

# Connecting millions of smart meters: Atos Origin M2M solution

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## M2M STATE OF THE ART

Machine-To-Machine communication process allows exchange of information between communicating (or even "intelligent") objects and Information System(s) without any human intervention. Therefore, it makes it possible to route data but also to organize and trace exchanges, manage communicating objects and minimize related communication costs.

Machine-To-Machine process involves convergence of three types of technologies:

- Communicating objects (RFID tag, modem, network cards) or intelligent objects (microprocessors with embedded applications)
- Communication networks (wired or wireless, IP, GSM, GPRS, Wifi, Zigbee, HSPDA, ...)
- More and more complex and efficient enterprise Information Systems which are able to integrate and control more and more external components.

The majority of current solutions are mainly linked to telecommunication operators. These offers are very specialized such as electronic banking. They are, in our vision, less suited for generalization and globalization for large public applications, because these operators' offerings are mainly oriented on radio protocols (GPRS, 3G, etc.) and thus provide a restricted number of administrative services.

It becomes necessary to develop this range of administrative services by introducing into these emergent technical domains new Internet technologies, like monitoring of communications between communicating devices.

Additional non-radio protocols, administrative services and monitoring of communications are all provided by our M2M solution.

The application fields of M2M are nowadays gathered in six different types of usages:

- Monitoring or telemetry
- Fleet management
- Supply chain
- Electronic surveillance
- Business home automation
- Electronic payments

Taking advantage of Atos Origin expertise and strong involvement in telecommunication and security solutions, we propose our own platform: Atos Origin M2M solution.

Reliable, with customizable capabilities and open upgradeable M2M service with high added value, this solution manages important communication flows between Information Systems and the different communicating objects at the most competitive cost. Any kind of communication network can be addressed by our solution, whether standalone, or in combination.



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**ABOUT THE COMPANY:** Atos Origin is an international information technology services company. Its business is turning client vision into results through the application of Consulting, Systems Integration and Managed Operations. The Company's annual revenue is EUR 5.8 billion and it employs 50,000 people in 40 countries. Atos Origin trades as Atos Origin, Atos Worldline and Atos Consulting.

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Atos Origin M2M offer is made of a consistent set of infrastructure services that allow remote communicating objects to exchange information or to be controlled by a central Information System.

## M2M COMMUNICATION FOR SMART METERING INFRASTRUCTURE

Smart metering systems are highly dependent on quality, security and availability of data, which deeply involves the communication infrastructure.

Communication performance becomes even more critical when the number of meters and the collection frequency increase, which is the case for ERDF in France, where up to 35 million meters are concerned with daily collection of meter data.

The communication infrastructure proposed by Atos Origin to ERDF AMM project, relies on a M2M platform (mainly GPRS based), behaving like a virtual telecommunication operator above the French Telco operators.

The M2M offer makes it possible to integrate three major types of services that generate as many messages as needed:

- Information sending (alert),
- Action (such as Question/Answer, similar to a meter reading operation, scheduled or not; remote configuration such as an order to execute or such as the modification of a parameter),
- Update (downloading an application, configuration file).

By separating the functions that receive the requests and those that process them, distributed multi-tier architecture of Atos Origin M2M solution ensures high adaptability to technical and service changes.

Furthermore, Atos Origin proposes for its M2M platform a differentiating approach with a Business Process Outsourcing (BPO) Model: M2M services provided to our customers are managed by our own platforms located in our premises.

This way of providing service makes it possible to significantly reduce customer initial investment, and to lower costs during the operational phase (sharing of hardware, software and human resources). Pricing of the M2M offer is based on a fixed price per communicating object.

The downscaling of the M2M offer pricing model makes it possible to consider growth of services with confidence.

The numerous advantages of Atos Origin M2M solution are to provide:

- Independence from the various telecom operators and communicating objects,
- Adequacy with the latest communication technologies and their evolution over time,
- The guarantee of an optimisation of communication costs,
- Strong security of exchanges,
- Supervision of exchanges,
- Commitment to provide a defined level of service,
- Long-term management of business cycles. ■■