

- Get a simple way of seeing which segment best illustrates where you are across hundreds of appropriate variables.
- Start to understand the importance of all the components necessary for building your intelligent systems success.
- Calibrate on multiple variables to see where you are compared to peers on this journey.
- Understand where you should be thinking about starting, developing, increasing, or even decreasing investments over time.
- Build a basic blueprint based on data, models, and comparative choices in near real time.


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USING THIS MODEL

Mapping where you are on this journey to an intelligent systems world

Executive leaders' opinions

Forbes interviewed 500+ executives and leaders in major corporations in manufacturing, aerospace and defense, telecommunications, medical technologies, technology hardware, energy and utilities, and automotive industries. These leaders described where they are on their intelligent systems journey.

Detailed research design

Through strict research screeners and discrete choice modeling we were able to determine the right behaviors, investment models, and sequence of intelligent systems technologies to show what that successful journey could look like.

Actionable insights

Using a range of economic, behavioral, and other outcome-based measures (for example, innovation) we were able to segment the world into six distinctive groups. The most successful segment gets an ROI of over three times that of its peers.

Segmenting the world

Before you look through the indexes to see where you fall across hundreds of variables, check out the summaries of each of the six segments.

Hundreds of variables

Using an index system, you can see where your segment over- or under-registers against any of the more than three hundred variables in the research. An easy color coding system allows for an instant scan or a deeper review.

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THE WORLD

The intelligent systems revolution is making Industry 4.0 a reality

Over 50% of data will be collected on the intelligent edge by 2022 (Gartner). Imagine, then, what data collection will look like by 2025 – or 2030. How many business models will be rewritten by the growth of intelligent systems companies that are computing, connecting, sensing, automating, predicting, and learning in near-latency-free time on the edge? By 2030, 70% of growth in the global economy will come from AI, robotics, and automation (PwC and the OMB), all of which sit at the heart of the intelligent systems concept.

In our data-centric world, the idea of intelligent systems is intrinsically understood but not extensively practiced. For companies in industries such as aerospace or defense, manufacturing, medical technology, energy, and telecommunications, the challenges lie in determining the right characteristics for success. The characteristics of a successful intelligent system are more than just the technologies deployed; they cover how leaders think about intelligent systems, business drivers, and deployment of the necessary process changes for embedded intelligent systems design.

We have surveyed 650+ leaders across six major industries in the U.S. and Japan, who walked us through the deep details of their thinking, actions, processes, metrics for success, and beliefs.

CORE DESIGN

Carefully screened executives based on six criteria

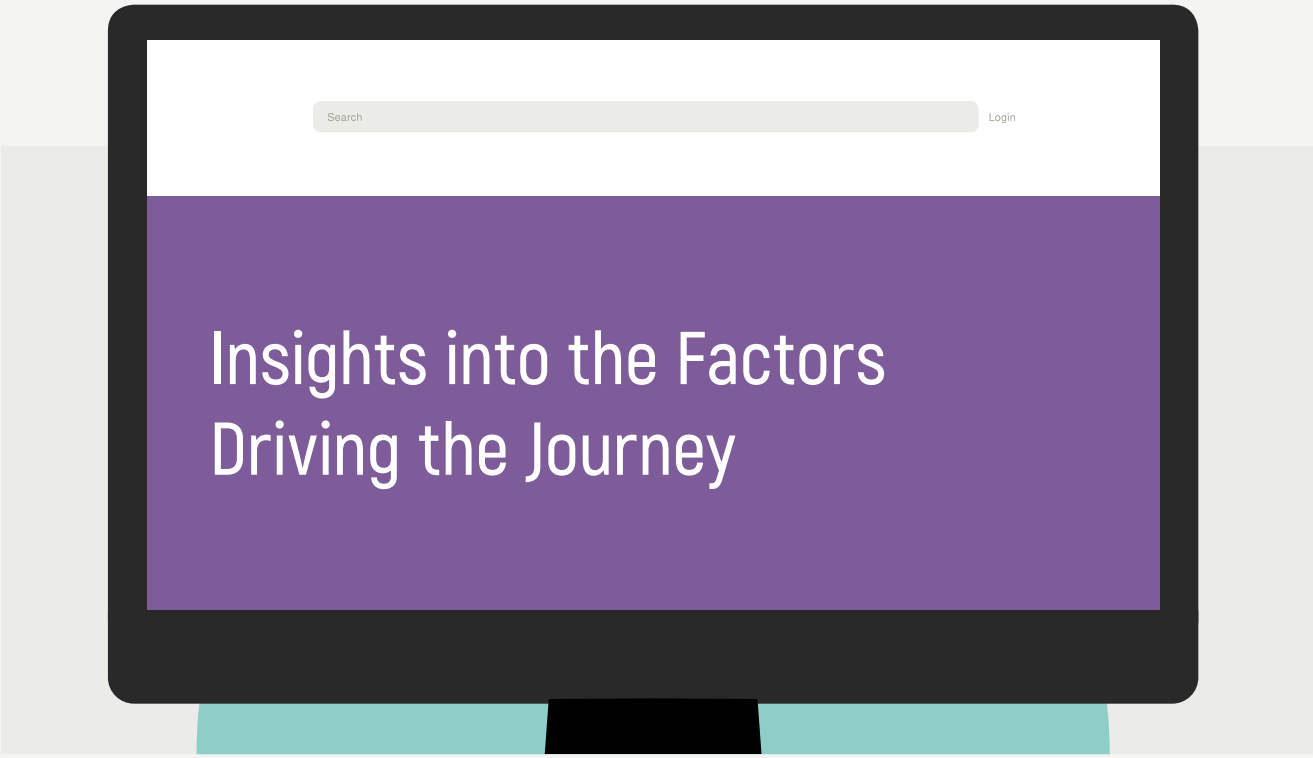
Key components of successful intelligent systems include the implied power of digital feedback loops, automation, machine learning, and security. Measuring the relative importance of these components and their sequencing helps define the waypoints and investment needs of companies making the intelligent systems journey.

Research respondents were chosen according to six criteria:

- Executives and leaders from large organizations who have significant knowledge of and influence over the organization's embedded devices or systems, both used and sold
- From target industries: aerospace and defense, automotive manufacturing, energy, industrial manufacturing, medical technology, technology hardware manufacturing, and telecommunications
- From organizations that have an indicator of the level of digital transformation achieved
- From organizations that sell products or offer services built on custom-designed embedded software, devices, and/or applications
- From organizations that use or sell embedded products and services designed to operate on the intelligent edge (minimum 10%)
- Engaged in some level of conversation about implementing intelligent systems across the organization (measured across five levels, from beginning conversations to fully moving to an intelligent systems business model)

Forbes interviewed 506 executives online in Q1 2021. An additional study was fielded in Japan at the end of Q1 2021. These research results are not included in this report and will be reported separately. Interviews were held online to enable easier completion of the complex discrete choice models; respondents were asked to judge trade-offs between specific characteristics of intelligent systems as used by their organizations (each answering 12 trade-off choices across 4 characteristics, for over 24,000 decisions).

INSIGHTS



The research design focused on sets of questions about where the organization was positioned on a range of concepts such as the role of embedded devices, far edge compute, cybersecurity needs, and mission-critical requirements into the future. Questions were asked about factors driving the journey to an intelligent systems world as well as the desired outcomes for the companies.

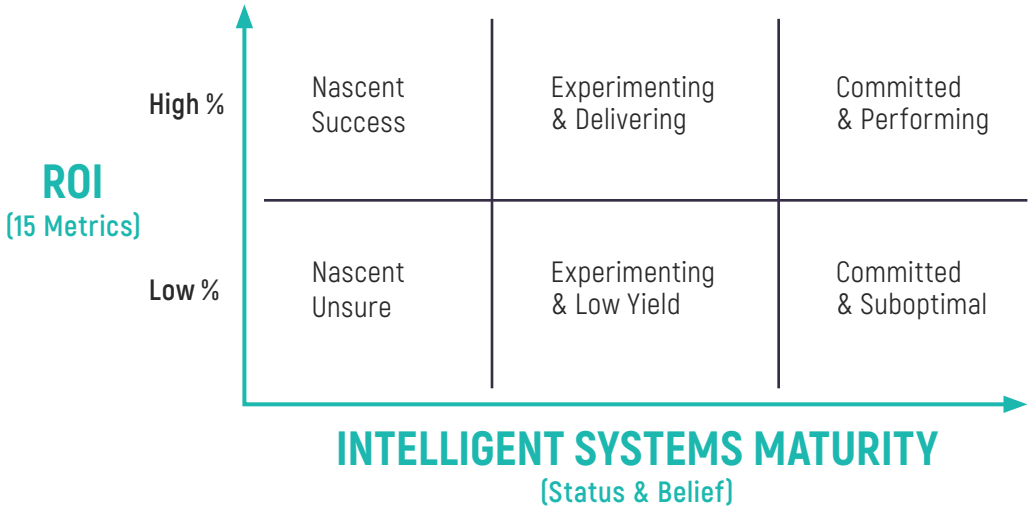
SEGMENTING THE INTELLIGENT SYSTEMS WORLD

Thinking about where your company is on this journey

The model resulting from this research shows the blueprint for architecting successful intelligent systems, as well as the critical waypoints for behaviors, metrics, and investments as organizations move from an experimental state to a complete state of intelligent systems transformation.

SEGMENTATION METHODOLOGY

A 3x2 segmentation was based on two levels of expected ROI in executing intelligent systems and three levels of maturity in the pursuit of intelligent systems:



Calculating ROI

Respondents were asked to estimate the impact of deploying intelligent systems on 15 metrics encompassing sales/profit, product/service delivery, innovation/business processes, and employee productivity/satisfaction. ROI results emerged from a factor analysis of respondents' estimations. This analysis allowed for the division into two segments: those expecting a high impact to overall ROI and those expecting a low impact to overall ROI.

Defining Maturity

To define levels of maturity with respect to the organization's embrace of intelligent systems, the model looked to a combination of questions, including:

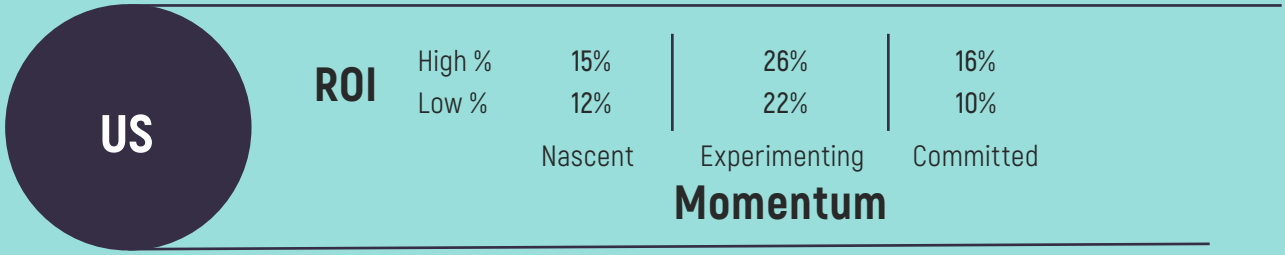
1

The status of the organization's familiarity with or pursuit of intelligent systems, ranging from having minor conversations but no real plans to making some core changes in business practices to fully moving toward an intelligent systems business model

2

Beliefs regarding the ROI of intelligent systems and the ability to extract incremental value from continued optimization of intelligent systems

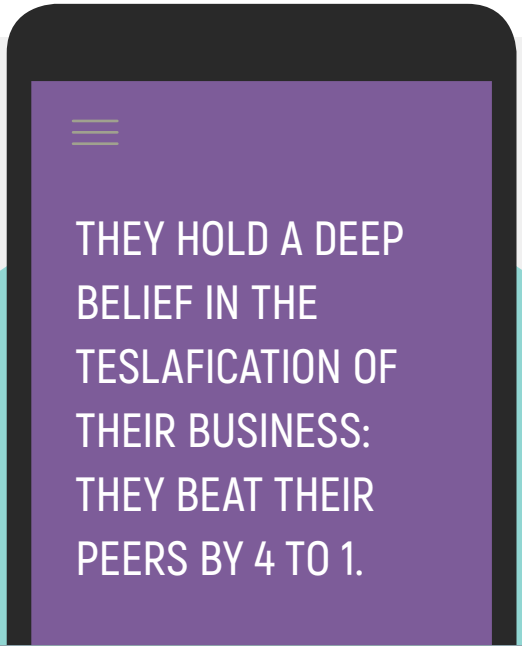
This analysis yielded three distinctive levels of maturity – starting out (nascent), experimenting, and committed – each showing different behaviors across the survey questions. The net results divided the study respondents as follows:



COMMITTED AND PERFORMING (16%)

They hold a deep belief in the Teslafication of their business and the idea that they outperform peers 4:1.

They are investing in a unique sequence of characteristics for success that are focused on the foundationals that have high value.



Compared to their less-performing peers, their results are four times higher. They consider themselves significantly more able to deliver new business models with intelligent systems, including seamless connections between suppliers and customers and connecting business processes with new forms of sensors, than all their peers. Their prime investments in intelligent systems focus on five key characteristics and an ability to get everybody on one real-time workflow process now. In the medium term (five years), the ideas of automated learning and the ability to detect events and resolve them autonomously are key. They see their embedded systems future as critical and dependent on the ability to monitor, manage, and maintain these devices on the far edge. They see themselves as rich visionaries and believe their embedded device businesses will be increasingly innovative. Their metrics of success are strongly focused on revenue production, sales, and customer and employee KPIs.

To learn about the specfic intelligent systems characteristics go to **WINDRIVER.COM/INTELLIGENT-SYSTEMS**

THEIR VIEW ON WHEN SPECIFIC INTELLIGENT SYSTEM CHARACTERISTICS MATTER

11.6% Characteristics that are nice to have but not important

24.1% Characteristics that are crtical for success in five years

18.4% Characteristics that are needed now to build the right infrastructure

55.3% Characteristics that are foundational for success in three and five years' time

COMMITTED AND SUBOPTIMAL (10%)

They believe in a data-driven future and the ability to predict and manage system stresses and failures and create real-time, seamless ecosystems of applications with real-time simulation characteristics. They see the ability to compute on the edge as a nice-to-have only.

THEY BELIEVE IN A DATA-DRIVEN FUTURE BUT HAVE TOO NARROW A PROCESS VISION THAT LIMITS POTENTIAL RETURNS.

The key for this group is to move the company to a data-driven decision process at its core. They see themselves as behind their peers in their digital transformation, and they perceive themselves as behind on concepts such as artificial intelligence (AI) and machine learning (ML). They are ahead of their peers on the idea that designing in the cloud is the future, but they lag in areas such as 5G on the far edge and the future importance of mission-critical capabilities. Their core focus for success is on three areas: the ability to simulate and emulate during development and operations, to do so via public cloud, and to have intelligent systems as a "copilot" for employees.

The big barriers are cybersecurity, finding specific industry solutions, and a lack of momentum that would come from a shining example in their industry.

THEIR VIEW OF INTELLIGENT SYSTEM CHARACTERISTICS

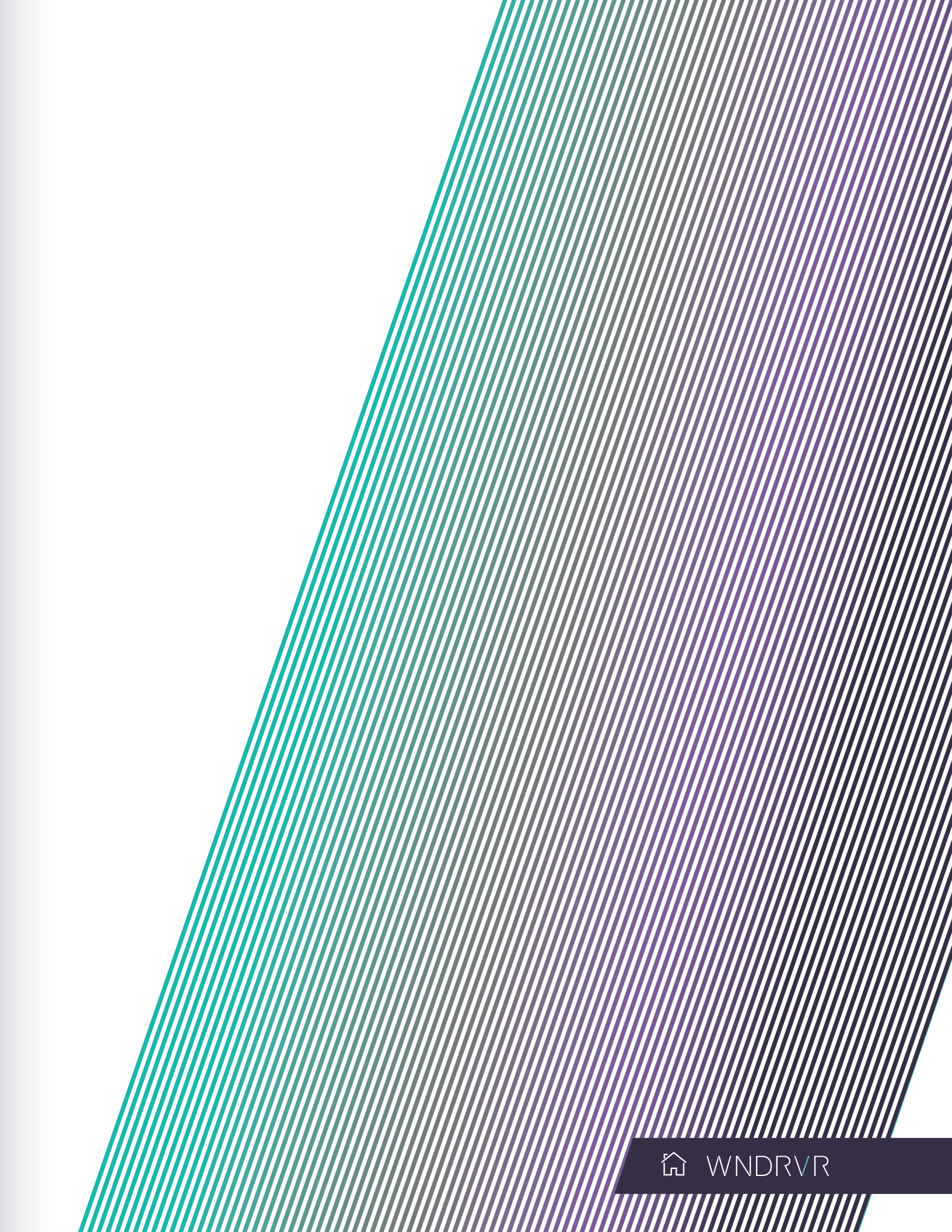
17.5% Nice to have

18.14% Critical for success in five years

31.1% Basic infrastructure

33.0% Foundational for success in three and five years

To learn about the specfic intelligent systems characteristics go to **WINDRIVER.COM/INTELLIGENT-SYSTEMS**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EXPERIMENTING AND DELIVERING TO GET TO SCALE (23%)

They believe in a data-driven future and the ability to predict and manage system stresses and failures and create real-time, seamless ecosystems of applications with real-time simulation characteristics. They see the ability to compute on the edge as a nice-to-have only.

THEY BELIEVE IN THE IDEA OF DIGITAL BUSINESS MODELS AT THEIR CORE. THEY NEED TO BUILD FROM THEIR SUCCESSES WITH THE FAR EDGE AND MISSION-CRITICAL CAPABILITIES IN ORDER TO GROW.

The key for this group is to move the company to a data-driven decision process at its core. They see themselves as behind their peers in their digital transformation and behind on concepts such as AI and ML. They are ahead of their peers on the idea that designing in the cloud is the future, but they lag in areas such as 5G on the far edge and the future importance of mission-critical capabilities. Their core focus for success is on three areas: the ability to simulate and emulate during development and operations, to do so via public cloud, and to have intelligent systems as a "copilot" for employees.

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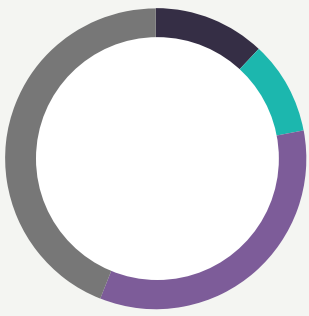
THEIR VIEW OF INTELLIGENT SYSTEM CHARACTERISTICS



12% Nice to have

10% Critical for success in five years

34% Basic infrastructure

43% Foundational for success in three and five years

EXPERIMENTING AND GETTING LOW YIELDS (22%)

Not fully committed, they get the ideas but are not organizing for success yet, and they have a narrow construct about what success could be. A large range of characteristics are low-impact nice-to-haves that are needed in five years for some, while for others they are the same characteristics that are essential to infrastructure.

NOT FULLY "IN" ON ANYTHING, BUT THEY GET THE BIGGER IDEA. THEY JUST DON'T SEE THE RETURNS YET.

These companies see themselves as early adopters, and the idea that technology leads their organizational strategy is at their core. They see themselves as digital businesses and are moving to an organizational level of commitment to intelligent systems. They are concerned about the potential difficulty for the organization to deliver, but on balance they believe that the organization does see where the value is. They do not expect a lot of hurdles, but they do believe more than other groups that seeing higher levels of employee satisfaction will drive better adoption.

These companies are extremely centered on embedded devices on the far edge as vital for the business (providing 80%+ of their revenue, they believe). They more strongly believe in the importance of mission-critical performance and more often see a growing significance for mission-critical capabilities in both the three-year and five-year time spans, compared to their peers in other segments.

THEIR VIEW OF INTELLIGENT SYSTEM CHARACTERISTICS

18.8% Nice to have

9.2% Critical for success in five years

6.9% Basic infrastructure

65% Foundational for success in three and five years

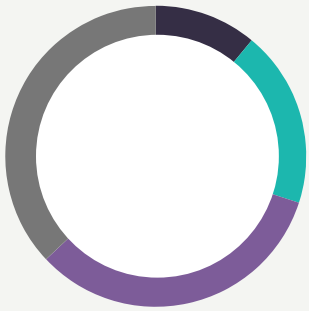
NASCENT WITH SOME SUCCESS (18%)

The aspiration is there, especially around revenue creation and product sales. They focus on the need for cybersecure and agile development for their compute on the far edge. This group understands many of the key characteristics, but they may underestimate the impact of characteristics such as real-time workflows.

ASPIRATIONS ARE THERE, AND THE BASIC CHARACTERISTICS ARE BEING BUILT FOR SCALE NOW.

This group of companies displays specific differences from their peers on a number of fronts. They see medium-to-high ROI in revenue creation opportunities and increased product sales as well as customer- and employee-based KPIs. Their distinctive focus is on making sure the building blocks are cybersecure, and they see a critical need for agile embedded development. Their top priority is to move the company to a more data-centric decision-making style, and they clearly do not underestimate the challenges ahead in terms of building sustained success. These companies see a lack of application areas for ML, a lack of clear industry leadership examples, and a lack of clear articulation of how to handle intelligent systems from an ethical standpoint, and all these are impediments to further development. Evidence of the shift in performance (economic and/or innovative) for them and others is a crucial trigger for increased confidence and further investment.

THEIR VIEW OF INTELLIGENT SYSTEM CHARACTERISTICS



10.6% Nice to have

19.4% Critical for success in five years

33.2% Basic infrastructure

36.9% Foundational for success in three and five years

NASCENT AND UNSURE (12%)

These are the one in eight who do not really believe in the big meta trends behind intelligent systems and so are not architecting for an intelligent systems future. They underestimate the potential impact of true compute on the edge, the ability to predict and solve failures, and real-time workflows.

THEY DO NOT REALLY BELIEVE IN THE META TRENDS, SO LACK VISION AND MOTIVATION.

This group of companies, as expected for organizations on the lowest levels of return and also on the lowest levels of belief in intelligent systems, are significantly behind other companies on most of the variables measured. They generally believe they are behind their peers on a range of performance metrics and ideas about the importance of technology to changing strategy and performance. For example, they do not believe that companies are becoming software enterprises, that digital models should be at their core, that mission-critical capabilities are going to be more important in the future, or that cybersecurity and security are building blocks for all sectors.

They do not see especially tough barriers to success, but their general lack of belief in the major trends (software enterprises, new business models, digital feedback loops, etc.) is probably holding back their desire to experiment and learn, as they do not see where the possible results could come from.

This group of companies does believe that they are ahead on the idea that evidence of an optimized workflow evolving from use of intelligent systems would be a catalyst for adopting such systems. The characteristics they believe will be needed right now involve the ability to reprogram embedded devices in the cloud and the ability to detect and resolve events.

THEIR VIEW OF INTELLIGENT SYSTEM CHARACTERISTICS

15.8% Nice to have

39.2% Critical for success in five years

21.8% Basic infrastructure

24.2% Foundational for success in three and five years

INTELLIGENT SYSTEMS COMPARATIVE INDEX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INTELLIGENT SYSTEMS COMPARATIVE INDEX

When reviewing these comparative index scores please note the color coding below. This code shows, for any specific factor, where each of the six segments performs below average (a range of choices), on average, or above average (a range of choices) for the total responses to that factor or particular question. You can choose to compare segments to segments, or you can look for a segment you believe is where you are or would like to be for comparison.

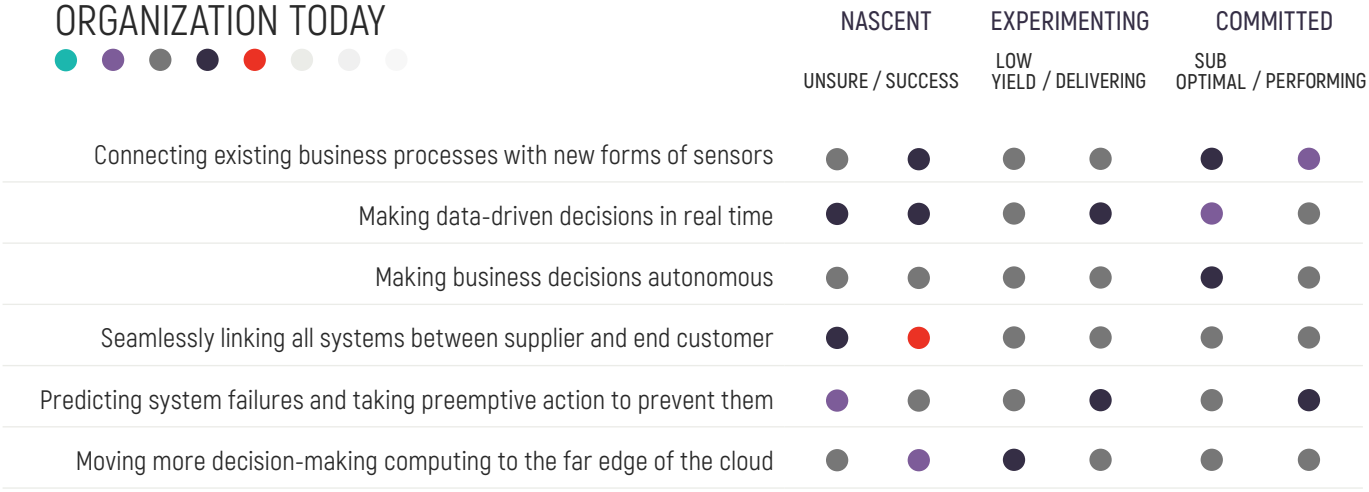
151+ / 121–150 / 91–120 / 61–90 / 60 or less

DEFINING INTELLIGENT SYSTEMS NOW AND IN THE FUTURE

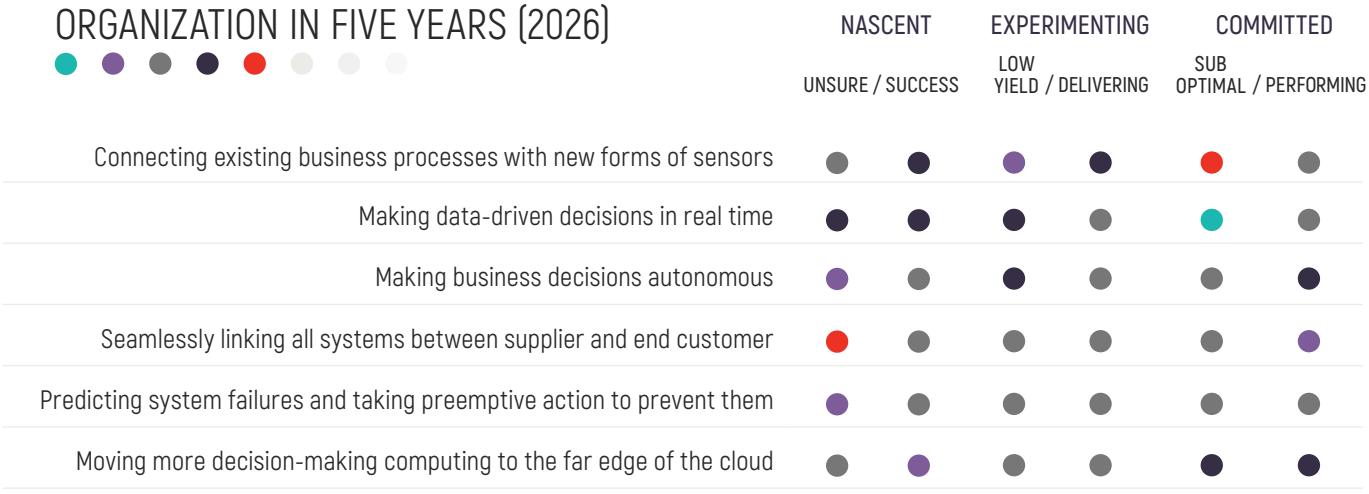
HOW WOULD YOU DESCRIBE YOUR ORGANIZATION'S UNDERSTANDING OF THE IDEA OF INTELLIGENT SYSTEMS TODAY?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
There have been some minor conversations about the idea	●	●	●	●	●	●
We have had planning and strategy conversations about it	●	●	●	●	●	●
Some core changes in the organization's business practices have occurred	●	●	●	●	●	●
Intelligent systems are reaching mainstream in the organization	●	●	●	●	●	●
Intelligent systems could become the most predominant business practices	●	●	●	●	●	●
Our organization is fully moving to an intelligent systems digital business model	●	●	●	●	●	●

TOP PRIORITIES FOR INTELLIGENT SYSTEM DEVELOPMENT IN THE ORGANIZATION TODAY



TOP PRIORITIES FOR INTELLIGENT SYSTEM DEVELOPMENT IN THE ORGANIZATION IN FIVE YEARS (2026)



ORGANIZATIONS' PERSPECTIVES ON THEMSELVES AND INTELLIGENT SYSTEMS

16 WAYS TO COMPARE YOURSELF TO PEERS – ATTITUDES & BELIEFS

INNOVATOR IN NEW DIGITAL TECHNOLOGIES

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Laggard in the industry						
In line with peers in the industry						
Early adopter compared to peers						

ROLE OF TECHNOLOGY AS A STRATEGY ENGINE

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Tech supports strategy						
Tech influences strategy						
Tech leads business strategy						

ORGANIZATIONS' PERSPECTIVES ON THEMSELVES AND INTELLIGENT SYSTEMS

151+ / 121–150 / 91–120 / 61–90 / 60 or less

INDUSTRY LEADER (ECONOMICS/ PRODUCT PERFORMANCE)

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Behind peers in the industry						
In line with peers in the industry						
Top industry performer						

DIGITAL BUSINESS MODELS ARE AT OUR CORE

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Behind peers						
In line with peers						
Ahead of most peers						

Continued on the next spread ...

(Continued from the previous spread)

16 WAYS TO COMPARE YOURSELF TO PEERS – ATTITUDES & BELIEFS

ALIGNMENT WITH PEERS ON AI AND ML

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

ALIGNMENT ON DELIVERING PRODUCTS AND SERVICES INTO NEW BUSINESS SECTORS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

ORGANIZATIONS' PERSPECTIVES ON THEMSELVES AND INTELLIGENT SYSTEMS

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

ALIGNED ON THE IDEA THAT CYBERSECURITY AND SECURITY ARE CRITICAL AS BUILDING BLOCKS FOR ALL BUSINESS SECTORS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

ALIGNED ON THE IDEA THAT CLOUD DESIGN AND DELIVERY IS THE FUTURE

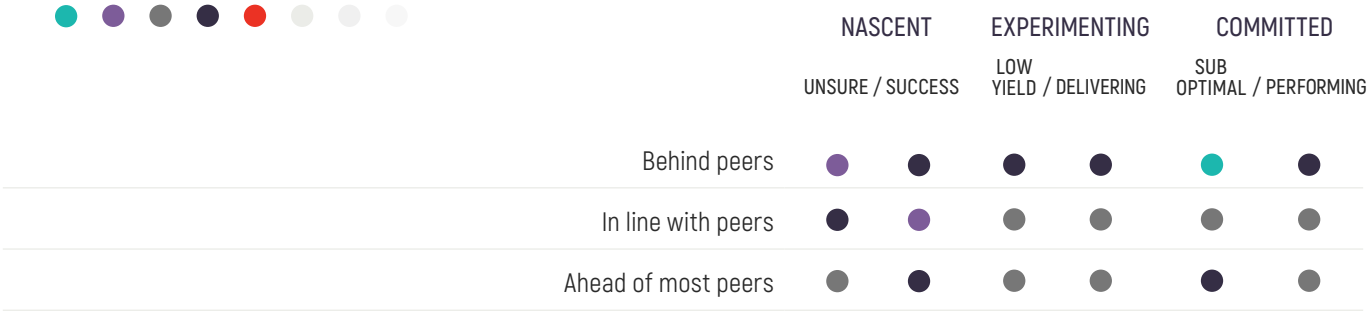
	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

Continued on the next spread ...

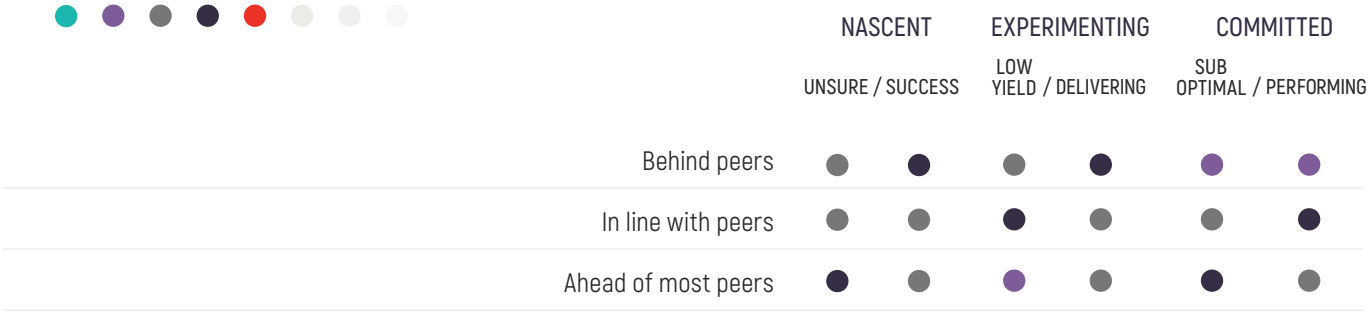
(Continued from the previous spread)

16 WAYS TO COMPARE YOURSELF TO PEERS – ATTITUDES & BELIEFS

ALIGNED ON THE IDEA THAT MISSION-CRITICAL EMBEDDED DEVICES ARE CRITICAL FOR THE FUTURE



ALIGNED ON THE IDEA THAT THE INTELLIGENT EDGE AND 5G ARE THE FUTURE



ORGANIZATIONS' PERSPECTIVES ON THEMSELVES AND INTELLIGENT SYSTEMS

151+ / 121–150 / 91–120 / 61–90 / 60 or less

ALIGNED ON THE IDEA THAT REAL-TIME DATA TO DRIVE DECISION-MAKING WILL BE KEY FOR PRODUCTS AND SERVICES

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

ALIGNED ON THE IDEA THAT DIGITAL FEEDBACK LOOPS WILL DRIVE ONGOING DECISION-MAKING

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

Continued on the next spread ...

(Continued from the previous spread)

16 WAYS TO COMPARE YOURSELF TO PEERS – ATTITUDES & BELIEFS

ALIGNED ON THE IDEA THAT AGILE DEVELOPMENT METHODS ARE CRITCAL FOR EMBEDEED DEVICES AND SERVICES IN THE NEAR FUTURE

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

ALIGNED ON THE IDEA THAT COMPANIES ARE INCREASINGLY BECOMING SOFTWARE ENTERPRISES

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

ORGANIZATIONS' PERSPECTIVES ON THEMSELVES AND INTELLIGENT SYSTEMS

151+ / 121–150 / 91–120 / 61–90 / 60 or less

ALIGNED ON THE IDEA THAT SYSTEMS – FROM CUSTOMER TO SUPPLIER PRODUCTS AND SERVICES – ARE HIGHLY CONNECTED IN REAL TIME

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

ALIGNED ON THE IDEA THAT EMBEDDED SYSTEMS CAN RUN MUCH OF THEMSELVES AUTONOMOUSLY

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Behind peers	●	●	●	●	●	●
In line with peers	●	●	●	●	●	●
Ahead of most peers	●	●	●	●	●	●

POTENTIAL SOCIETAL IMPACT OF INTELLIGENT SYSTEMS

TOP THREE CHOSEN: SOCIETAL IMPACT OF INTELLIGENT SYSTEMS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Change how we think about infrastructure, more adaptive and efficient ways	●	●	●	●	●	●
Transform how we use resources in the environment, more efficient/adaptive	●	●	●	●	●	●
Evolve how we govern society as real-time info and systems give quick feedback	●	●	●	●	●	●
Help to improve healthcare with preventive medical care at a patient level	●	●	●	●	●	●
Transform how to govern corporations as they become more real time and data-centric	●	●	●	●	●	●
Revolutionize industry dynamics because they break down barriers to access	●	●	●	●	●	●
Widen global opportunities as traditional barriers are broken down	●	●	●	●	●	●
Evolve how people are involved in the working world, more value, personalized	●	●	●	●	●	●
Help to better protect civil liberties	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

THE DNA OF INTELLIGENT SYSTEMS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE /	SUCCESS	LOW YIELD /	DELIVERING	SUB OPTIMAL /	PERFORMING
True compute on the far edge						
Automated learning functionality; machine learning						
Near-real-time seamless multiple ecosystems						
Real-time synthesized workflow process						
Connecting data into new product development						
Predicting stresses/failures						
Personalized embedded device experience via cloud						
Simulating and emulating in near real time						
Detection of events/resolution						
Total automation						
Acting based on sensory data and algorithms						
Adapting tasks based on reprogramming via cloud						
Experimenting as a learning system						

INTELLIGENT SYSTEM DESIGN AND CHARACTERISTICS

IN THE NEXT THREE YEARS, WHICH WILL BE THE MOST IMPORTANT FOR THE SUCCESS OF YOUR ORGANIZATION?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE /	SUCCESS	LOW YIELD /	DELIVERING	SUB OPTIMAL /	PERFORMING
Built, developed, operated using simulations to increase productivity						
Developed, deployed, and operated through private clouds						
Developed, deployed, operated through mixed public/private clouds						
Built, developed, operated using simulations to increase quality						
Designed to be mission critical to protect data against cyberattacks						
Designed mission critical in nature to protect against infrastructure failure						
Technically advanced machines that react based on goal-based algorithm						
Deliver real-time digital data feedback loops for business decision-making						
Scale digital solutions more efficiently than purely adding people/capital						
Technically advanced machines that react based on predefined rules						
Ability to dynamically load new tasks/workflows into device over lifecycle						
Communicate securely w/heterogenous ecosystem of devices/services						
Developed, deployed, and operated through public clouds						
Can react to unplanned situations using machine learning						
Can complete tasks with oversight using autonomous capabilities						
Help create new business opportunities and business models						
Have the capacity to be monitored, managed, and maintained						
Can work side by side with humans in shared tasks						

INTELLIGENT SYSTEMS COMPARATIVE INDEX

151+ / **121–150** / **91–120** / **61–90** / **60 or less**

WHERE WILL YOUR ORGANIZATION BE IN THE DEVELOPMENT OF THE IDEA OF INTELLIGENT SYSTEMS IN THE NEXT THREE YEARS?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Discussing the possibilities of intelligent systems at a strategic level	●	●	●	●	●	●
Having a clear focus on creating an intelligent systems future for the company	●	●	●	●	●	●
Seeing current experiments in practice in certain areas of the company	●	●	●	●	●	●
Having some bus. practices that contribute to an intelligent systems future	●	●	●	●	●	●
Having core bus. processes that contribute to an intelligent systems future	●	●	●	●	●	●
Our embedded products/services are being partially developed for this	●	●	●	●	●	●
Our embedded products/services are being completely developed for this	●	●	●	●	●	●

PREDICTING EMBEDDED DEVICES AND INTELLIGENT SYSTEMS

EMBEDDED BECOMES A KEY PART OF THE EVOLVING DIGITAL BUSINESS FUTURE IN THE NEXT THREE YEARS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Describes us completely	●	●	●	●	●	●
Describes us somewhat	●	●	●	●	●	●
Does not describe us at all	●	●	●	●	●	●

OUR EMBEDDED DEVICES WILL INCREASINGLY COMPUTE IN MORE COMPLEX WAYS ON THE INTELLIGENT EDGE

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Describes us completely	●	●	●	●	●	●
Describes us somewhat	●	●	●	●	●	●
Does not describe us at all	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

OUR EMBEDDED DEVICES WILL INCREASINGLY CONNECT DATA AND INSIGHTS FOR NEW PRODUCTS AND SERVICES

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Describes us completely	●	●	●	●	●	●
Describes us somewhat	●	●	●	●	●	●
Does not describe us at all	●	●	●	●	●	●

OUR EMBEDDED DEVICES WILL INCREASINGLY CONNECT CUSTOMERS, PRODUCT, AND OURSELVES, AND OUR PRODUCTS AND SERVICES (TESLAFICATION)

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Describes us completely	●	●	●	●	●	●
Describes us somewhat	●	●	●	●	●	●
Does not describe us at all	●	●	●	●	●	●

Continued on the next spread ...

(Continued from the previous spread)

PREDICTING EMBEDDED DEVICES AND INTELLIGENT SYSTEMS

OUR EMBEDDED DEVICES WILL INCREASINGLY BE DEVELOPED, DEPLOYED, AND OPERATED THROUGH THE CLOUD

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Describes us completely	●	●	●	●	●	●
Describes us somewhat	●	●	●	●	●	●
Does not describe us at all	●	●	●	●	●	●

OUR EMBEDDED DEVICES WILL INCREASINGLY BE INFUSED WITH AI (AUTOMATION) AND MACHINE LEARNING

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Describes us completely	●	●	●	●	●	●
Describes us somewhat	●	●	●	●	●	●
Does not describe us at all	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

OUR EMBEDDED DEVICES WILL INCREASINGLY BE USED IN NEW AND INNOVATIVE WAYS NOT YET DISCOVERED

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Describes us completely						
Describes us somewhat						
Does not describe us at all						

INDUSTRY VISIONARIES

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Rich Visionaries (Rates 5 or more of the 7 attributes as 6/7 "describes completely")						
Expanding Out (Rates 3-4 of the 7 attributes as 6/7 "describes completely")						
All Others (not a Rich Visionary or an Expanding Out)						

EMBEDDED DEVICE BUSINESS MODELS AND USAGE

PERCENT OF SALES THAT ARE EMBEDDED SOFTWARE/DEVICES/APPLICATIONS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
SUBTOTAL: 40% or less	●	●	●	●	●	●
SUBTOTAL: 50%–70%	●	●	●	●	●	●
SUBTOTAL: 80%–100%	●	●	●	●	●	●

PRODUCTS DESIGNED TO WORK ON THE INTELLIGENT EDGE FOR INTERNAL USE

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
0%–20%	●	●	●	●	●	●
21%–50%	●	●	●	●	●	●
51%–100%	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

BY 2026 WHAT PERCENT OF PRODUCTS WILL BE DESIGNED TO WORK ON THE INTELLIGENT EDGE FOR INTERNAL USE?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
0%–20%	●	●	●	●	●	●
21%–50%	●	●	●	●	●	●
51%–100%	●	●	●	●	●	●

BY 2026 WHAT PERCENT OF PRODUCTS WILL BE SOLD TO WORK ON THE INTELLIGENT EDGE FOR EXTERNAL USE?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
0%–20%	●	●	●	●	●	●
21%–50%	●	●	●	●	●	●
51%–100%	●	●	●	●	●	●

Continued on the next spread ...

(Continued from the previous spread)

EMBEDDED DEVICE BUSINESS MODELS AND USAGE

PRODUCTS SOLD TO WORK ON THE INTELLIGENT EDGE FOR INTERNAL USE

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
0%–20%	●	●	●	●	●	●
21%–50%	●	●	●	●	●	●
51%–100%	●	●	●	●	●	●

MISSION-CRITICAL/BUSINESS-CRITICAL FOCUS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Extreme Internal (30%+ USED for edge computing & mission-critical performance demanded)	●	●	●	●	●	●
Product Sales (30%+ SOLD for edge computing & rating 6/7 on mission-critical)	●	●	●	●	●	●
Extreme Both (30%+ USED & SOLD for edge computing & rating 6/7 on mission-critical)	●	●	●	●	●	●
All Others	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

METRICS FOR INTELLIGENT SYSTEMS

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: OPEX IMPROVEMENTS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Less than 20% increase	●	●	●	●	●	●
21%–35% increase	●	●	●	●	●	●
36%–50% increase	●	●	●	●	●	●

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CAPEX IMPROVEMENTS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Less than 20% increase	●	●	●	●	●	●
21%–35% increase	●	●	●	●	●	●
36%–50% increase	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: TOTAL REVENUE CHANGES

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Less than 20% increase	●	●	●	●	●	●
20%–34% increase	●	●	●	●	●	●
35%–50% increase	●	●	●	●	●	●

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: PROFIT MARGIN CHANGES

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Less than 20% increase	●	●	●	●	●	●
20%–34% increase	●	●	●	●	●	●
35%–50% increase	●	●	●	●	●	●

Continued on the next spread ...

(Continued from the previous spread)

METRICS FOR INTELLIGENT SYSTEMS

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CHANGES IN EMPLOYEE RETENTION

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Less than 20% increase	●	●	●	●	●	●
20%–34% increase	●	●	●	●	●	●
35%–50% increase	●	●	●	●	●	●

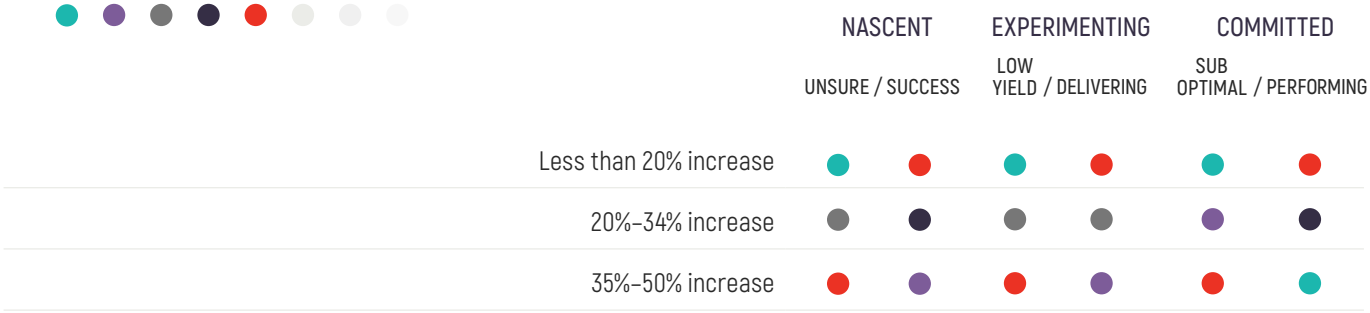
ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CHANGES IN EMPLOYEE RECRUITMENT

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Less than 20% increase	●	●	●	●	●	●
20%–34% increase	●	●	●	●	●	●
35%–50% increase	●	●	●	●	●	●

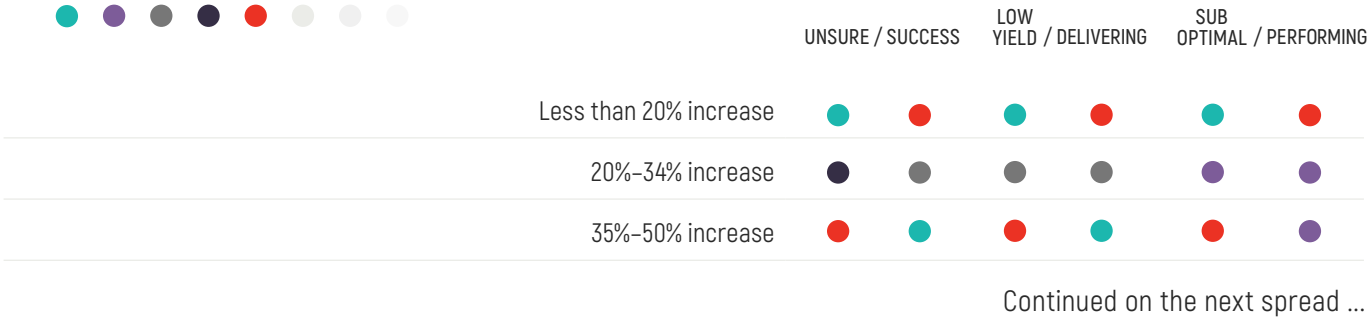
INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CHANGES IN PRODUCT/SERVICE DELIVERY



ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CHANGES IN THE TYPE OF MARKET INSIGHTS WE CAN USE



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METRICS FOR INTELLIGENT SYSTEMS

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CHANGES IN OVERALL CONFIDENCE IN THE ORGANIZATION

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Less than 20% increase	●	●	●	●	●	●
20%–34% increase	●	●	●	●	●	●
35%–50% increase	●	●	●	●	●	●

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: MARKET VALUATION CHANGES

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Less than 20% increase	●	●	●	●	●	●
20%–34% increase	●	●	●	●	●	●
35%–50% increase	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CHANGES IN DIGITAL WORKING PRACTICES

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Less than 20% increase						
20%–34% increase						
35%–50% increase						

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CHANGES IN THE TYPE OF MARKET INSIGHTS WE CAN USE

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Less than 20% increase						
20%–34% increase						
35%–50% increase						

(Continued from the previous spread)

METRICS FOR INTELLIGENT SYSTEMS

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: ORGANIZATION'S CAPACITY TO INNOVATE

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Less than 20% increase	●	●	●	●	●	●
20%–34% increase	●	●	●	●	●	●
35%–50% increase	●	●	●	●	●	●

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CHANGES IN COMPETITIVE ADVANTAGES IN ESTABLISHED SECTORS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Less than 20% increase	●	●	●	●	●	●
20%–34% increase	●	●	●	●	●	●
35%–50% increase	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

ESTIMATE THE IMPACT FROM USING INTELLIGENT SYSTEMS IN YOUR BUSINESS'S PROCESSES IN THE NEXT THREE YEARS: CHANGES IN INTERNAL CONFIDENCE

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Less than 20% increase						
20%–34% increase						
35%–50% increase						

INTELLIGENT SYSTEM HIGH PERFORMERS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Revenue Seekers (30% or higher return expected for $ Metrics)						
Product Sales (30% or higher return expected for Sales Metrics)						
External Factors (30% or higher return expected for Customer & Marketing Metrics)						
Internal Impact (30% or higher return expected for Employee & Org Metrics)						
All Others						

BARRIERS AND DRIVERS FOR INTELLIGENT SYSTEMS

ESTIMATED LEVEL OF DIFFICULTY/ COMPLEXITY INTEGRATING INTELLIGENT SYSTEMS INTO THE BUSINESS WORKFLOW

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
1 - Not At All Difficult						
2						
3						
4						
5						
6						
7 - Extremely Difficult						

INTELLIGENT SYSTEMS COMPARATIVE INDEX

151+ / 121–150 / 91–120 / 61–90 / 60 or less

KEY BARRIERS TO THE WIDESPREAD ADOPTION OF INTELLIGENT SYSTEMS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE / SUCCESS		LOW YIELD / DELIVERING		SUB OPTIMAL / PERFORMING	
Underlying technology needs are not appropriately deployed or available	●	●	●	●	●	●
Skill sets needed will substantially restrict abilities to widely adopt	●	●	●	●	●	●
Industry is highly regulated, which restricts adoption of intelligent systems	●	●	●	●	●	●
Cybersecurity concerns that will significantly restrict potential	●	●	●	●	●	●
Application areas like machine learning are not being extensively used	●	●	●	●	●	●
Customers are not asking or pushing companies to adopt	●	●	●	●	●	●
Opportunities to take advantage are seen as limited for a range of reasons	●	●	●	●	●	●
Ecosystems are major barriers to success in our industry	●	●	●	●	●	●
Unique industry challenges before intelligent systems can grow	●	●	●	●	●	●
Industry leaders have not made a case for improved employee experience or safety	●	●	●	●	●	●
No clear leader for intelligent systems that would spur adoption	●	●	●	●	●	●
Thought leaders have not established how to address any ethical barriers	●	●	●	●	●	●
No clear economic measures or upsides that are widely accepted in industry	●	●	●	●	●	●
Moving to the cloud is not an idea our industry will easily embrace	●	●	●	●	●	●

Continued on the next spread ...

(Continued from the previous spread)

BARRIERS AND DRIVERS FOR INTELLIGENT SYSTEMS

KEY BARRIERS THAT ARE IMPORTANT TO OVERCOME TO ACHIEVE WIDESPREAD ADOPTION OF INTELLIGENT SYSTEMS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Skill sets needed will substantially restrict abilities to widely adopt	●	●	●	●	●	●
Application areas like machine learning are not being extensively used	●	●	●	●	●	●
Cybersecurity concerns that will significantly restrict the potential	●	●	●	●	●	●
Underlying technology needs are not appropriately deployed or available	●	●	●	●	●	●
Industry is highly regulated, which restricts adoption of intelligent systems	●	●	●	●	●	●
Ecosystems are major barriers to success in our industry	●	●	●	●	●	●
Opportunities to take advantage are seen as limited for a range of reasons	●	●	●	●	●	●
Customers are not asking or pushing companies to adopt	●	●	●	●	●	●
Industry leaders have not made a case for improved employee experience or safety	●	●	●	●	●	●
Unique industry challenges before intelligent systems can grow	●	●	●	●	●	●
Thought leaders have not established how to address any ethical barriers	●	●	●	●	●	●
No clear leader for intelligent systems that would spur adoption	●	●	●	●	●	●
Moving to the cloud is not an idea our industry will easily embrace	●	●	●	●	●	●
No clear economic measures or upsides that are widely accepted in industry	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

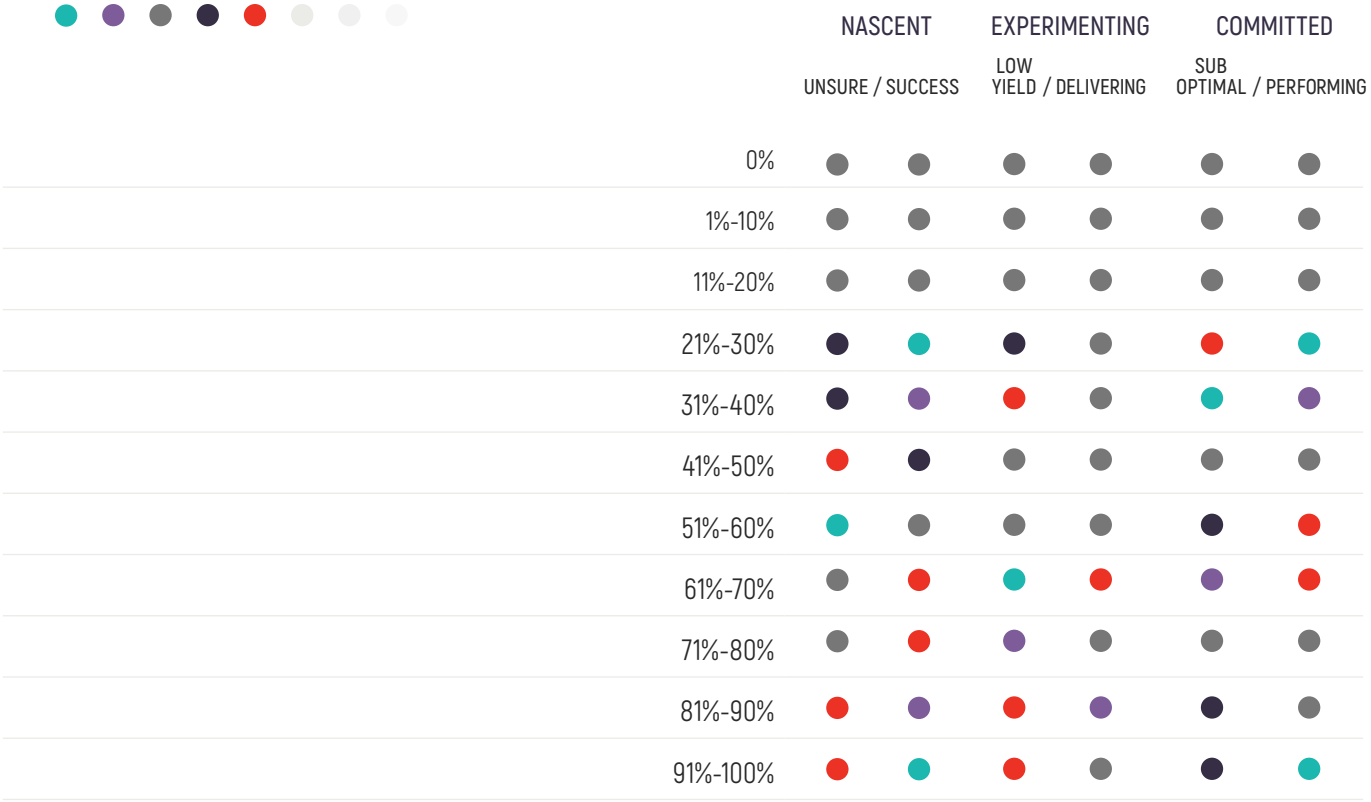
● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

WHAT WILL ACCELERATE INVESTMENT IN AND THE ADOPTION OF INTELLIGENT SYSTEMS?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE /	SUCCESS	LOW YIELD /	DELIVERING	SUB OPTIMAL /	PERFORMING
Evidence of improved employee satisfaction	●	●	●	●	●	●
Evidence of optimized workflows that evolve from using intelligent systems	●	●	●	●	●	●
Progressively improved feeling of comfort with the results we are getting	●	●	●	●	●	●
Evidence of ability to innovate new products/services from intelligent systems	●	●	●	●	●	●
Evidence that competitors are thriving more with their intelligent systems	●	●	●	●	●	●
Evidence of improved customer satisfaction and their desire to work with us	●	●	●	●	●	●
Evidence that industry experts increasingly believe it is the way forward	●	●	●	●	●	●
Evidence of the economic impact to customers	●	●	●	●	●	●
Evidence this allows customers to do more with our products and services	●	●	●	●	●	●

THE FAR EDGE & MISSION-CRITICAL INTELLIGENT SYSTEMS FUTURE

THINKING OF THE INTELLIGENT EDGE, HOW MUCH OF YOUR EMBEDDED PRODUCTS AND SERVICES WILL BE DESIGNED TO BE USED ON A FAR EDGE CLOUD?



INTELLIGENT SYSTEMS COMPARATIVE INDEX

TO WHAT EXTENT DOES YOUR ORGANIZATION CONSIDER MISSION-CRITICAL CAPABILITIES FOR YOUR EMBEDDED PRODUCTS AND SERVICES TODAY?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Not very important to our organization						
Somewhat important to our organization						
Extremely/very important to our organization						
6 - Very Important						
7 - Extremely important						

TO WHAT EXTENT DOES YOUR ORGANIZATION CONSIDER MISSION-CRITICAL CAPABILITIES FOR YOUR EMBEDDED PRODUCTS AND SERVICES FIVE YEARS FROM TODAY?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
0%-20%						
21%-50%						
51%-100%						
6 - Very Important						
7 - Extremely important						

Continued on the next spread ...

(Continued from the previous spread)

THE FAR EDGE & MISSION-CRITICAL INTELLIGENT SYSTEMS FUTURE

HOW IMPORTANT FOR MISSION-CRITICAL PERFORMANCE ARE SAFETY PROTOCOLS FOR YOUR EMBEDED PRODUCTS AND SERVICES SO THAT THEY CAN FUNCTION IN A REAL WORLD MISSION-CRITICAL MATTER?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Not relevant	●	●	●	●	●	●
A "nice to have"	●	●	●	●	●	●
Occasionally important	●	●	●	●	●	●
Connected to our success	●	●	●	●	●	●
Important to success	●	●	●	●	●	●
Critical for success	●	●	●	●	●	●

HOW IMPORTANT FOR MISSION-CRITICAL PERFORMANCE ARE LEVELS OF GUARANTEED RELIABILITY THAT WOULD BE AT THE VERY UPPER END OF RELIABILITY OVER A LONG TIME?

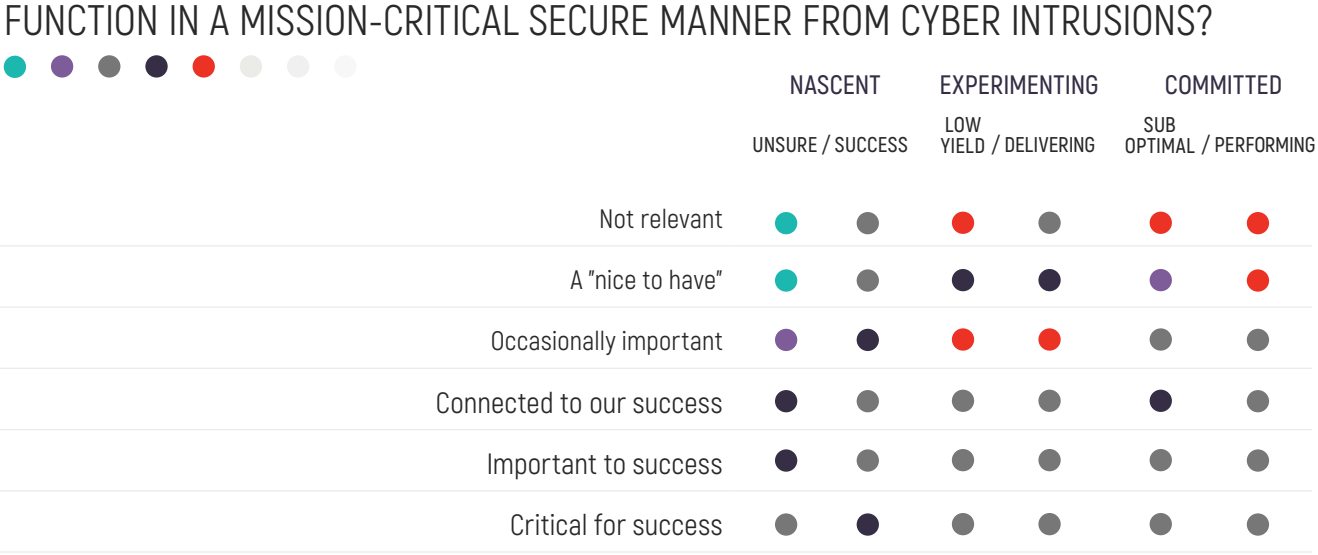
	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Not relevant	●	●	●	●	●	●
A "nice to have"	●	●	●	●	●	●
Occasionally important	●	●	●	●	●	●
Connected to our success	●	●	●	●	●	●
Important to success	●	●	●	●	●	●
Critical for success	●	●	●	●	●	●

INTELLIGENT SYSTEMS COMPARATIVE INDEX

● 151+ / ● 121–150 / ● 91–120 / ● 61–90 / ● 60 or less

HOW IMPORTANT FOR MISSION-CRITICAL PERFORMANCE IS IT THAT THE EMBEDDED PRODUCTS AND SOLUTIONS ARE CAPABLE OF COMPUTING IN NEAR-LATENCY-FREE REAL TIME?

HOW IMPORTANT FOR MISSION-CRITICAL PERFORMANCE IS IT THAT THE EMBEDDED PRODUCTS AND SOLUTIONS HAVE LEVELS OF SECURITY SO THEY CAN FUNCTION IN A MISSION-CRITICAL SECURE MANNER FROM CYBER INTRUSIONS?



Continued on the next spread ...

(Continued from the previous spread)

THE FAR EDGE & MISSION-CRITICAL INTELLIGENT SYSTEMS FUTURE

HOW IMPORTANT FOR MISSION-CRITICAL PERFORMANCE IS IT THAT THE EMBEDDED PRODUCTS AND SOLUTIONS CAN DELIVER NEAR-LATENCY-FREE COMPUTE FOR MISSION-CRITICAL NEEDS?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Not relevant						
A "nice to have"						
Occasionally important						
Connected to our success						
Important to success						
Critical for success						

HOW IMPORTANT FOR MISSION-CRITICAL PERFORMANCE IS IT THAT THE CODE INSIDE THE EMBEDDED PRODUCTS AND SERVICES IS FULLY CERTIFIED FOR MISSION-CRITICAL PERFORMANCE?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Not relevant						
A "nice to have"						
Occasionally important						
Connected to our success						
Important to success						
Critical for success						

INTELLIGENT SYSTEMS COMPARATIVE INDEX

151+ / 121–150 / 91–120 / 61–90 / 60 or less

HOW IMPORTANT FOR MISSION-CRITICAL PERFORMANCE IS IT THAT THE CODE INSIDE THE EMBEDDED PRODUCTS AND SERVICES ARE ABLE TO USE AI IN NEAR REAL TIME TO DELIVER INSIGHTS AND ACTIONS FOR MISSION-CRITICAL SUCCESS?

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Not relevant						
A "nice to have"						
Occasionally important						
Connected to our success						
Important to success						
Critical for success						

EXTREME MISSION-CRITICAL NEEDS

	NASCENT		EXPERIMENTING		COMMITTED	
	UNSURE	SUCCESS	LOW YIELD	DELIVERING	SUB OPTIMAL	PERFORMING
Extreme MC (Critical/Important ratings for at least 5 of 7 measures)						
All others (Not Extreme MC)						

EPILOGUE

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