

HOW YOUR IOT INVESTMENT CAN DELIVER ONGOING R&D ADVANTAGES

OSANT WHITEPAPER

INTRODUCTION

Though widely applied and proven, IoT remains disruptive to business norms, challenging to most, threatening to some and an area of significant opportunity for many. To those who innovate for a living — including product development, innovation and software engineering teams — IoT is an inviting stream to wade into, although a deep, broad and fast moving one. And, let's remember, there isn't much "past" yet from which to learn. Meanwhile the IoT movement forges ahead, redefining its scope and potential along the way, discovering where it can take us next.

In such an environment, you may ask — how can a business that intends to benefit long-term from IoT gain a position of control and direction? The research and development vision and product roadmap of the IoT provider can play a key role. IoT's potential as an innovation force is clearer when the platform provider's own R&D commitments and direction are well defined and made part of the ongoing conversation. The IoT platform and the provider organization behind it matter greatly.

THE BIG PICTURE

How does a business advance from a general understanding of IoT to believing in it and moving forward with conviction? Skepticism is natural and warranted. A 2017 Cisco survey of 1,845 IT and business decision-makers showed that 60 percent of IoT initiatives stall at the proof of concept (PoC) stage and only 26 percent of companies have had an IoT initiative that they considered a complete success.¹ At least some of this perceived success deficit may actually be the result of a vision deficit — narrow scope ... limited depth of field. Without a longer view to consider, the IoT initiative may be limited to tactical steps. An IoT provider with a vision, rationale and R&D commitments to share can help illuminate a path forward, or conversations about that path, for its client company. Upfront dialogue about expectations and potential can establish the criteria that will define success. What one asks of an IoT solution sets the bar. What is it you are asking for? Is the provider prepared to answer?

A more comforting observation is that the promise and product of IoT — timely, actionable data and insights — have always been the basis for business success. While IoT redefines timely as immediate and continuous, the search for higher potential in any business continues to revolve around three familiar topics:

- Customers delivering a superior product, promise, and user experience (Marketing)
- Operations performing and profiting at higher levels (Optimization)
- Improvement leading, not lagging, in both of these areas (Innovation)

(1) Cisco Study – Released at the The Internet of Things World Forum, May, 2017

TODAY'S INNOVATION IMPERATIVE

Access to better, faster information enables businesses to be more proactively and continuously innovative. The notion of innovation as purpose, with digital connectivity as a primary driver, places high responsibility for correct decision-making as platform capabilities are built and provider relationships are formed.

More businesses today may be asking ... The ability to understand our equipment, processes and customers more precisely and respond faster to opportunity is now possible or fast approaching. How can we utilize it (IoT) first or better than others in order to grow our customer relationships, improve quality and performance, and refine or reinvent our business model?

OUR PERSPECTIVE

The responsibility of the IoT platform provider extends well beyond adequacy today of the given platform. Adaptability, flexibility, and reliability for the future require more, including:

- Proven commitment to a research and development strategy
- A documented product roadmap demonstrating future readiness
- A philosophy of listening, applying, and adapting solutions to real client needs
- Investment for the long run to meet future demands and respond to change



INDUSTRY RECOGNIZED IOT PLATFORM EVALUATION CRITERIA

As the hub of insights and productivity for an IoT solution, an IoT platform must contain assurances in a variety of critical areas, including security, scalability, client usability, compliance, and more. An organization seeking a basis for comparison of the capabilities and usability of various platforms may request ratings and reviews from providers they are considering. For example, the world's leading research firm for IoT platforms and middleware evaluates IoT platforms in each of the criteria on page 4.²

(2) MIT-E, MachNation – Losant IoT Summary, 2018

COMMON IOT PLATFORM BUILDING BLOCKS

- Access Control: The degree to which the platform provides operator control over basic asset authentication and authorization as well as more granular access/control capabilities
- Analytics: A platform's strengths in delivery of data (real-time, historical, aggregated) regarding the state of devices and collected observations through graphical views
- Architecture: Observations regarding the platform's design and implementation and the scope of applicability indicated by such conditions
- Data Management: Evaluation of the on-platform capability to create, read, update, delete, and perform other common data management tasks
- Device Management: Relative qualities of the platform providing support for edge computing devices, gateways (aggregation devices) and unmanaged assets connected to the platform
- Edge: Features that enable control or integration with edge devices
- Event Processing: The platform's ability to process data outputs/conditions and enable visualization of their meaning on the platform dashboard
- External Integration: Review of how well, easily or reliably the platform can integrate (northbound/ southbound) with external services and gateways
- Monitoring: How well the platform makes it easy for both operators and administrators to monitor connected assets, ingested IoT data, and the state of platform configuration
- Usability: The combination of beneficial features, readily accessible support, tutorials, interfaces, and more that deliver platform operators and developers productive and efficient user/working experience



OPPORTUNITY BEYOND CLOUD – TO CUSTOM

Cloud-based data accessibility is a key driver of IoT utilization and delivery of its many advantages. Yet, Cloud-alone access forgoes the more nimble and powerful solutions possible when the IoT platform's Cloud capability is augmented with both edge and on-premises data access. The combination of Cloud, Edge and On-Premises access adds significant dimension to the IoT solution and its ability to accommodate multi-tenancy — individualized data viewing experiences and/or selectivity of data by specific device(s) or viewer applicability. Through such capability, IoT enterprise clients are increasingly developing IoT solutions for their customers who value understanding the benefits of enhanced operational data around, for example, newly purchased equipment. A new revenue source and depth of relationship are gained when customers subscribe and pay fees to receive truly custom views of data which precisely fit their needs, markets, and future business goals.

DIMENSIONS OF THE PLATFORM PARTNER

Whether beyond or alongside the technical realm, IoT providers and platforms can differ in the mindset and culture from which they originate. The complex and dynamic nature of client service and IoT platforms requires a unique and high level of service expertise. The classic service provider business model, based on the application of a single tried-and-true approach; the branded (or franchised) best-practice solution; or a comprehensive menu of static services all available under one roof — just isn't realistic in IoT. Delivering for a business what can only be imagined demands a distinct set of strengths:

- Broad resource partners
- Customization, creativity, and collaboration at a high level
- Commitment to the needs and potential of each client, individually

An IoT platform partner is expected to accept and function within multiple roles as it leads with multifaceted enthusiasm and technical acumen. It's more than wearing many hats — rather, understanding and seeing from varied perspectives (business, strategic, IT architecture, visual, data, enterprise, team, customer service responsibilities) while maintaining a non-biased mindset technologically. For these reasons it is valuable to see and evaluate an IoT platform provider on the basis of the various leadership roles they must fulfill, described on page 6.



IOT PLATFORM PROVIDER AS ADVANCED EXPLORER

Software research and development requires vision into an uncertain, unknowable future. There is an element of Lewis & Clark at work in the R&D efforts expected of IoT providers. Trail-blazing with little certainty of the conditions up ahead shares similarities with the need to identify a position and a path for software development as continuous change is reshaping the landscape. An effective IoT partner knows, and lives, the importance of visualizing the best path forward; being out in front, seeing what's ahead, and adapting to the next challenge. Meanwhile, intent listening and processing of client input with thoroughness and objectivity are qualities essential to delivering the best IoT solution for the situation. Conviction regarding direction coupled with a willingness to redirect and adapt as needed defines the challenge. Not all IoT providers recognize the total responsibility. The advanced explorer mindset of an IoT provider is evident in a notable track-record and commitment to R&D, specifically, maintaining and refining a product development roadmap that tracks and anticipates needs and considers or adjusts to new factors as they are encountered or identified along the way.



IOT PLATFORM PROVIDER AS TRUSTED GUIDE

At its essence, the role of IoT platform partner is that of service provider and client confidant, pursuing client well-being through specific IoT initiatives and goals. Setting and maintaining a beneficial IoT course for the client is how trust grows. The relationship often extends to a deeper consultative role where insights and opportunities are shared, tested, pursued, and refined. Related to trust and guidance is the need for the IoT platform provider to keep client objectives top of mind, remain hardware and connectivity agnostic, conducive to and functional with commonly used systems, allowing what is best for the situation to dictate choices. This also enables the provider and its client to be receptive to, rather than replaced by, new and evolving capabilities.



IOT PROVIDER AS ORCHESTRATOR OF CAPABILITIES

The work of the effective IoT platform provider is highly collaborative and resourceful. With access to an ecosystem of partners representing specialized solutions, diverse technology, hardware or connectivity options and strategic partnerships, the platform provider is able to design, plan, and implement IoT solutions precisely and efficiently. Such partner resources help to maintain awareness of new and evolving capabilities and help the provider and their clients stay nimble, responsive, and forward-focused.

CONCLUSION

The IoT proposition — real-time data enabling improved processes, performance, and customer experience — is something most can understand, appreciate, and benefit from. Many will formulate a business and strategic case for implementing an IoT initiative and see success. For some, it will change how they do business. Almost all will need the assistance of a dedicated IoT platform provider along the way.

IoT offers powerful potential, and so it is worth doing well from the very start — this begins with selection of an IoT platform provider/partner. It is important to consider and understand how providers may differ in experience, mindset, technical/platform capabilities, and in the service commitment they recognize and offer their clients. Is data access static and one dimensional or multi-tenant conformable and custom-configurable within the platform? Essential to answering this and other key questions are discussion and understanding of the IoT provider's product roadmap, which should clearly detail capabilities and rationale. In addition, an over-arching R&D Strategy supporting the roadmap delivers the assurances of preparedness, flexibility, and adaptability an unforeseeable future will require.





ABOUT LOSANT

The Losant Enterprise IoT Platform is an application enablement platform which allows enterprises to effectively build applications that securely scale to millions of devices. With real-time stream processing and batch processing capabilities, users can create dynamic experiences and perform complex analytics. All of Losant's components, from Edge Compute to End-User Experiences, work seamlessly together to transform data into tailored IoT solutions.

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