



# Winning with Location Intelligence:

## The Essential Practices

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# Executive Summary

For years, progressive organizations have recognized the value of location data and the power of geospatial analysis to provide insights about their business and customers. Many of these organizations have invested significantly in geospatial technology and leveraged its capabilities to support and grow their business.

So what's changed? As the pace of digital transformation accelerates and organizations adopt digital and analytics-based business models, the availability and strategic importance of data has exploded. Data is now a competitive asset. And much of this data is geospatial.

Organizations that tap into geospatial information and generate competitive insights gain a distinct advantage. This ability is called location intelligence. Organizations with well-developed location intelligence abilities use geospatial technology, data, maps, and analysis to inform decisions, manage assets, engage customers, and drive business innovation.

The key to location intelligence is recognizing it as an organizational ability. That means understanding that it comprises more than just technology and data. It also includes the skills and competencies of people who use and support the tools, the organizational processes and governance that define how work is executed, and the cultural norms and behaviours that determine how organizations collaborate and innovate. Organizations that take a holistic view of location intelligence are in the best position for success.

To gain a better understanding of location intelligence, Esri Canada partnered with IDC to conduct a detailed diagnostic survey of managers and executives from more than 200 Canadian organizations across several industry verticals. The intention was to evaluate the perception of location intelligence among business leaders. Specifically, Esri Canada wanted to identify the key practices that underpin an organization's location intelligence abilities. In particular, it wanted to identify practices that were most closely associated with business outcomes. Through careful analysis, Esri Canada and IDC developed a model that measures the proficiency of an organization's location intelligence abilities across practices that drive business outcomes.



## The State of Location Intelligence in Canadian Organizations

The survey revealed that, among leadership, location intelligence is well-recognized and perceived as an important strategic enabler. A total of 83% of respondents indicated that location intelligence was "critical" or "very important" to their organization's success. This was true for current and projected future success.

Respondents also identified a broad range of business uses and benefits associated with location intelligence. Common uses include navigation and routing, tracking or locating assets, analyzing business trends, monitoring health, safety, and environmental conditions, managing facilities and physical assets, and developing new products and services. Investment in location intelligence has led to productivity improvements, cost savings, better compliance, and improved brand and reputation.

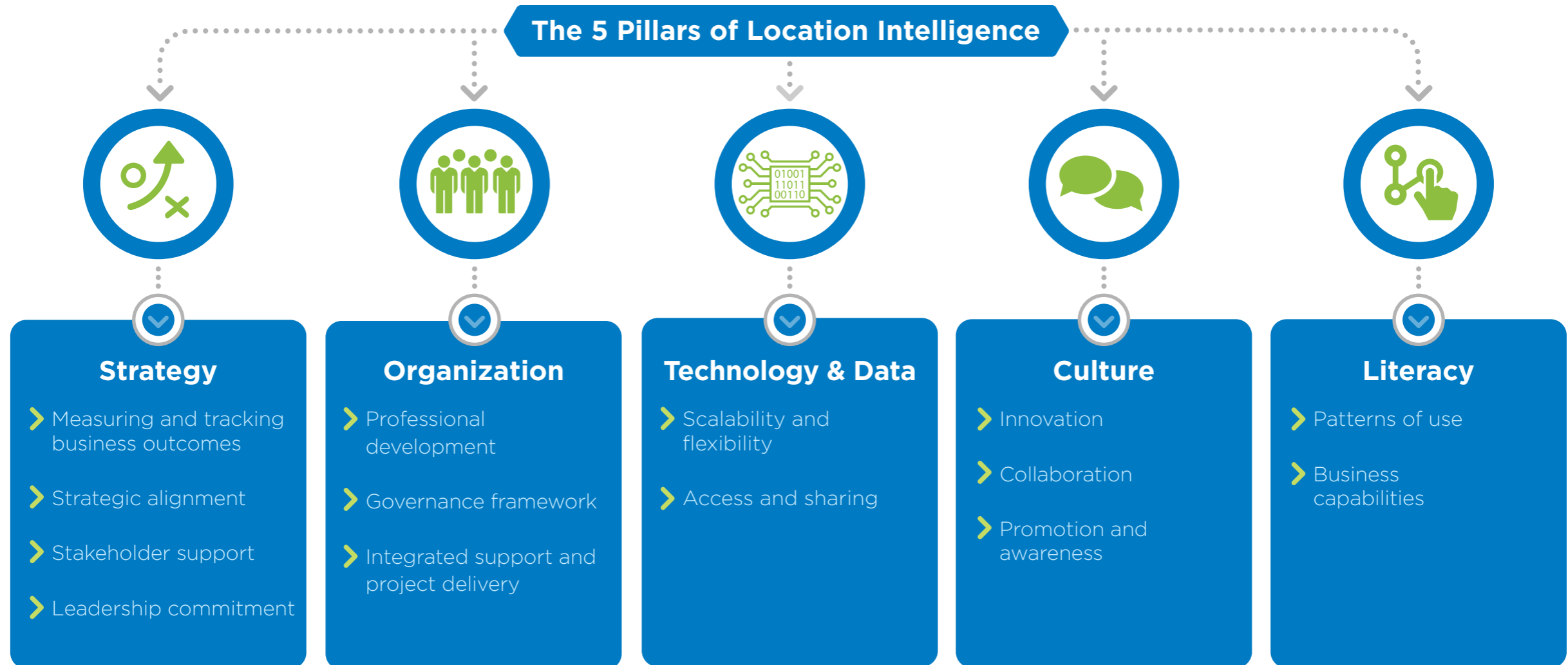
Despite the perceived importance and many acknowledged business applications and benefits, the level of realized business value varies widely across organizations. In terms of business outcomes, respondents indicate that location intelligence investments over the past two years have yielded improvements ranging from less than 5% for some early adopters to more than 25% for the most mature organizations.



Location intelligence investments over the past two years have yielded **improvements in business outcomes** ranging from less than 5% for some early adopters to more than **25% for the most mature organizations.**

## Essential Practices for Improved Business Outcomes

What separates organizations that achieve the greatest business outcomes with location intelligence? The answer lies in their commitment to certain organizational practices. IDC analysis reveals a set of practices that are essential to effective location intelligence.



## The 5 Pillars of Location Intelligence



## Strategy

**Most organizations acknowledge that success starts with a strategy. Developing a robust and aligned location intelligence strategy is key to delivering business value. Essential practices include:**

- Measuring and tracking business outcomes
- Aligning with corporate strategy and IT strategy
- Winning the support of business stakeholders
- Gaining commitment from senior leadership



## Organization

**Professional development, governance, and integrated IT delivery are integral to enabling and sustaining a location intelligence ability. Essential practices include:**

- Providing opportunities to develop skills and competencies
- Adopting a fit-for-purpose governance framework
- Integrating geospatial solution support and project delivery into overall IT delivery



## Technology & Data

**The best organizations implement scalable and flexible geospatial solutions that enable users to extract maximum value from geospatial data. Essential practices include:**

- Implementing a technology architecture that promotes scalability and flexibility
- Developing a geospatial data architecture that enables easy access and promotes sharing



## Culture

**Location intelligence is a rapidly evolving and cross-functional discipline. An organizational culture that encourages innovation and collaboration and promotes awareness of the power of location is crucial to success. Essential practices include:**

- Supporting innovation from the highest levels of leadership
- Fostering collaboration among business stakeholders
- Promoting location intelligence actively and broadly



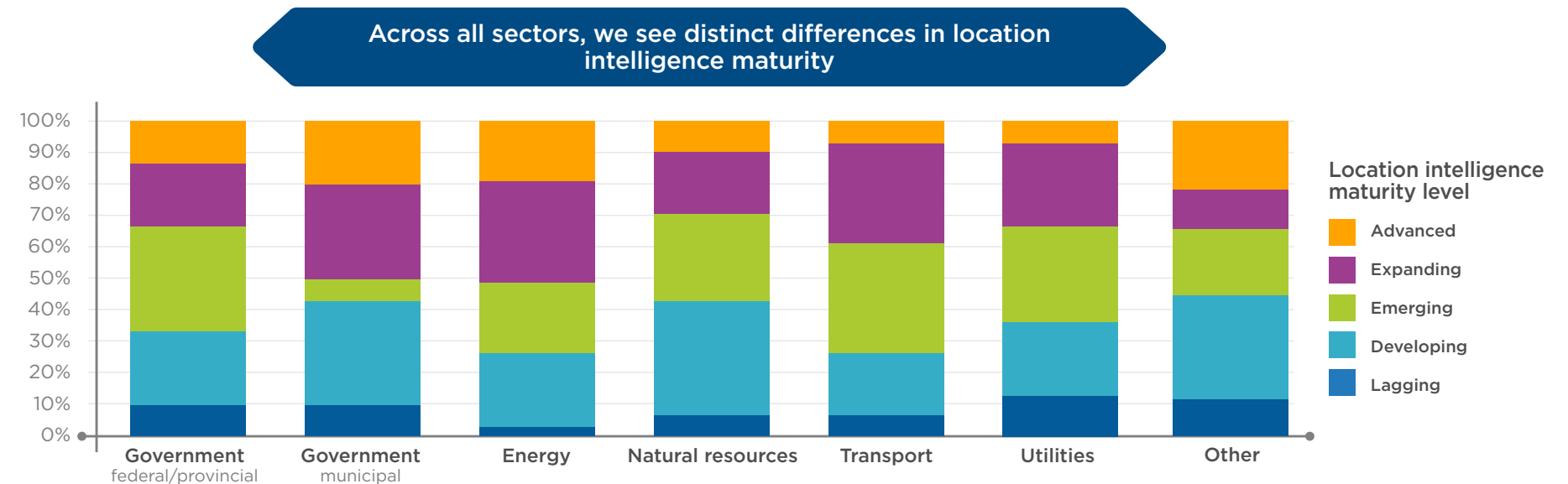
## Literacy

**Going beyond basic mapping is key to achieving better business outcomes. High-performing organizations demonstrate proficiency across many of the most sophisticated uses of geospatial technology and analysis and support a wider range of business functions. Essential practices include:**

- Leveraging many geospatial usage patterns
- Supporting a wide range of business capabilities

## Assessing Organizational Location Intelligence

IDC analysis determined that business performance — the mean improvement in business outcomes experienced over the past two years — is strongly associated with the maturity of the location intelligence practices. We find that, in general, organizations fall into one of five levels of proficiency. This is consistent across the industry verticals surveyed.



### Lagging

Little or no location intelligence strategy exists. Organizational practices are mostly undeveloped, ad hoc, or immature. Most in this category indicate that location intelligence is an important capability for their organization, but there is a lack of focus.

### Developing

A location intelligence strategy may exist but is likely informal and covers a sparse set of stakeholders. Benefits identified are mostly qualitative. A few mature organizational practices may exist and are often focused on foundational capabilities, such as data management.

### Emerging

A location intelligence strategy is documented for select business areas, informally in some cases. But the strategy may not be fully aligned with the overall corporate strategy. The organization has a mix of mature and immature practices but is trending toward greater maturity.

### Expanding

A location intelligence strategy is established for many departments. The organization is expanding and evolving its practices toward enabling a broad, corporate-wide organizational ability.

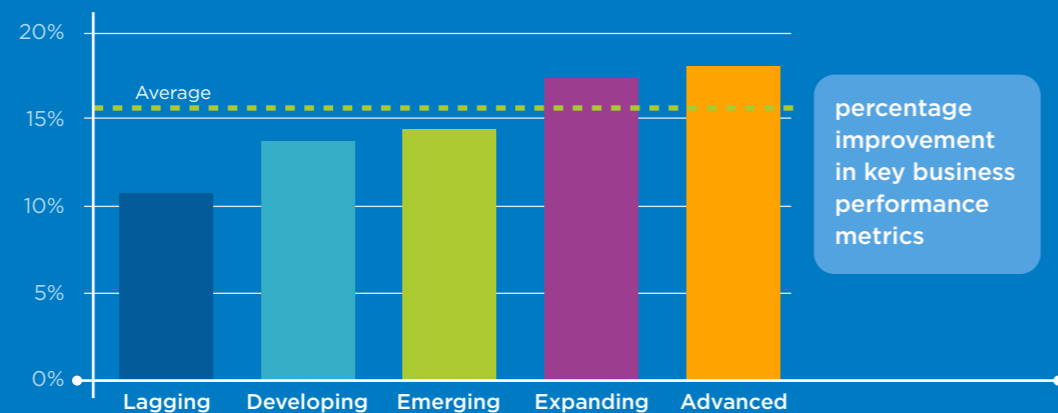
### Advanced

A location intelligence strategy is formally established and covers the entire organization. Organizational practices are highly mature and location intelligence is positioned as a strategic capability.

## IDC Findings

IDC research shows greater overall proficiency is associated with better business outcomes. These findings are consistent and significant across each proficiency level.

On average, respondents cited improvements to key business performance metrics of 16% over two years due to LI investments



As maturity increases, the study revealed that **organizations leverage location intelligence for more strategic and competitive uses.**

As proficiency increases, IDC finds that the strategic importance of location intelligence likewise increases. Overall, improved productivity was the most cited benefit realized through location intelligence. However, as proficiency increased toward the Expanding and Advanced levels, organizations leverage location intelligence for more strategic and competitive uses. These organizations often cite improved brand and reputation, service response times, improved compliance, and societal benefits as primary benefits. Conversely, Lagging and Developing organizations tend to focus on operational or tactical improvements that result in cost savings.

## About This Study

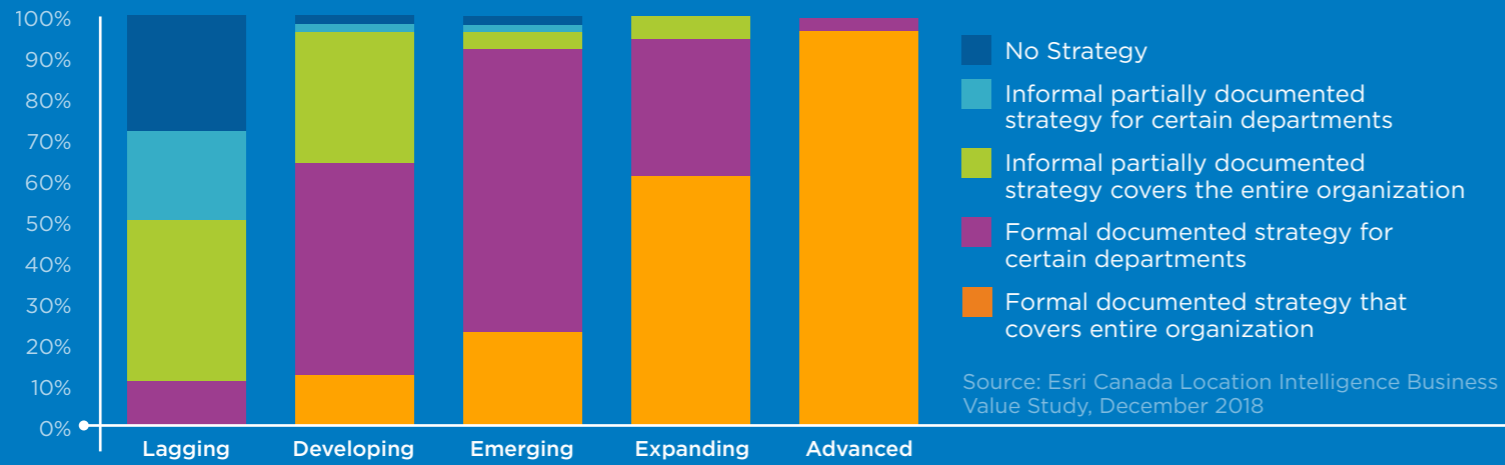
This study is based on a survey of 205 senior managers and executives from Canadian organizations. Respondents were screened for knowledge of location intelligence concepts and their organization's practices and business performance. Industries represented include federal, provincial, and municipal government; energy; natural resources; transportation; utilities; financial services; and retail. Organizations were segmented based on industry and geography and ranged in size from 500 employees to more than 10,000 employees. For a detailed description of the study methodology, see the Appendix.



# Strategy

Success with location intelligence starts with a strategy. An effective strategy defines how the organization leverages location intelligence to create business value.

A critical step for having a strategy for LI is moving from a department-level strategy to one that spans the organization



The study revealed that more than **90% of Advanced organizations have a formal and documented location intelligence strategy** that covers the entire organization.

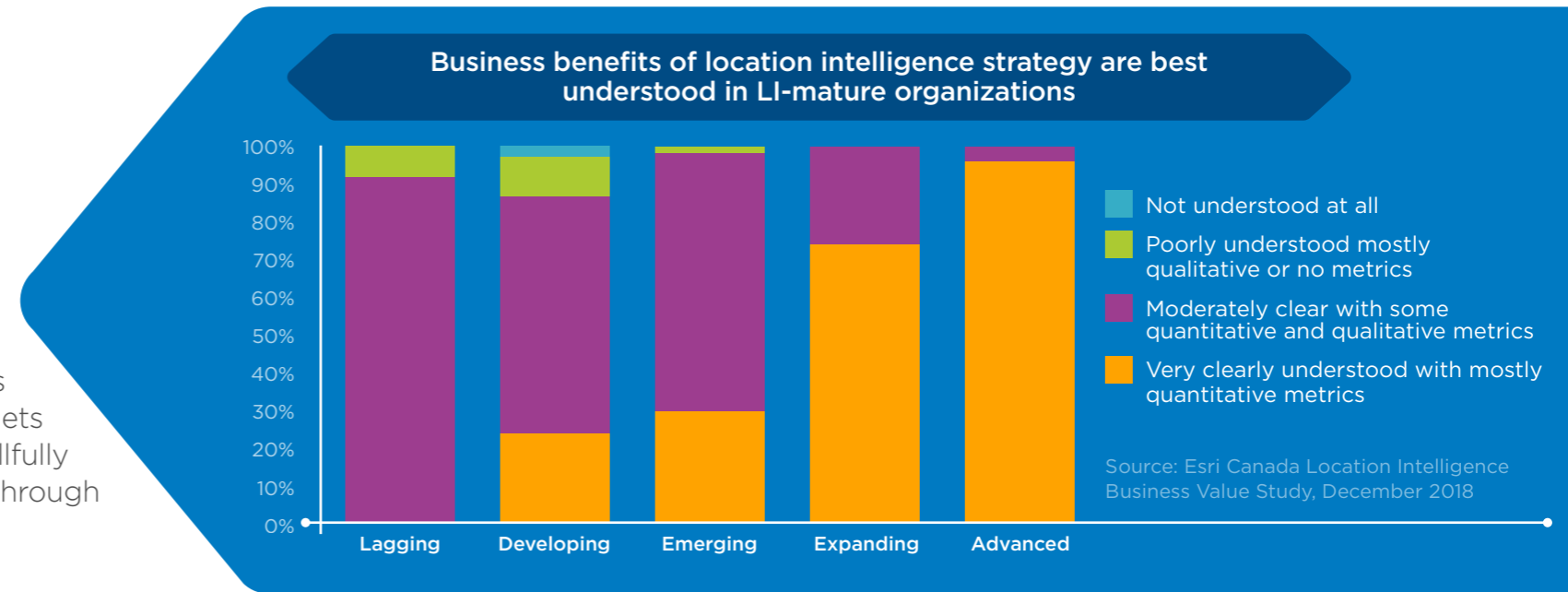
The survey revealed that organizations that excel with location intelligence invariably have a broad and comprehensive strategy that aligns closely with the business strategy. Specifically, the study revealed that more than 90% of Advanced organizations have a formal and documented location intelligence strategy that covers the entire organization. This is in stark contrast to Lagging organizations where approximately 30% of organizations admitted to having no location strategy at all.

What further separates mature organizations is their commitment to a set of strategic practices.



## Measuring and Tracking Business Outcomes

High-performing organizations focus closely on the business outcomes achieved through location intelligence. Those at the early stage of maturity generally indicate a "poor" or "moderate" understanding of the benefits of their location intelligence program. Mature organizations, on the other hand, have a clear understanding of benefits and, in the Advanced cases, track business outcomes quantitatively. The old saying "what gets measured gets managed" rings true here. The best organizations skillfully and continuously assess the business value realized through location intelligence.



## Strategic Alignment

Close and direct alignment between the location intelligence strategy and the organization's corporate and IT strategy is key to success. Location intelligence, as a broad ability, should serve and enable the business. Ensuring this ability is developed in a way that supports the business strategy is a priority of mature organizations. Strong strategic alignment ensures investments in location intelligence are made where it matters most. The survey revealed that alignment of the location intelligence strategy with key business strategies is stronger among mature organizations. Nearly all Advanced organizations (96%) say their strategy is "closely aligned," compared with a zero-percentage response from those Lagging, which are much more inclined to say it is "partially aligned" (77%).

## Stakeholder Support

There is a clear link between a successful location intelligence strategy and the degree of support offered by business stakeholders. A strategy is not effective if the needs and interests of affected individuals and organizations are not considered. A relentless focus on stakeholders galvanizes support and creates positive momentum toward adoption of location intelligence. This pattern is clear when we evaluate organizations at different maturity levels. Expanding and Advanced organizations are more likely to cite "strong and broad" support from stakeholders for their location intelligence strategies.

## Leadership Commitment

Similar to the need for stakeholder support is the need for leadership commitment. In most organizations, the direct involvement and support of senior management is a strong determinant of success. This is especially true for new strategic programs and initiatives. Many strategies fail to get off the ground because of insufficient support from leadership. Advanced organizations report nearly 100% "strong and broad" support for their location intelligence strategy. Lagging organizations, on the other hand, indicate 92% "moderate support with some holdouts." Clearly, the more invested and actively engaged the decision makers of an organization are in the creation and execution of a location intelligence strategy, the greater the impact of the strategy.



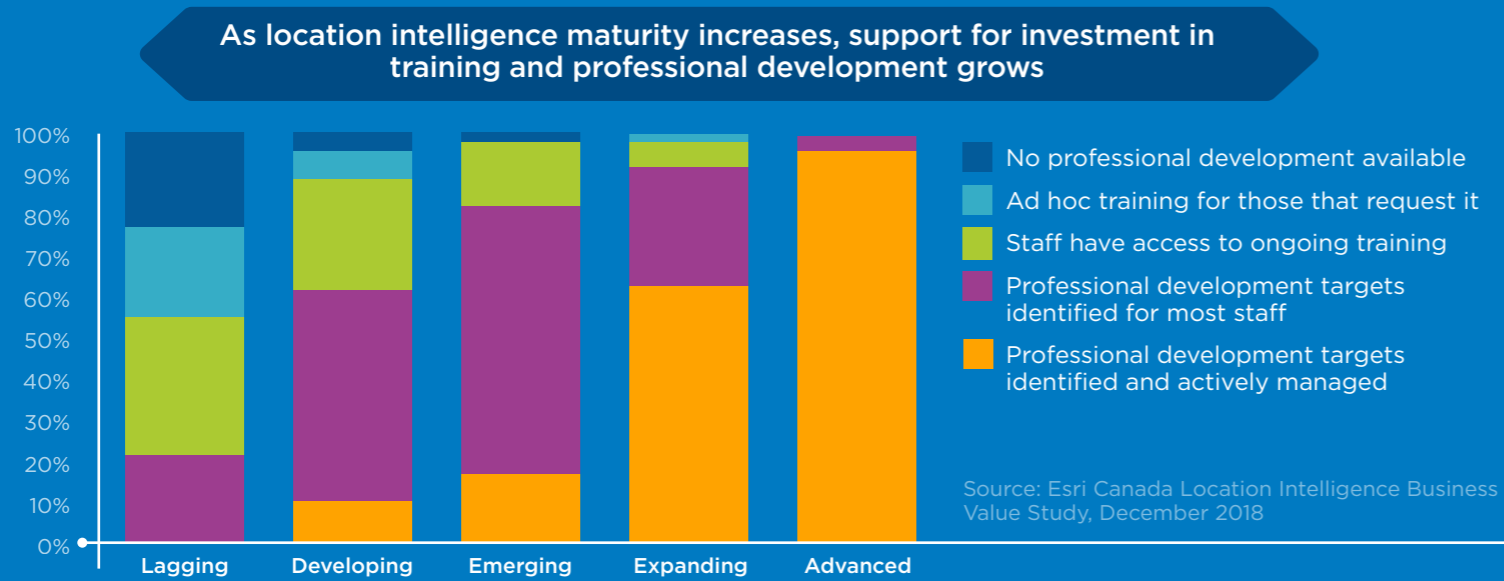
# Organization

Sustained success with location intelligence requires skilled people and robust processes. These elements are the key link between an organization's strategy and day-to-day operations.

The survey indicated that effective businesses demonstrate maturity across three core organizational practices: professional development, governance, and integrated IT support. These organizations are laser-focused on nurturing and growing their geospatial talent, empowering business units with decision-making autonomy and ensuring support for location intelligence solutions and services is integrated into the larger IT portfolio.

## Professional Development

IDC research indicates that a strong commitment to developing geospatial skills and knowledge ultimately leads to more rapid adoption of location intelligence and quicker time to value. Survey results show that mature organizations take great care to not only make training and development opportunities available to workers but also to set specific development targets. Having measurable targets enables these firms to manage for performance.



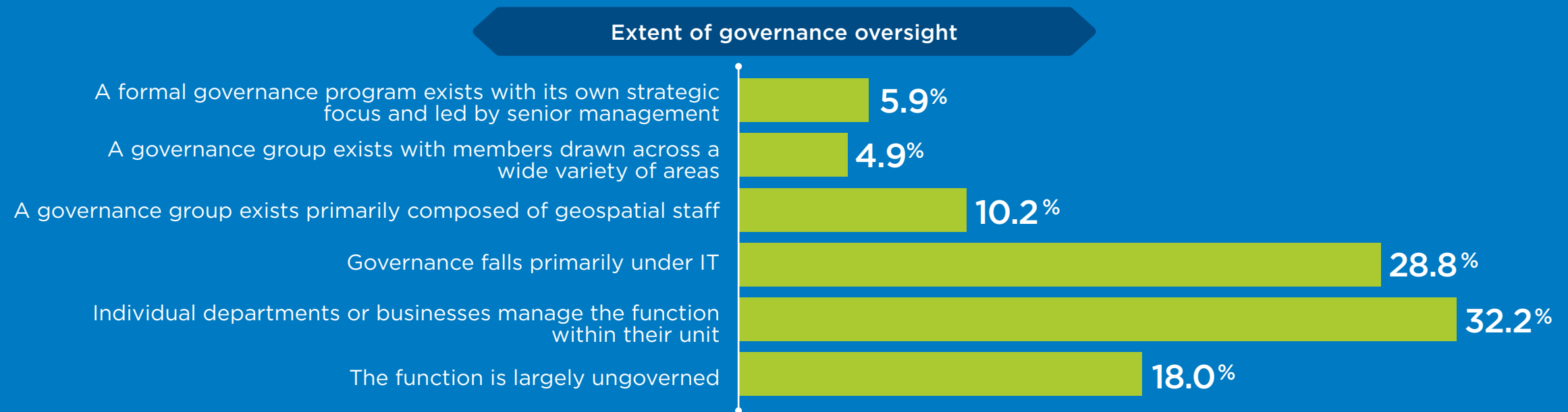
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## Governance Framework

Governance — the organization’s system of accountability and decision making — is a key aspect of location intelligence success. However, the extent and nature of governance oversight varies widely across organizations and suggests governance is very much about fit and function.

Over 80% of survey respondents indicated that they have a governance framework and that its function is to oversee the delivery and investment in corporate location intelligence. Less mature organizations tended to cite governance as falling under the IT function as part of overall IT governance. Advanced and Expanding organizations tended to cite either the presence of a formal, dedicated location intelligence program or that location intelligence was largely ungoverned. Mid-level, Emerging organizations tended toward an even mix of IT-based governance and department-centred governance.

The conclusion is that governance is vital but should be carefully applied. As an organization matures, governance of location intelligence is best managed and nurtured through a central body. Once an inflection point is reached where demand and capabilities at the department level are strong, then empowering decision making and establishing accountabilities right at the department level is prudent. This ensures decisions are made where business knowledge is highest. To do this, mature organizations govern by establishing effective policies and standards and by defining clear roles and responsibilities among participating stakeholders.

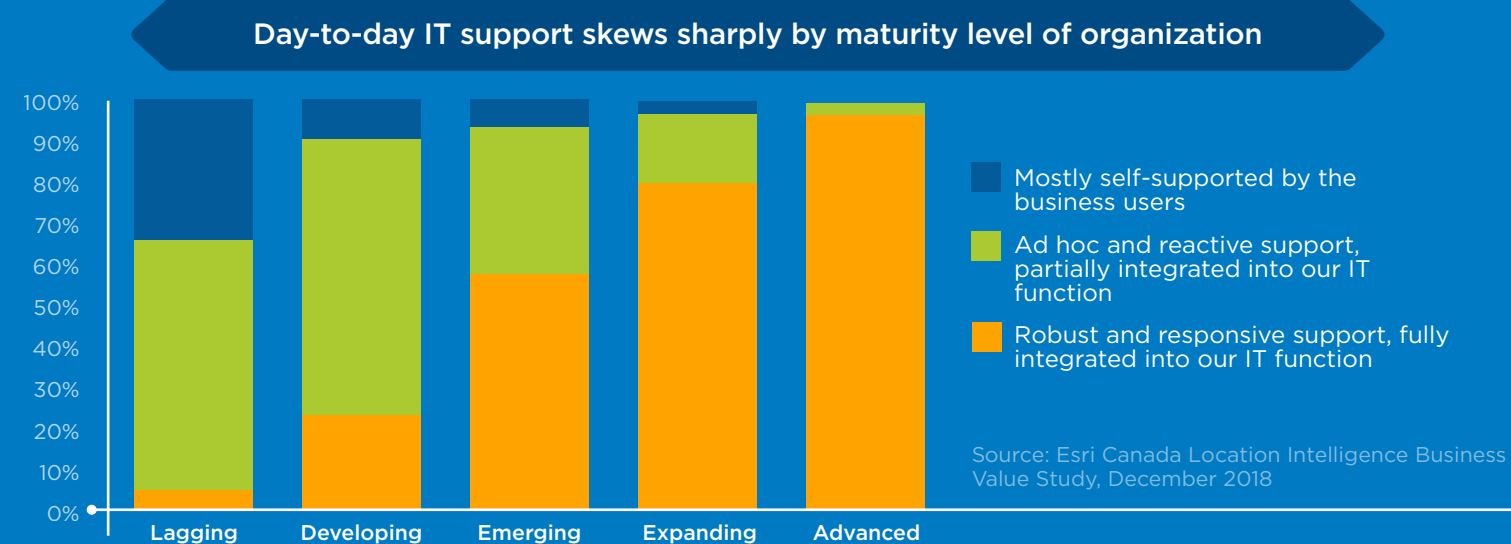


Source: Esri Canada Location Intelligence Business Value Study, December 2018

## Integrated Support and Project Delivery

Treating location intelligence as a going concern means having a robust support system and project delivery methodology in place. How well an organization provides support specifically for location intelligence needs and how well it integrates location intelligence into broader IT delivery significantly impacts value realization.

Advanced organizations (96%) characterize day-to-day support for location intelligence as "robust and responsive and fully integrated into IT." Conversely, 94% of Lagging organizations cite support as either "ad hoc, reactive, and partially integrated" or "mostly self-supported by business users." It's logical to conclude that organizations with mature and robust IT support processes are well positioned to support location intelligence delivery. Organizations that weave location intelligence delivery into IT delivery reap the benefits.



Advanced organizations (96%) characterize day-to-day support for location intelligence as "robust and responsive and fully integrated into IT."

In terms of project delivery, a large majority of Advanced organizations indicate that they have "robust performance management in place" to measure the business performance of location intelligence initiatives. Only 6% of Lagging organizations say likewise. In fact, many Lagging organizations (44%) indicate tracking of project performance metrics is largely "ad hoc." Additionally, many of the low-maturity organizations follow "no formal methodology" when it comes to location intelligence project delivery. Mature organizations, by and large, follow a structured project methodology, with traditional waterfall and agile delivery being cited most commonly. In this way, location-intelligence-oriented projects are no different than any IT project. Measuring outcomes and following a structured methodology is key.

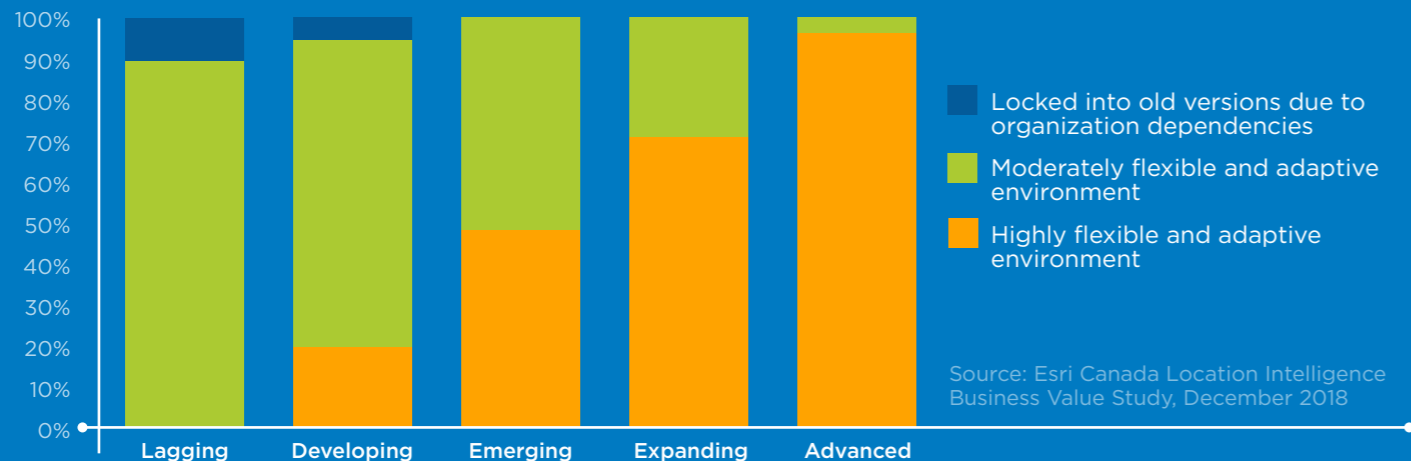




## Technology and Data

Geospatial technology and data are the foundation of an organization's location intelligence ability. Users leverage geospatial software, hardware, and methodologies to capture, manage, analyze, map, and share geospatial information. Turning this information into insight and creating value requires attention to several essential practices. Foremost among these is the implementation of a technology architecture that promotes scalability and flexibility, and a data architecture that enables easy and secure access while promoting data sharing.

### Greater maturity is associated with a more flexible LI environment



The implementation of a technology architecture that promotes **scalability and flexibility**, and a data architecture that enables **easy and secure** access while **promoting data sharing** are essential.

### Scalability and Flexibility

High-performing organizations distinguish themselves by focusing on implementing geospatial platforms that promote scalability and flexibility. To that end, most have recognized cloud-based infrastructures and "as-a-service"-based delivery models as key technology strategies. The survey indicated that Advanced organizations (71%) favour software-as-a-service (SaaS) solutions for their core geospatial systems. The majority of these organizations (96%) describe their geospatial environments as "highly flexible and adaptive."

This contrasts with 89% of Lagging organizations that say they have "moderately flexible and adaptive environments," with an additional 11% indicating they are "locked into old versions due to organization dependencies." These organizations (nearly half) typically favour on-premise-based geospatial environments, with only 17% indicating cloud-based environments.

The focus on scalability and flexibility correlates closely with attitudes toward adoption of new geospatial solutions. All (100%) of the Advanced organizations surveyed indicate that they are "early adopters of new capabilities and regularly update location intelligence technologies." Lagging and Developing organizations, however, typically characterize themselves as "cautious adopters of new capabilities who generally keep technology up to date."

## Access and Sharing

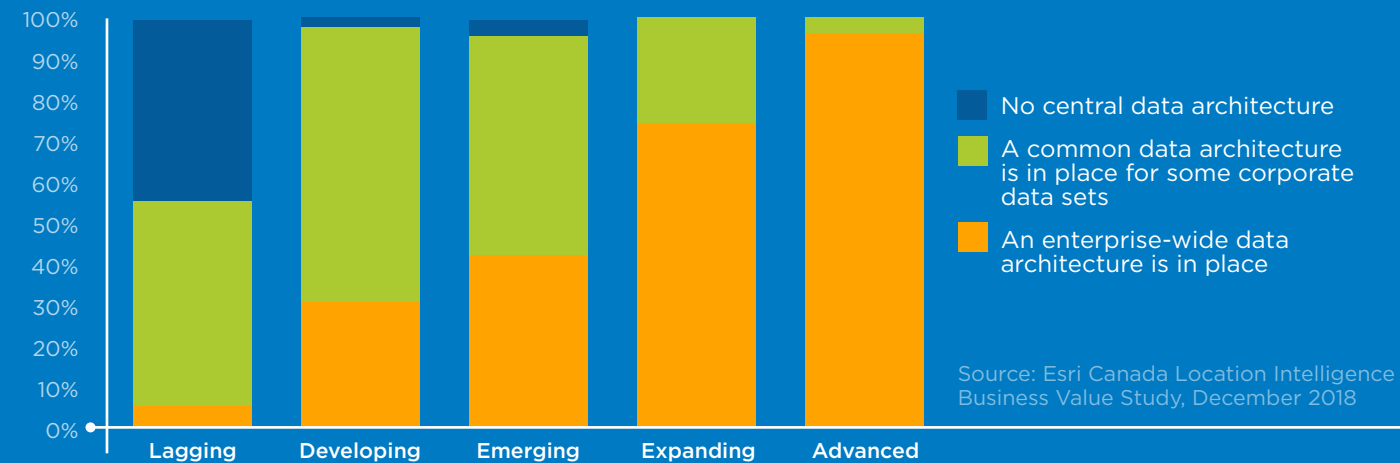
Data is the heart of location intelligence. Enabling easy and secure access to high-quality geospatial information and the methods and tools to promote sharing and collaboration is where value starts.

The focus on quality, specifically the quality assurance process, is a key differentiator between high- and low-maturity firms. The survey results show that a majority (82%) of Advanced organizations manage data quality through a "rigorous and continuous improvement process." Additionally, 93% of Advanced organizations indicate the presence of data standards and access controls that are "governed by a set of clearly defined and enforced processes, policies, and KPIs."

Lagging and Developing respondents were much weaker in this regard. Over half (56%) of Lagging organizations indicate that data governance is limited to "some documented best practices and guidelines" that largely cover data management and data usage.

In terms of data sharing, 54% of Advanced organizations indicate that sharing geospatial data with relevant users is seamless, with a third identifying the presence of enterprise geospatial data portals or dedicated data sharing systems. Sharing practices among immature organizations, conversely, are more manual and typically enabled either through centralized repositories or directory structures and associated filing practices. The conclusion is that organizations that focus on implementing solutions and processes that promote secure geospatial data sharing are driving the greatest business value.

### A higher location intelligence maturity score is correlated to having an enterprise-wide data architecture

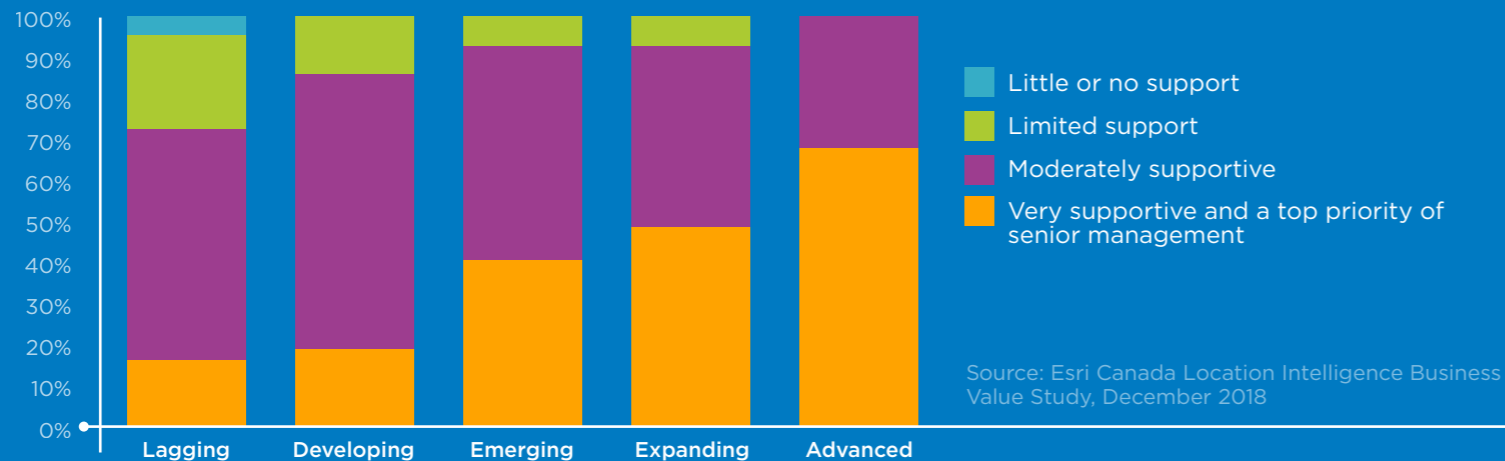




# Culture

Organizational culture is an intangible concept that refers to the values and behaviours that shape the "personality" of an organization. Culture affects how people collaborate, share information, and respond to change. Without a culture that embraces "location," true organizational location intelligence will remain a dream. A few cultural practices stand out.

**Culturally, a higher location intelligence maturity score is correlated to greater support for innovation by senior management**



A total of **68% of Advanced organizations say they are "very supportive" of innovation** and it is a "top priority for senior management."

## Innovation

IDC research finds that an organizational culture that encourages innovation is strongly associated with improved business outcomes. A total of 68% of Advanced organizations say they are "very supportive" of innovation and it is a "top priority for senior management." Conversely, only 32% of Advanced organizations say they are "moderately supportive." By comparison, 17% of Lagging organizations indicate their organizations are "very supportive," while 56% say they are "moderately supportive." The pattern across all stages of maturity is that support of innovation increases with maturity and has commitment from senior levels.



## Collaboration

Collaborative cultures are particularly important for organizations looking to drive business value through location intelligence. Geospatial information is often stored away in siloed systems and knowledge of that data is not readily shared. Organizations that are successful at overcoming these barriers through collaboration tend to be better off. Among Advanced and Expanding organizations, a large majority indicated their organization "has broad collaboration across most departments and functions." However, the majority of Lagging organizations (67%) indicate "moderate and ad hoc collaboration."

## Promotion and Awareness

Promotion of location intelligence is key to spreading awareness. Many organizations struggle to maximize the return on their location intelligence investments because users are simply not aware of the potential of the technology or analysis techniques. The survey revealed that 100% of Advanced organizations report that location intelligence "initiatives and success stories are proactively promoted and celebrated across the organization." They also indicate that those inside the organization are "closely aware of new trends." Conversely, only 6% of Lagging organizations say the same, with two-thirds saying initiatives and success stories are communicated "ad hoc."

The focus on proactive engagement with business stakeholders may be to blame for the lack of overall awareness. Of Lagging organizations, 0% indicate that they have "dedicated staff to proactively engage with business stakeholders." In fact, 61% of Lagging organizations say they "reactively respond to requests for solutions from the business stakeholders," and a further 39% say "business stakeholders are largely left to their own devices to seek out solutions." Advanced organizations, on the other hand, overwhelmingly indicate (100%) a proactive and dedicated focus on engaging business stakeholders around location intelligence opportunities and needs.



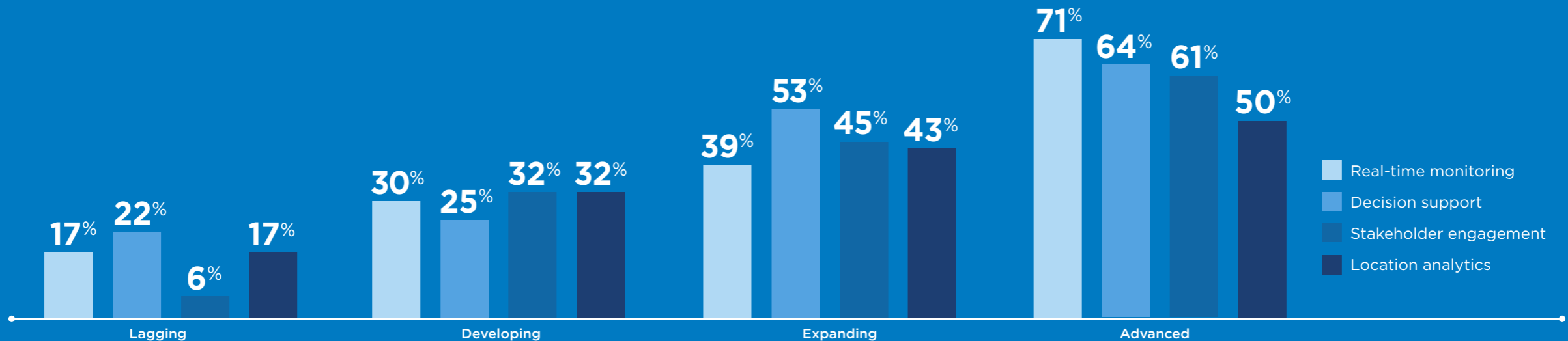




# Literacy

Literacy refers to competence or knowledge in a specified area. In terms of location intelligence, literacy refers to competence with geospatial technology and analysis. Highly literate organizations leverage geospatial technology and analysis across many patterns of use and support a range of business functions.

A higher maturity score is associated with greater consideration and adoption of new location intelligence capabilities



Source: Esri Canada Location Intelligence Business Value Study, December 2018

## Patterns of Use

The survey revealed that mature organizations tend to leverage a broader range of uses of geospatial technology than less mature organizations. In terms of basic mapping and visualization, adoption was fairly consistent across all organizations. However, when we consider newer or more sophisticated uses of geospatial technology we begin to see a marked difference between low- and high-maturity firms. Advanced organizations, for example, showed considerably greater adoption of geospatial technology in terms of real-time monitoring (71%), decision support (64%), stakeholder engagement (61%), and location analytics (50%). These patterns of use represent more sophisticated uses of geospatial technology and are indicative of organizations that are leveraging location intelligence to support strategic aspects of their business.

## Business Capabilities

Geospatially literate organizations are also defined by their range and type of business capabilities enabled through location intelligence. For Lagging organizations, our research indicated that the use of location intelligence is limited to supporting a relatively narrow set of business capabilities. These include analyzing business patterns and trends (33%) and monitoring the status of operations (27%). Overall, Lagging organizations cited location intelligence as supporting identified business capabilities on average for 2.39 use cases.

Conversely, Advanced organizations showed a much greater range in terms of the business capabilities supported by location intelligence with an average of 6.18 use cases being identified. Organizations at the Advanced and Expanding levels identified business capabilities such as navigating and routing (57%); tracking and locating assets (54%); sales force management (57%); developing business plans and designs (57%); monitoring health, safety, or environmental conditions (53%); and developing new or improved products and services (57%). This indicates that mature organizations leverage location intelligence to support a broader range of business capabilities and often business functions that go beyond the day-to-day aspects of their business.

Organizations at the Advanced and Expanding levels deployed a greater range of business capability use cases

**57%** Navigating and routing

**54%** Tracking and locating assets

**57%** Sales force management

**57%** Developing business plans and designs

**53%** Monitoring health, safety or environmental conditions

**57%** Developing new or improved products and services

# Key Challenges

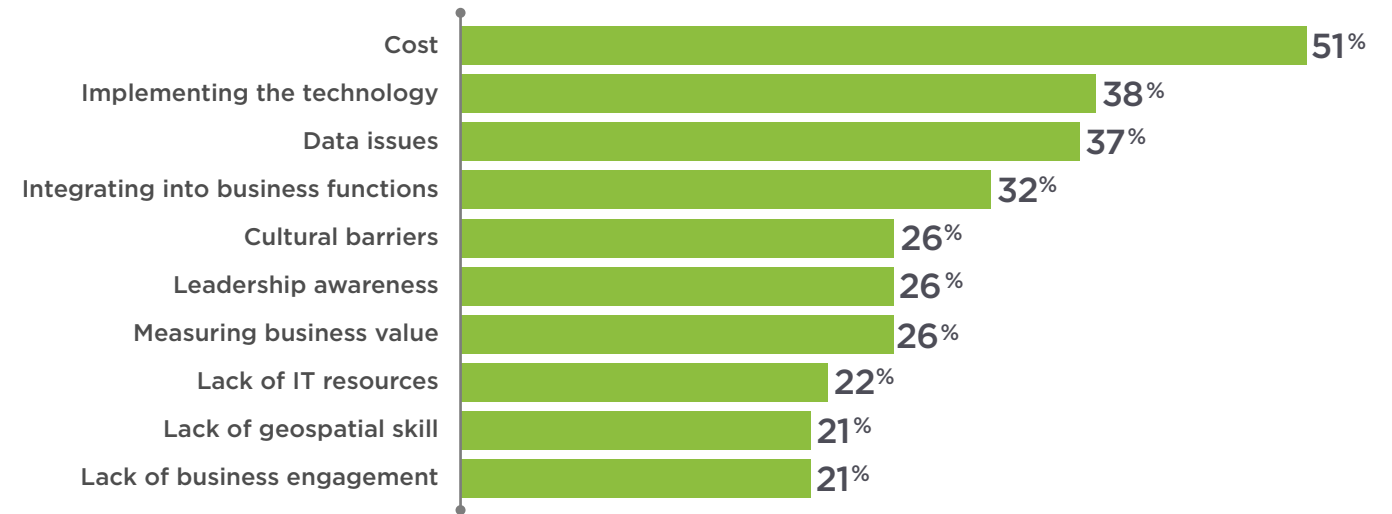
Several key challenges were identified that impact an organization's ability to implement and leverage location intelligence. These challenges were persistent across all maturity types but vary in prominence as maturity increases.

Across all respondents, cost, technology implementation, and data-related issues rank as the three most significant barriers to enabling location intelligence. These challenges represent the hard technical and financial hurdles of implementation. Also ranking high was integrating into business function, cultural barriers, leadership awareness, and measuring business value. These represent the softer integration and business value related challenges.

Among maturity levels, we see differences too. Advanced organizations, for example, were more likely to cite business integration and cultural barriers as key challenges when compared with Lagging or Developing organizations. Conversely, Lagging organizations were more likely to indicate technology implementation, measuring business value, lack of geospatial skills, and lack of business engagement as key challenges. This generally indicates that mature organizations have resolved many of the fundamental technical, financial, and knowledge barriers when it comes to location intelligence but are still challenged by softer culture and change management issues.

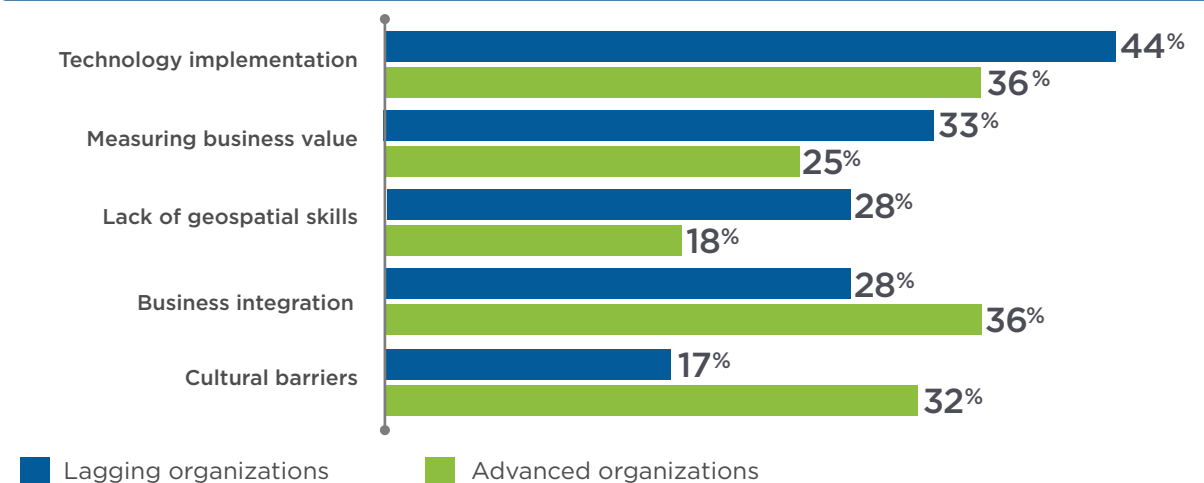
The takeaway is that addressing location intelligence challenges requires a clear understanding of where and how these challenges impact the organization. The response will likely be multifaceted.

## Top challenges faced by organizations leveraging location intelligence



Source: Esri Canada Location Intelligence Business Value Study, December 2018

## Lagging organizations placed higher emphasis on implementation, measurement, and skills, whereas Advanced organizations saw their challenges in culture and integration



Source: Esri Canada Location Intelligence Business Value Study, December 2018

# Recommendations

To improve location intelligence maturity, IDC recommends organizations take the following actions:

## ➤ **Assess your location intelligence strategy in the context of broader business priorities.**

Most organizations are on a digital journey to address shifting market conditions, meet rapidly changing customer (or constituent) demands, and enable new business models. Both public and private sector stakeholders need to break down old ways of service delivery and weave digital processes into every organizational facet. In this study, IDC found broad agreement among all respondents that location intelligence is important today and will be increasingly important in the future. You need to build a plan today to get there tomorrow. Moreover, it is imperative for the location intelligence strategy to mesh with the overall digital plans. Specifically, that means location intelligence is woven into a company's strategy around business intelligence, advanced analytics, and, ultimately, machine learning and artificial intelligence (AI).

## ➤ **Evaluate your current technology and data management practices and invest where gaps exist.**

Any digital capability function, including location intelligence, is powered by data. Leaders in data excellence need to treat data and information as the vital asset that it is. Consider the following: What processes, products, and events can be monitored, tracked, analyzed, and optimized? Do we have the right data management practices around location intelligence to set us up for success? It's a matter of creating a road map to guide a journey to location intelligence data excellence. Ensure that IT budgets are adequate to support these requirements. Expect to fine-tune your road map and budgets as demands change and geospatial technology advances. Finally, recognize that not everything can be done in-house. Successful organizations often look to create strategic partnerships with technology vendors and service providers willing to invest time and resources to truly understand your business.

## ➤ **Foster a culture of collaboration and sharing of best practices and processes across the organization.**

Large organizations especially can benefit by harnessing latent skills, experience, and knowledge scattered across different business units. The study highlights key factors in how organizations might accelerate their journey across the maturity curve, including a greater willingness to embrace innovation and overall cultural and specific business leadership support. To advance location intelligence initiatives, encourage different disciplines and teams to work together on shared goals. Identify and promote change agents — those individuals who have the motivation and skills to make progress. Consider establishing a centre of excellence (COE) that includes a dedicated practice focused on location intelligence. Use pilot projects and showcase small wins to create momentum and build confidence around location intelligence initiatives. Use these to learn, then transfer knowledge to adjacent functional areas and to inform the road map.

## ➤ **Invest in talent, skills development, and long-term growth of your team to ensure the organization builds a rich set of location intelligence capabilities.**

Successful organizations never stop innovating — and innovation is driven by the workforce. For most organizations, while the workforce may be its most expensive asset, it is also the most important contributor to success or failure. Ensure ongoing focus is given to maximizing recruitment, training, and retention programs. Ignoring these aspects of your location intelligence capabilities will lead to stalled projects and underperformance. This is a shared responsibility of HR, individual departments, and senior management.



# The Time is Now

**IDC believes the time is right to ingrain location intelligence into your business' DNA.** Information is the fuel driving today's business engines, helping companies gain deeper insight into and understanding of customers, suppliers, and partners. This knowledge feeds business processes and gives a competitive edge to those using location intelligence to run, grow, and transform their business.

**Location intelligence, combined with the latest digital innovations** — including Big Data, cloud, AI, and other analysis tools — are being used today by market leaders to **build strong foundations for business transformation success** and market disruption. They are gaining tremendous business value from location intelligence. By adopting the essential practices, organizations are one step closer to winning with location intelligence.



# Appendix

## Methodology

IDC conducted this research project on behalf of Esri Canada during the fourth quarter of 2018. The objective was to understand the essential practices that define location intelligence maturity and the link between maturity and improved business outcomes.

Research took the form of a 15-minute web-based survey of 205 Canadian respondents, fielded during November and December 2018.

### Respondents who participated in the survey met the following criteria:

- Large enterprise (500+ employees)
- Decision-making role with title of manager, director, or executive

### Respondents were asked to list the most important benefits derived from their investments in location intelligence, and then to estimate the improvement in those areas over the past two years:

- |                        |   |   |                           |
|------------------------|---|---|---------------------------|
| 1. Risk mitigation     | 5. Improved customer or citizen experience/satisfaction       | 8. Improved asset efficiency                  | 12. Competitive advantage |
| 2. Cost savings        | 6. Improved availability/reliability of products and services | 9. Improved service response times            | 13. Benefits to society   |
| 3. Increased revenue   | 7. Increased productivity                                     | 10. Improved brand and reputation             | 14. Other                 |
| 4. Improved compliance |   | 11. Improved organizational health and safety |                           |

### Vertical industries covered in the survey include:

- |                     |             |                                     |          |
|---------------------|-------------|-------------------------------------|----------|
| ✓ Natural resources | ✓ Energy    | ✓ Municipal government              | ✓ Other* |
| ✓ Transportation    | ✓ Utilities | ✓ Federal and provincial government |          |

\*Financial Services and Retail were surveyed but had fewer than 30 respondents

When results of the survey were fully analyzed, a correlation exercise on the data set was conducted to identify areas of location intelligence behaviours and adoption most highly correlated with positive business outcomes. This correlation formed the basis for the maturity model used throughout this research report.



## About Esri Canada

Founded in 1984, Esri Canada provides geographic information system (GIS) solutions that empower people in business, government, and education to make informed and timely decisions by leveraging the power of mapping and spatial analytics. These solutions enable organizations to better manage their resources, plan their future, and collaborate within and beyond their organization. Esri Canada's products and services help advance successful digital transformation. The company serves 12,000 organizations from 16 offices across Canada and is based in Toronto.

Learn how to transform your business  
with location intelligence.

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