WHITEPAPER

Connect, Innovate, Transform: The Power of IoT

Discover the key steps to successfully achieve your IoT/M2M project

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Introduction

IoT, a growth opportunity for SMEs

The Internet of Things (IoT) and Machine-to-Machine (M2M), far more than technological buzzwords, are today strategic levers of transformation for companies of all sizes, from large corporations to SMEs.

By connecting their equipment, sensors, or machines, companies can explore the possibilities of:

- **Enhancing** their service offering,
- **Improving** operational efficiency,
- **Optimizing** maintenance and operating costs,
- **Creating** new revenue streams.

The success of any IoT project, however, requires careful consideration of many elements across the entire value chain: from the choice of equipment to data processing and monetization, including security and connectivity.

By bringing together all the expertise required to implement IoT projects, both as a telecom operator and a digital services provider, **DEEP supports companies at every stage of their IoT project**. With a holistic approach, DEEP ensures the deployment of secure and scalable solutions.

Through this white paper, we outline with you the key steps to ensuring your projects succeed.

PART 1

New business opportunities through IoT

How does IoT create value for companies and their customers? A few concrete examples:

Smart security and surveillance

An alarm installer can go beyond simply installing equipment by offering connected real-time monitoring, integrating motion sensors, cameras, and automatic alerts sent to a mobile app. The result: more complete solutions that generate higher value, thanks to AI-based features and data monetization.

Logistics and transport

A logistics provider can equip containers and trucks with IoT sensors to offer real-time tracking and monitoring of transport conditions (temperature, humidity, shocks). This reassures customers (transparency and visibility on trucks and cargos) while optimizing routes (through integration with existing telemetry solutions) and adding an extra layer of compliance.

Maintenance and technical services

A company managing boilers or elevators can install connected meters to enable preventive maintenance: anticipating breakdowns, reducing intervention costs, and increasing equipment availability.

Beyond these examples, regardless of the industry, IoT acts as a catalyst for innovation and differentiation. **DEEP's teams will explore the opportunities that technology brings with you—"like a true partner."**

PART 2

The 6 steps to succeed in your IoT project

1. Choose the right equipment (hardware)

The first step is to define the equipment suited to your business and project objectives: sensors, cameras, payment terminals, meters, presence detectors, etc.

Depending on your activity and needs, equipment choices may vary significantly—and they are a decisive factor in project implementation.

2. Select the right connectivity technology

Connectivity is at the heart of any IoT system. Depending on the equipment installed, the most appropriate connectivity technologies must be selected.

A connected camera requires high bandwidth and near-constant availability. By contrast, a water meter sends only a few data points per day but must operate for years without a battery change.

Here, the key is finding the right balance between bandwidth needs, autonomy, and network coverage.

We can distinguish between several connectivity technologies, including:

- **Standard technologies** (2G/3G where still available, 4G – the new standard, and 5G)
- **LP-WAN** (Low Power Wide Area Network) ensuring long equipment autonomy, allowing limited data exchanges:
  - **LTE-M** is preferable for regular data exchanges with reduced consumption.
  - **NB-IoT (NarrowBand IoT)** for low-power fixed sensors.

To make the right choice, you must look ahead: investing today in 2G or 3G technologies carries risks, as these networks are gradually disappearing in many countries.

3. Ensure adequate coverage: national, international, or both

An IoT project can be deployed locally or globally. Depending on requirements, it is crucial to rely on an operator ensuring optimal coverage.

- In Luxembourg, **DEEP provides the best mobile coverage on the market**.
- Abroad, DEEP acts as a multi-operator with no preference for any national network. Equipment automatically connects to the best available network, without restrictions.

The result: an optimal roaming experience, essential for companies deploying equipment across multiple countries.

4. Rely on a flexible management platform

An effective IoT platform should allow simple and efficient management of the entire equipment fleet. Key features include:

- Activation/deactivation of SIM cards,
- Consumption monitoring and tariff option management,
- API openness for easy integration with other business systems,
- Automated alerts in case of anomalies (e.g., detection of a stolen or misused SIM card).

Such a platform is indispensable to maintain both operational and financial control of your IoT project.

5. Integrate security from the design stage

The multiplication of connected objects creates just as many new entry points for cyberattacks. When deploying a new service based on connected equipment, depending on the criticality of the solution, the risks of sensor hacking, data theft, or misuse must not be underestimated.

In this respect, it is important to ensure data encryption throughout the transmission chain, establish a secure VPN, and implement continuous supervision of data exchanges to detect vulnerabilities or breaches.

Security is no longer an option, but a **foundational pillar of every IoT project**.

6. Unlock data value with the application layer

At the end of the chain, the challenge lies in transforming collected data into valuable information. To do this, application solutions must be deployed to exploit the data, support business, or meet customer needs.

The challenge is not just to collect data but to extract **business-relevant information**.

In most IoT projects, the deployment of appropriate tools takes place in the cloud, to facilitate data collection and support customers wherever they are. Moreover, cloud platforms provide high flexibility and scalability in resource management. However, it is essential to rely on environments that meet regulatory and sovereignty requirements.

Explore the possibilities of AI!

When it comes to data monetization, artificial intelligence opens new perspectives—especially when services rely on multiple data sources and the goal is to automate decisions, make predictions, or identify trends.

CONCLUSION

DEEP, your end-to-end IoT partner

As you can see, a successful IoT project relies on a global and consistent approach. It involves:

- Defining the right equipment,
- Choosing the right connectivity,
- Ensuring optimal network coverage and availability,
- Adopting a robust connectivity management platform,
- Securing data exchanges,
- Unlocking the value of collected data.

With its expertise, DEEP masters the entire IoT value chain and supports companies at every step, ensuring:

- Adapted technology choices,
- High-performance connectivity in Luxembourg and internationally,
- Robust security,
- Flexible application and hosting solutions.

With DEEP, turn your IoT ideas into real business opportunities.

By combining technological expertise and human intelligence, DEEP accelerates your digital transformation, enabling you to explore new possibilities. With over 750 employees in France, Luxembourg, and Morocco, we are a unique partner to design, manage, and transform your IT environments. Our complementary areas of expertise include consulting, data and artificial intelligence, cloud, cybersecurity, IT infrastructures, data centers, and telecommunications. You benefit from a comprehensive approach to evolve your systems towards safer, more sustainable, and high-performing digital environments.

IoT Project Checklist

The 6 key questions to ask yourself to approach your IoT project effectively:

1. Have you identified your business needs and selected your equipment?
2. Have you chosen the appropriate connectivity technology?
3. Is your network coverage guaranteed locally and internationally?
4. Do you have a flexible and open management platform?
5. Are security aspects integrated from the design stage?
6. Is your data monetization strategy defined (applications, AI, cloud)?

Interested?

8002 4000

m2msales@deep.eu

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