



## Internet of Things (IoT) in Practice

Developing and implementing Business Models using DATAEAGLE 7000 and Mobile Radio



## APPLICATION

Data and information linked therewith increasingly develop to central elements for industry, traffic, infrastructure, economy and society. Innumerable “things” – such as measuring and monitoring devices, machinery, pumps, vehicles or household appliances are equipped with sensors which gather data of any kind and then are sent by gateways wired or wireless by radio (e.g. via the [IoT Gateway DATAEAGLE](#) of [Schildknecht AG](#)) to a cloud or a portal established there for analysis and further utilization. So the Internet of Things (IoT) has already become reality in many places. Companies of any kind and size are now endeavoring to develop new business models by applying modern IoT technology. The objective of these models is to optimize familiar processes e.g. with regard to security and economic efficiency or to generate new processes. In such developments support by experienced companies such as the radio technology specialist [Schildknecht AG](#) is extremely helpful.



## CHALLENGES

The development of an IoT business model for a certain application within a company is faced with several challenges: The intended business model shall be capable of fast and uncomplicated implementation with regard to scope and objective and being structured in a clearly perceptible manner. This concerns both the adaptation and establishment of in-house structures as well as definitions with regard to data selection, access authorization and many more. Moreover, the required hardware (gateways) must be selected with regard to its capacity for data preprocessing, data protection, global connectivity as well as costs and economic efficiency.



## SOLUTION

**Schildknecht AG** with its decade-long radio-technology experience in automation technology features excellent prerequisites for the development of such IoT business models. As far as hardware is concerned, the technologically highly developed **DATAEAGLE Gateways** are used, especially modules of the **7000 Series** with their suitability for remote transmission of data by mobile radio. These gateways are equipped with an integrated eSIM card for extremely cost-effective utilization of about 400 mobile radio providers in all over the world and in applications automatically search for the most powerful mobile radio network at the place of installation; from there, data is directly transmitted to a **Device Cloud** and after that to a data cloud (e.g. Microsoft Azure, Amazon AWS). A further important benefit: Via mobile radio, **DATAEAGLE 7000** applies the communication technology of the globally highest regional coverage: because mobile radio is also available in regions where an internet connection is impossible.



## RESULT

When developing IoT business models, a close cooperation between the principal and the IoT-technology supplier is an important success factor. Business models are naturally based on the specific requirement catalogue whose compliance requires a great deal of technology and application knowledge and of course the suitable hard- and software. **Schildknecht AG** with its **DATAEAGLE** device series and comprehensive application experience complies with these prerequisites. An example for an already successfully completed project is the cooperation of **Schildknecht AG** with the Austrian **ASFINAG**: the automatic, radio-based recording of user frequency at rest areas of Austrian railways by applying **DATAEAGLE 7000** and a specific portal, from which the cleaning service of the company can regularly retrieve all data relevant for its application has immediately increased the quality and cleanliness of resting areas – which has rapidly and easily optimized the concept for cleaning the facilities. Moreover, thanks to this data compression the data quantity transmitted in this project per month is below 0.5 MB per system, making data transmission costs very low: **DATAEAGLE 7000** and mobile radio consequently form an attractive basis for economic IoT solutions as provided by **Schildknecht AG** with its comprehensive knowledge.

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