



Reducing the environmental impact  
of perishable supply chains

Improve traceability

Increasing competitiveness

**IntelliFood is an intelligent process  
monitoring and control solution  
for perishable foods**

Certain materials (commodities) and their mixes delivered or produced by business partner are fastidious about temperature, light and humidity. For example:

- Vegetable cream, vegetable foams: temperature, sun protection
- Fruit fillings: humidity, temperature (have to store in a dry and cool place)
- Powder shaped emulsifier: humidity, temperature, light
- Margarines: temperature (both the too high and the too low temperature are unfavorable)
- Sweetening mix (sugar alcohol): humidity

The storage of these materials needs specific parameters, otherwise waste product will be generated, which must be removed or destruct. In case of mixtures containing sensitive material is the storage really important as well, because the waste material has impact on the product, however the monitoring of the mixture making is essential.

The prepared solution is a system based on wireless sensor network, which is made up of temperature and humidity measurement units (approximately 12-15 sensor points) which are able to communicate with each other. The wiring is not required, the easy to deploy mobile sensors measure the values of the parameters scheduled and communicate the results to a central data store.

The processing application operating in the same place evaluates the measurements and sends alerts for the responsible people according to the rules are set. If the rate of temperature or humidity comes near to a lower or upper limit, an email or an SMS can start a manual intervention.

The regular measurements allow the precise storage of the storage and mixing parameters along the given particular materials and mixes, and in this way the quality management becomes verifiable beside the identification of the product. The customer can get information about the ordered product right from the delivery date.

Mixing of materials depends on the temperature. The using and monitoring of the relevant rules can ensure that all material will be mixed between the corresponding temperature ranges based on objective measurements.

Beside the simple statements based on binding of basic substance / mixture and measured temperature / humidity values, complex information can be prepared as well, which takes account of other factors such as seasonality, storage time, suppliers, etc.

## Seacon Europe Ltd.

The enterprise is engaged in software development, in consulting and in related education. Using multiple technologies, Seacon produces unique developments and standard / commercial off-the-shelf (COTS) software for more business branches. The applicant's main profile is the software development. The experiments have many years of experience in software development technologies, and they have experience in multi-stakeholder project work as well. The applicant is a technical and technological partner in the project.



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