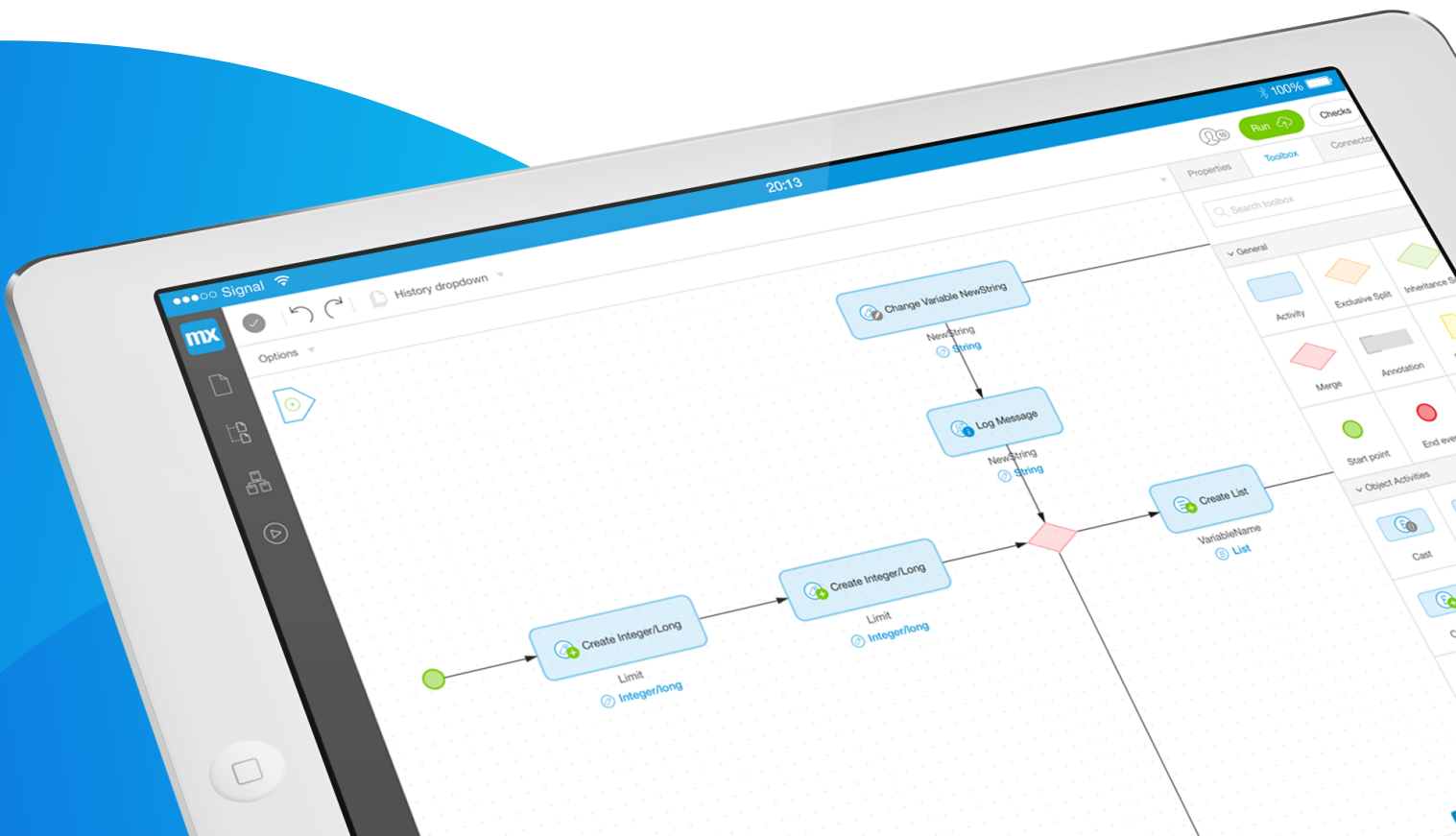


Executive Brief:

Understanding the Benefits of High-Productivity Platforms for IoT Application Development

This brief is designed to help IT leaders understand how a high productivity application Platform-as-a-Service (hpaPaaS) addresses key challenges to IoT application development, helping the business to drive smarter operations and launch connected products. As a next step, they should discuss hpaPaaS with their enterprise architects, who can evaluate the technology in more depth.



IoT Presents Big Opportunities, but Also Unique Challenges

McKinsey estimates that the Internet of Things (IoT) could generate \$11.1 trillion a year in economic value by 2025. Understandably, IT leaders face growing pressure from the business to deliver new IoT solutions that improve operational efficiency and grow revenue via connected products and services.

Despite the massive opportunity, IoT is a new domain that presents IT teams with specific challenges:

- **Technical Complexity** – Teams often struggle to implement, integrate and manage the heterogeneous mix of endpoints, platforms, back-end systems and data required for IoT solutions.
- **Skills Shortage** – IoT solutions require scarce, hard-to-find skills spanning IoT technology, integration, data management, analytics and app development. According to Gartner, 49 percent of CIOs expecting to experience IT skills shortages in the next 12 months.
- **Lack of Agility** – IoT application development requires rapid experimentation, frequent iteration and close collaboration between business and IT. Traditional development approaches don't facilitate the required speed and agility, not to mention active involvement from the business.

High-Productivity Platforms Facilitate IoT Innovation with the Required Speed, Collaboration and Control

hpaPaaS is a fast-growing technology market uniquely suited to help IT leaders and their teams address these challenges and facilitate rapid, iterative development essential to IoT success.

According to Gartner, hpaPaaS “provides application development, deployment and execution in the cloud using declarative, model-driven application design and one-step deployment.” In other words, hpaPaaS abstracts away from the technical complexity associated with traditional software development, enabling a broader range of users to rapidly build applications, including, but limited to, IoT solutions.

“Using the Mendix platform, we built a first version of our IoT app in a week and then iterated from there, expanding the ways we used the data. Our clients didn't even know they wanted it or needed it. Now they tell me they can't live without it.”

- Jonathan Foucheaux, Partner, Solomon Group

Here's a brief overview of some key hpaPaaS capabilities supporting IoT application development:

- **Visual Development** – hpaPaaS helps close the talent gap by enabling both professional and citizen developers to build IoT applications without needing to code. They can visually model their data models, UIs and logic, leveraging a marketplace of building blocks to kick-start development.
- **IoT Connectors** – Some hpaPaaS vendors minimize technical complexity by offering out-of-the-box connectors to IoT services from common platforms (e.g. AWS, IBM Watson and Microsoft Azure). Developers can simply drag and drop these services into visual application models.
- **Business-IT Collaboration** – hpaPaaS facilitates rapid experimentation and iteration by enabling developers and business stakeholders to collaborate across the complete application lifecycle, from ideation and requirements gathering to team development and feedback management.
- **Scalability and High Availability** – hpaPaaS enables your team to start small with IoT and scale easily, without needing to rework the application architecture. Platforms leveraging underlying technology like Cloud Foundry offer built-in application resilience and high availability.

An integrated hpaPaaS accelerates each step of the application lifecycle, helping your organization to realize unprecedented time to value. High productivity platforms are ideal not only for IoT solutions but a broad range of applications to digitize your operations, customer experiences and business models.

Mendix is the fastest and easiest platform to build and continuously improve mobile and web applications that enable innovation. Recognized as a Leader by Gartner and Forrester, we help our customers digitally transform their organizations and industries by building, managing, and improving apps at unprecedented speed and scale. Nearly 4,000 forward-thinking organizations, including KLM, Medtronic, Merck, and Phillips, use our platform to build business applications to delight their customers and empower their employees.

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