



INDUSTRIAL TRANSFORMATION (IX): Four Organizational Disconnects That Hinder Momentum

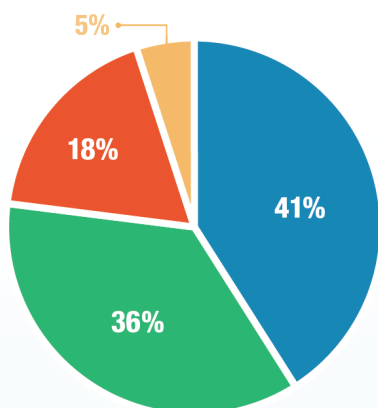
LNS Research recently conducted a global survey to measure and understand what industrial enterprises are doing around Industrial Transformation (IX), and the evidence is in. Companies are going beyond their **standard practices in Continuous Improvement** to seek step-change improvement in industrial operations. Two-thirds of organizations are implementing or plan to implement an Industrial Transformation program. We anticipated that organizational factors play a significant role in the success, failure, or stagnation of IX programs, so we included several questions to test our hypotheses around this topic. This report examines the four organizational disconnects industrial companies face with the IX program.

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—TOM COMSTOCK
Principal Analyst

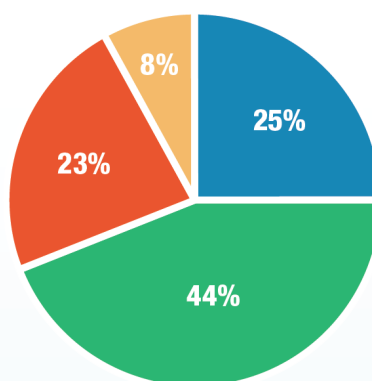
Survey and Demographics

LNS Research executed a global survey on the state of Industrial Transformation programs. We surveyed executives, management and operations personnel across a wide range of industries and geographies. The survey responses were quite global with a good balance from every major geography. There was also a good balance in the size of companies that responded, with 40% having revenues over \$1 billion, and 38% having revenues less than \$500 million in 2017.



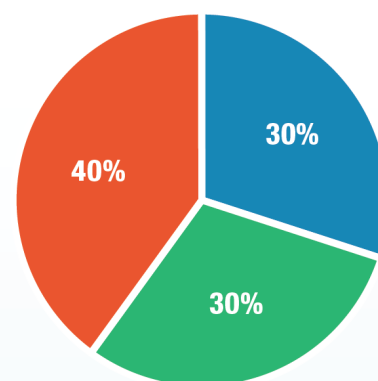
GEOGRAPHY
Color by HQ Location

- North America
- Europe
- Asia / Pacific
- Rest of World



INDUSTRY
Color by Industry

- Batch
- Discrete
- Process
- Other



REVENUE
Color by Company Revenue

- Small: \$0 - \$250M
- Medium: \$250M - \$1B
- Large: \$1B+

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State of Industrial Transformation

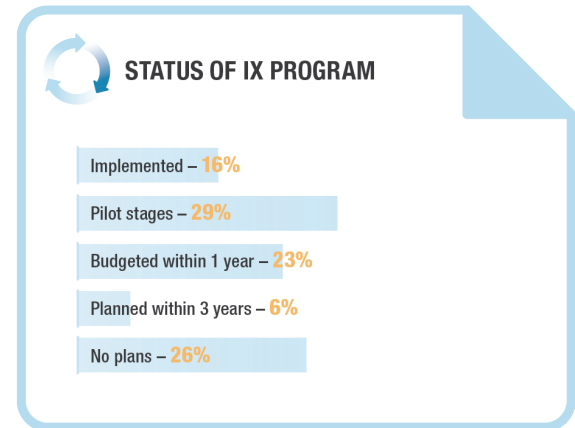
Industrial Transformation (IX) is the proactive and coordinated approach to leverage digital technologies to create step-change improvement in industrial operations. IX is a critical and often the largest subset of a Digital Transformation program that includes initiatives outside of the industrial space, such as redefining customer relationships. Among them, programs go by a range of names: Digital or Industrial Transformation, Industrie 4.0, Smart Manufacturing, and many others.

IX is now a key focus for industrial enterprises; 45% of companies are already engaged in IX with another 23% expecting to kick off a program within one year. The average IX program had ten distinct initiatives with the largest organizations having just slightly more. Today, most companies are focused on proofs-of-concept and pilots as key steps in the implementation strategy.

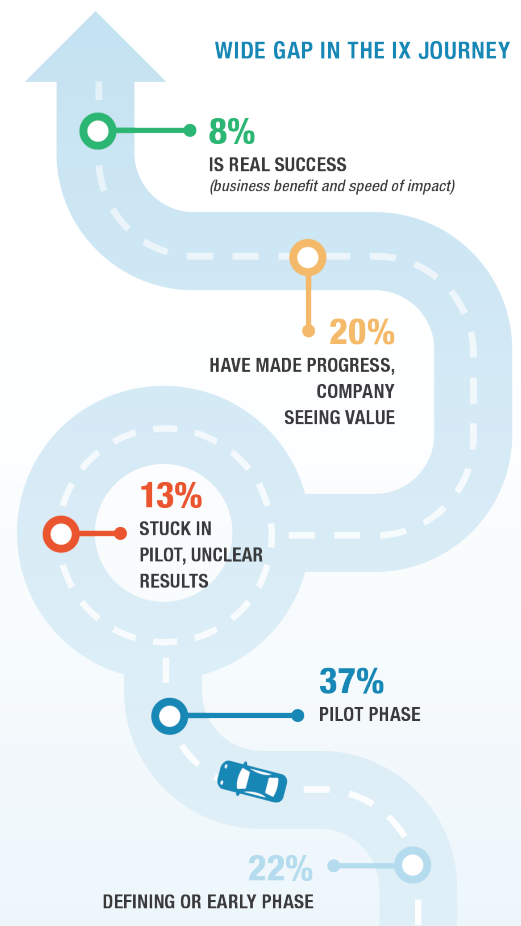
To understand the disconnects in IX, it's helpful to understand where industrials are in the search for step-change improvement in operations. Eight percent of companies describe the IX program as a real success, while another 20% report they are making progress and the corporation is seeing value. We call this top 28% of companies IX Leaders – the ones that say IX is working. We refer to the other 72% of companies as “Followers” because they have not yet received positive results from their Industrial Transformation program. They are still in the definitional or pilot phase. When we cross-reference the self-assessment against return on investment via incremental revenue realized and/or cost savings, we found a good correlation between the two definitions of success.

The survey results are clear and reinforce the top-down nature of IX programs:

- **INDUSTRIAL TRANSFORMATION** is a high-level priority for industrial organizations;
- **EXECUTIVE MANAGEMENT** is planning and executing the IX program;
- **CEO'S ARE DIRECTLY LEADING 42%** of the IX programs; and
- **64% OF IX BUDGET ALLOCATION** and 65% of budget spend is controlled by the board, CEO, COO, or CFO.



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IX: Four Organizational Disconnects That Hinder Momentum

Given the magnitude of priority and involvement by the C-suite and at the board level, we want to uncover why some companies are achieving success while others seem slow to capture comparable results. As we examined the data, organizational disconnects emerged as a likely culprit to hinder IX program performance.

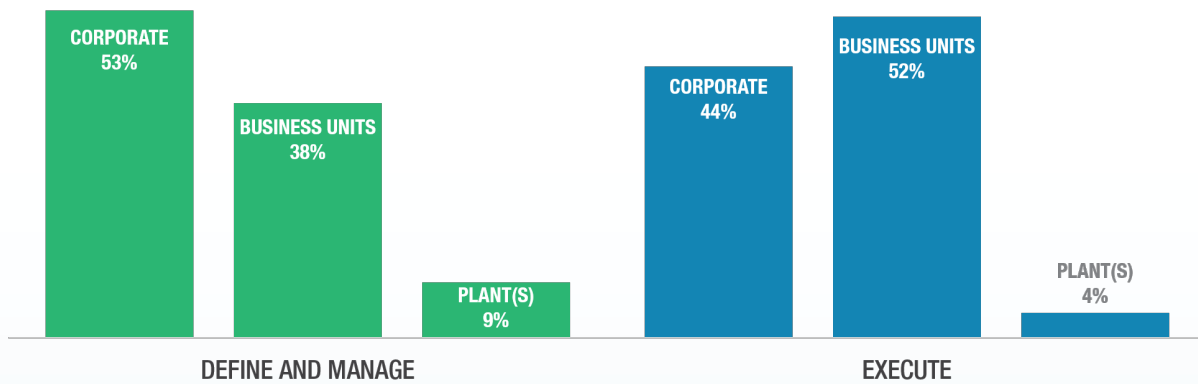
Disconnect #1 | Role of Plants in IX

IF IX IS ABOUT STEP-CHANGE IMPROVEMENTS IN OPERATIONS, WHY AREN'T PLANTS GIVEN A MORE SIGNIFICANT ROLE IN DEFINING AND EXECUTING THE IX PROGRAM?

Corporate-level departments or executives take the lead to define the IX program in 53% of companies, while 38% of companies say business units are responsible for defining the IX program. We see those numbers flip for executing the IX program; business units take the lead across 52% of companies. However, whether in defining or executing the IX program, plants are seldom the primary change agent.

By its very definition, Industrial Transformation is about rearchitecting industrial processes performed in the plant, mine, port or other industrial operation. The expertise around industrial processes is primarily in those operations, but the experts are predominantly relegated to a secondary role (at best).

Primary Role in IX Program



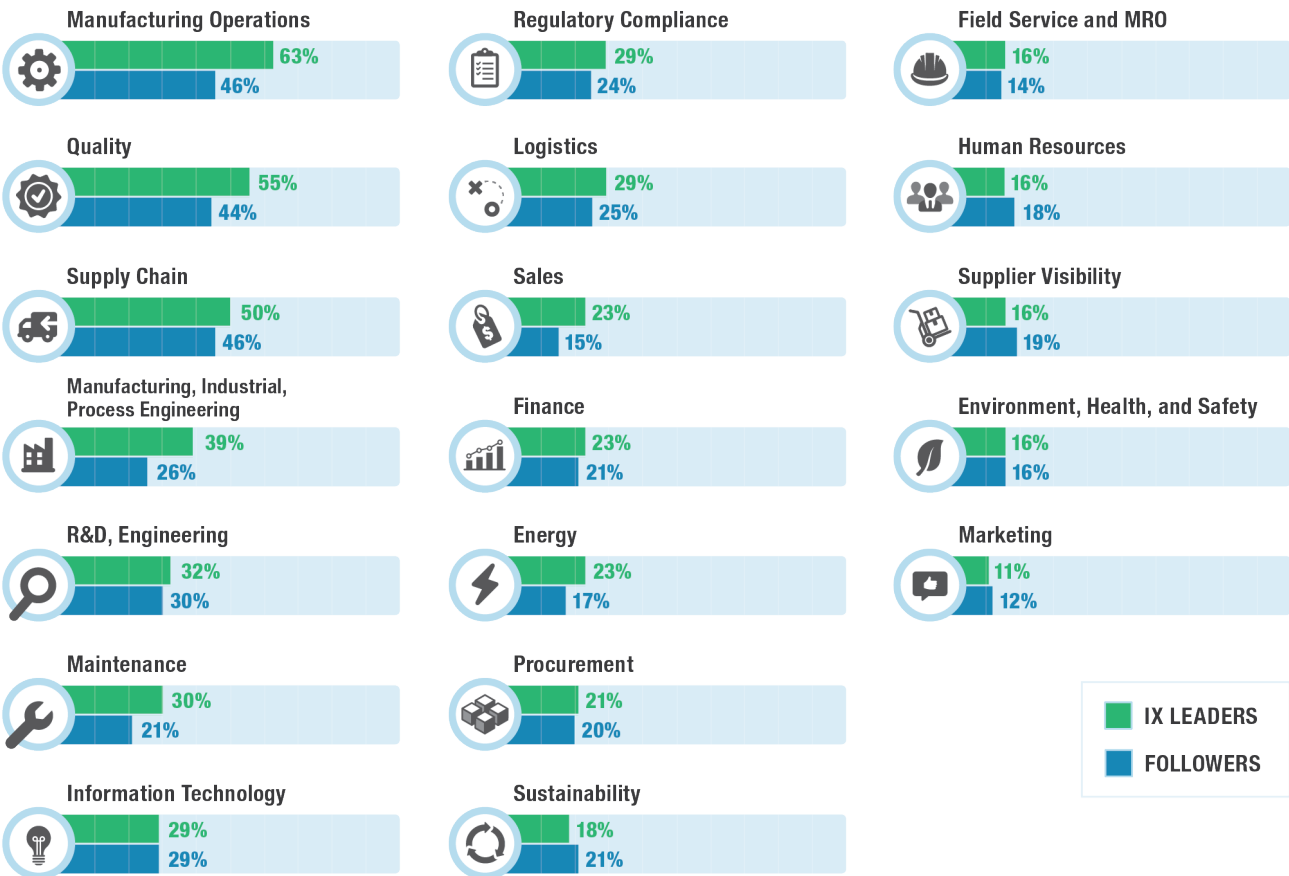
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When we examine how IX Leaders organize themselves, this disconnect quickly resurfaces. IX Leaders are more inclusive when it comes to staffing. We know they have more focus on subject matter experts because they are more likely to include engineering, supply chain, operations/manufacturing and quality staff on IX program teams.

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—TOM COMSTOCK
Principal Analyst

Functional Area Within Scope of Industrial Transformation



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When we probe data about program success, failure, or stagnation where plants had the primary role to define or execute the IX Program, the results intrigued us.

The coup de grace surfaces when we study the funding mechanism for the rollout of IX initiatives or solutions to plants. Fifty-eight percent of companies expect plants to fund IX initiatives and solutions that impact operations. They must pay, but they don't get a leadership role in planning and execution. That's a distinct disconnect.

Disconnect #2 | The Token CDO

WHY ISN'T THE CHIEF DIGITAL OFFICER EMPOWERED?

Business headlines have covered the advent of the new C-level role across the industrial sector: the chief digital officer (CDO). Several of the largest companies have made splashy, high-profile hires for the role, and the position appears to be mainstreaming: 52% of companies have already appointed a CDO, and another 24% plan to do so over the next

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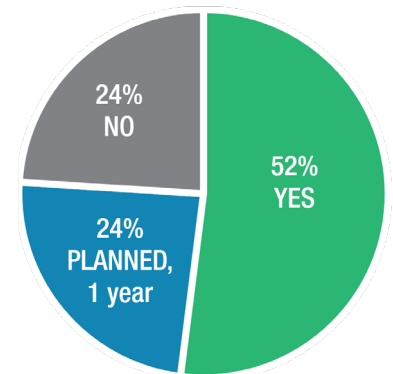
twelve months. Further, the new role appears to have importance on the organizational chart, since most CDOs report directly to the CEO or board of directors.

But ... and this is a big but ... the data also shows that the new role might not be “chief” of much, if anything. CDOs lead only 15% of IX programs and have budget control for IX technology and systems for only 5% of companies.

One of the surprises the survey data reveals is that the chief digital officer is often just a figurehead. Prior to collecting and examining the data, LNS’ hypothesis was that appointing a CDO would be a best practice in defining and executing an IX program. Instead, we find no difference between IX Leaders and Followers in the role of the CDO.

Any number of factors might be behind this surprising result: industrials might make the splashy hire because they feel compelled to do something around IX but are not truly committed, the splashy hire doesn’t have the organizational and operational “chops” to get things done, others throughout the organization view the CDO as too “corporate,” or some combination of these. The topic requires more research, but the lack of empowerment for this new role certainly represents a disconnect given the supposed “transformational” nature of IX programs.

Company Has CDO



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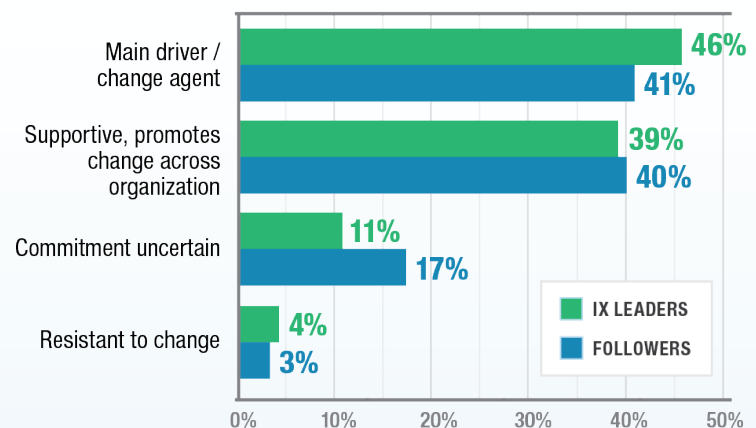
Disconnect #3 | Budget Doesn’t Mirror Exec Buy-In

THE C-SUITE AND BOARD ARE “CONVINCED,” SO WHY AREN’T THEY FUNDING IX ADEQUATELY?

The data is clear: executive buy-in is strong, but budgets are small. We see senior leadership support across IX Leaders’ and Followers’ organizations alike. In fact, executive management is actively driving or promoting the IX program across 80-85% of industrial organizations. For this reason, we believe “top-down” is a critical attribute for IX program success.

One of the most powerful ways the C-suite can drive and enable change is through funding. The distribution of three-year budget allocation signals a disconnect. While budget is relative to corporate size, we sense the small nature of IX program funding; 6% of companies have a three-

Executive Management's Attitude Toward IX



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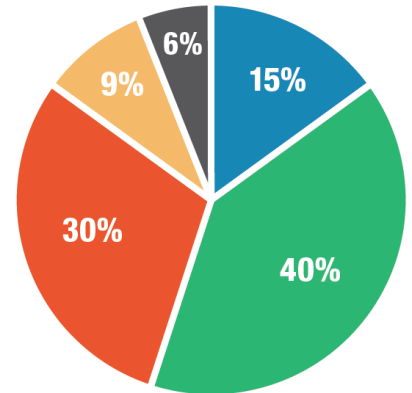
year budget over \$100 million, yet over 40% companies report revenue over \$1 billion (20% over \$5 billion). In fact, among industrial companies, 58% require individual plants or business units to fund the Industrial Transformation program initiatives or solutions. This funding model illustrates the disconnect: companies are eager to transform, but only provide funding for investigation and proofs-of-concept.

Disconnect #4 | Plant Manager on the Sideline

WHY DON'T COMPANIES PUT GOALS IN PLACE FOR PLANT MANAGERS ON THE IMPACT OF IX?

Again, before we collected and tallied survey data, we hypothesized that plant management reluctance to support IX would be a key determinant in program success. We further suspected that this would be especially true among companies with corporate-led IX program initiatives. Survey results showed the opposite: 79% of plant managers seek IX for their plant, and only 1% of plant managers are resistant to change — this holds true for both IX Leaders and Followers. When we asked respondents to identify the top three IX program challenges, only 12% cited a lack of plant management and operations buy-in.

IX Budget, Next 3 Years

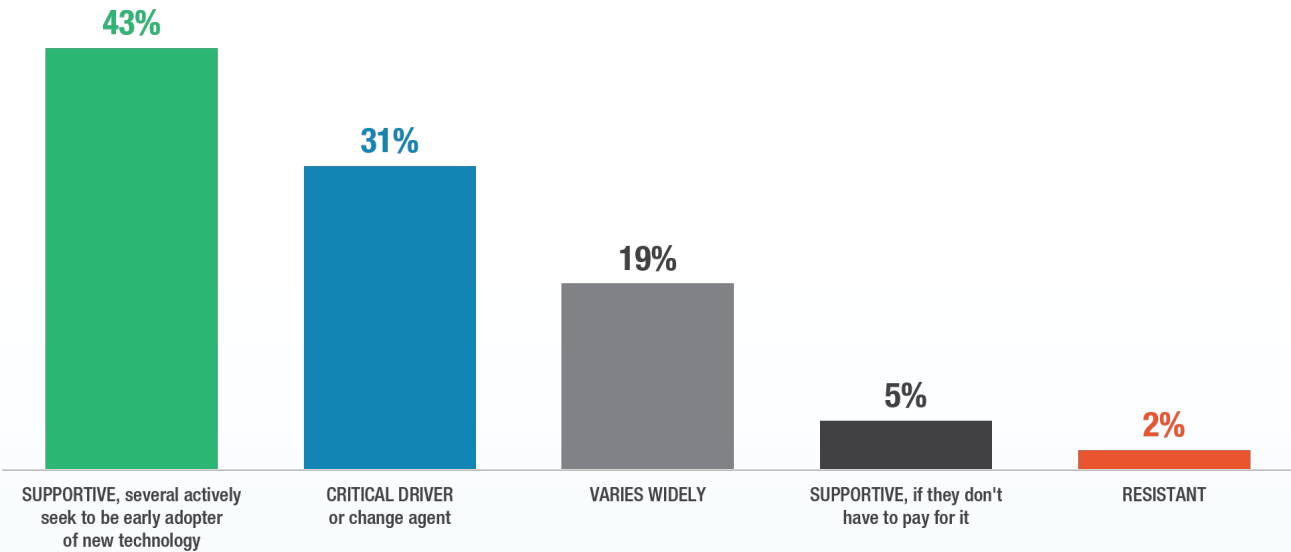


BUDGET

- <\$1 million
- \$1 - \$10 million
- \$11 - \$50 million
- \$51 - \$100 million
- >\$100 million

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Plant Management Attitude Toward IX Program



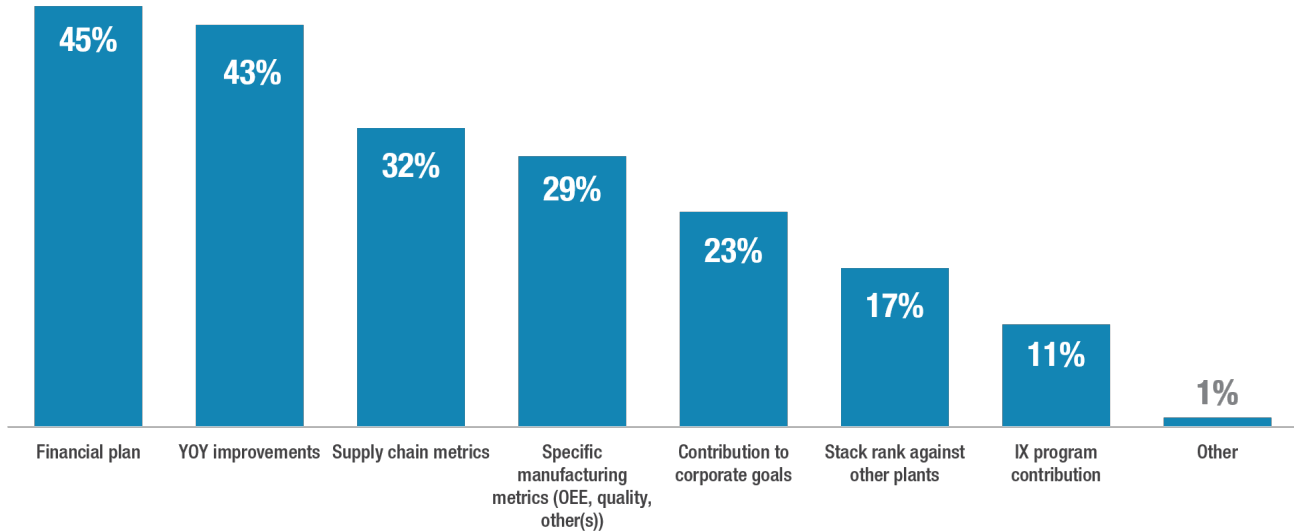
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With this much buy-in one would expect significant roll-out of IX initiatives and solutions across the organization, but 70% of companies have not yet rolled out IX initiatives or solutions across operations. Are plant managers not embracing the particulars of the specific IX program? Or, is there not enough incentive to change things that aren't working (a prevalent issue in terms of operational technology)?

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According to the research data, only 11% of companies support the IX program within plant managers' performance management program. That translates to less than half of companies that include contribution to corporate goals generally as part of the plant manager's performance package. If IX is critical to corporate success, you wouldn't know it from plant managers' performance plans.

Plant Management Performance Program / Evaluation



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Conclusions and Recommendations

In looking at these organizational disconnects, we have to wonder if industrial organizations are truly committed to IX. When our research analysts talk with operations personnel and ask about executive commitment to IX, they often hear, "The execs are saying all the right things and they sound committed, but we will know for sure when we see the staffing plans. We'll wait to see if the best people are on the project — and in the budget." CDOs that aren't empowered, budget not aligned to goals, and lack of plant engagement are all signs that the C-suite may be talking the talk but not walking the walk where IX is concerned.

This gap may account for IX programs destined to be Followers. One [critical best practice the data exposed is "the power of more."](#) IX Leaders are doing more across many dimensions. They have a larger functional scope, broader focus, and more breadth on teams. Furthermore, they focus on suppliers and customers, not just their own processes. They deploy significantly more technologies, and they jointly fund more initiatives and solutions. This "more" posture requires a genuine commitment to IX. The four disconnects are evidence of a lack of real commitment to IX, and signal that the IX program is headed toward

BY ITS VERY DEFINITION, The C-suite may be talking the talk but not walking the walk where IX is concerned. A critical best practice is "the power of more" ... IX Leaders are doing more across many dimensions.

—**TOM COMSTOCK**
Principal Analyst

stagnation or failure. That doesn't mean companies can't turn the ship around.

C-SUITE, GO BIG OR GO HOME. Clearly, *IX is no longer a bleeding edge initiative*. Industrial companies are moving forward with IX programs, and a small percentage of them are already reporting dramatic impact. The technologies and market are maturing. We believe that even the most risk-averse companies should be planning for and embarking on an Industrial Transformation journey.

However, that does not mean that any specific organization should start or scale up an IX program. Real commitment to transformation is critical for program success. If executive management is not on board and willing to commit serious budget and the best and brightest across the corporation, wait until they are. Moreover, when engaging in IX employ a top-down, bottom-up approach. Subject matter expertise and plant buy-in is critical for success.

CDO (OR CDO CANDIDATES), FOCUS ON THREE POINTS:

1. Make sure you understand what the true level of commitment to IX is in the organization. Strive to understand the C-suite's views and if there are issues, work them hard.
2. *Follow IX pest practices* identified by LNS Research from the market data. Of specific importance is a top-down, bottom-up approach. People shouldn't see the IX program as corporate telling plants what to do. Engage subject matter experts to focus on the right problems and potential solutions.
3. The funding model means that plant managers will be the ultimate judge of the program's innovations. Engage them early and often.

PLANT MANAGER, STEP FORWARD NOW. While the numbers are small so far, it's clear that many *industrial organizations are finding step-change improvements* in the form of incremental revenue opportunities and cost savings. Assuming that your plant is already successful with Continuous Improvement, further success for your operations and your career may require you to become the innovation leader that delivers step-change improvement early. The funding model means you are the ultimate IX program arbiter of success, so use that clout to engage early and ensure the program delivers value for your specific operation.

VENDORS TAKE NOTICE ALSO. The funding model means you must be successful in the pilot and still sell to plants. In qualifying opportunities, enlist [active and regular engagement of a diverse set of plant personnel](#), otherwise your solution set could very easily flounder in the rollout stage. IX Leaders are 2.7 times more likely to have joint funding with some IX program initiatives solutions funded centrally. Encourage your partners within the IX program to jointly fund your solution. Finally, do all you can to ascertain the true commitment to IX at the executive level.

EVERYONE, STAY CURRENT ON KNOWLEDGE. Industry is transforming. Transformation is hard. Success requires real commitment and engagement from the top and the plants. Stay tuned as LNS Research continues to examine the [best practices around Industrial Transformation](#), and as we uncover use cases and case studies.

Industrial Transformation Resource Guide

Companies use digital technology to drive transformation across the value chain. Use these resources to learn how to align the people, processes, and technologies required to achieve Operational Excellence in your organization.

INDUSTRIAL TRANSFORMATION

BLOG | Understanding Industrial Transformation: Definition and Framework for Success

[View Blog](#) →

RESEARCH | Industrial Transformation: Architecture and Analytics Just the Beginning

[View Research](#) →

RESEARCH | Industrial Control Systems and Edge Computing: Enabling an Operational Architecture for Applications and Analytics

[View Research](#) →

INDUSTRIAL ANALYTICS

RESEARCH | Build a Flexible Industrial Analytics Strategy for Today and Tomorrow: Why Business Leaders Should Adopt a Use Case Approach

[View Research](#) →

BLOG | How the Right Operational Architecture Powers the Analytics That Matter

[View Blog](#) →

RESEARCH | Analytics Really Do Matter: Driving Digital Transformation and the Smart Manufacturing Enterprise

[View Research](#) →

FACTORY OF THE FUTURE

RESEARCH | Improving Continuous Improvement: Reinvent Lean Today with Digital Technology

[View Research](#) →

RESEARCH | Forging the Digital Twin in Discrete Manufacturing: A Vision for Unity in the Virtual and Real Worlds

[View Research](#) →

RESEARCH | MOM and PLM in the IIoT Age: A Cross-Discipline Approach to Digital Transformation

[View Research](#) →

APM 4.0

SOLUTION SELECTION GUIDE | Asset Performance Management (Platform Vendors), 2019 Edition

[View Solution Selection Guide](#) →

RESEARCH | APM 4.0: Prescription for Better Profitability in Operations

[View Research](#) →

RESEARCH | The Road to Digital Transformation Success: A Methodology to Modernize Operational Excellence

[View Research](#) →

Industrial Transformation Resource Guide (cont.)

QUALITY, COMPLIANCE

RESEARCH | Quality 4.0 Impact and Strategy Handbook

[View Blog](#) →

RESEARCH | Driving Operational Performance with Digital Innovation: Connecting Risk, Quality and Safety for Superior Results

[View Research](#) →

RESEARCH | Roadmap to Supplier Status: Think Risk Performance, Not Compliance

[View Research](#) →

ENVIRONMENT, HEALTH AND SAFETY

WEBCAST | EHS 4.0: Using Technology to Reach New Levels of Safety and Environmental Performance

[Watch Webcast](#) →

RESEARCH | Unify EHS and Quality: Capture Synergies and Turn Policy into Action

[View Research](#) →

RESEARCH | The Connected Worker: Mobilize and Empower People to Reduce Risk and Improve Safety

[View Research](#) →

INDUSTRY FOCUS

AUTOMOTIVE RESEARCH | IATF 16949-2016: A Pivotal Opportunity in Automotive Quality Management

[View Research](#) →

AUTOMOTIVE AND A&D RESEARCH | Manufacturing Performance: Automotive and A&D Gaining Momentum with Analytics

[View Research](#) →

LIFE SCIENCES RESEARCH | Quality 4.0 in Pharmaceutical: Use Cases and Advantage in a Digitally Maturing Market

[View Research](#) →

METALS AND MINING RESEARCH | Data for Balanced Scorecard: Driving Profits in Mining, Metals, and Materials Industries

[View Research](#) →

POWER GENERATION RESEARCH | Driving Better Decision Making with Big Data: A Roadmap for Digital Transformation in the Power Generation Industry

[View Research](#) →

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