Improving Data quality for Risk Assessment

38 th EFSA's Focal Point Meeting

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IDRisk | Background

- **The National Data Management System** (NDMS) called "**PT•ON•DATA**" was developed in Portugal under the implementation of the electronic transmission of contaminant data to EFSA using the **Standard Sample Description** information format - **SSD**. The process, has allowed the centralization and harmonization of data with a greater automation of processes and performing electronic transmission to EFSA, contributing in this way to an improvement on the final quality, integrity and consistency of data.

- "**PT • ON • DATA**", began in 2012 in the field of **chemical contaminants**, through the natiomal large *consortium* formed by INSA and DGAV, in collaboration with ASAE ,IPMA and INIAV.

- **In 2014/2015**, the same *consortium* and partners ***tested a new EFSA data model, SSD2***, on the effectiveness and suitability for harmonized data collection and reporting in various domains: **chemical contaminants**, **pesticide residues**, **food additives**, **biological monitoring** and ***veterinary drug residues***.

- **Currently, "PT•ON•DATA**", has features to **load sampling as well as laboratory related data files containing sampling information and results of the analyses,** respectively. It also allows the mapping and validation of the analytical data in SSD2 format; conduct research and statistics; extract results and report data to different authorities. In addition **has allowed the introduction of new functionalities**, for example, the dynamic creation of electronic sampling forms, **which permits through a mobile device, to fill in the information gathered in the field.**

1. **Improve/Restructure the dynamic sampling forms module**

   We aim on **expanding our dynamic sampling forms module so a single organization** is able to create and manage sampling forms for multiple plans. We also aim to implement a versioning system for these dynamic sampling forms, so multiple versions of a sampling form within a certain plan is available whenever the need to use them arrives.

2. **Develop the application that will run on the mobile devices**

   In **order to gather and make use of the dynamically created digital sample forms on the field, an application for mobile devices must be developed**. We are considering using smart devices, mainly tablets, to be used by the field.

3. **Prepare/Improve the existing system in order to receive the data submitted through the mobile app**

   The **existing data collection system, our NDMS, should be able to recognize the new data format and structure** from these on-field devices as a new input of information for the system. The NDMS and its database should be adapted in order to conform to these new changes.

4 . <u>Prepare/Improve the existing system so real-time communication with the mobile devices that are on the field is possible</u>

This functionality aims on helping both ends (NDMS/Devices) in a way that: if necessary the client (mobile device) can request more information from the server; also, if necessary, a specialized technician on the server side can perform monitoring tasks on the data that is currently being sampled.

5 . <u>Data filled in through the use of digital sampling forms, must be able to be exported to a physical format</u>

The application that should be developed for the mobile devices must allow the data collected digitally to be printed on the spot, in special cases where a copy of some sort must be handed to the person representing the sample source, or as a redundant alternative to save the data for other purposes.

6 . <u>Investigate and implement other means to gather information via the mobile devices while on the field</u>

The application located on the mobile device should be able to acquire more information related to the sample other than through the digital sampling form, for example, the possibility to take photos or scan a certain product and then attach this extra information to the current form to later be stored on the LIMS database, would greatly increase the value of the data.

7 . Implement interfaces between systems (NDMSs) so a two-way communication is possible

Sometimes it is not as easy to request and receive certain datasets of information from these authorities or the process itself, since the begin of the communication to the actual storage of data on the centralized database can take an unreasonable amount of time. We propose to stablish a standard or protocol on how these different authorities can communicate which each other automatically, with the minimum amount of human interaction (ex: via web-services or other alternatives) and implement these interfaces, so the process of data and information sharing can be improved.

8 . Plan and implement an automatic PT.ON.DATA FoodEx2 classification system for sampling descriptions

Finally, one of tasks that we've found out over the years that consumes a large amount of time and is more prone to human error, is the process of mapping the description that are made on the samples that are gathered, and must be transformed into FoodEx2 codes to be reported to EFSA. We plan on implementing a system that should help, and if possible, automatically map sample descriptions present on submitted datasets to FoodEx2 terminology.

Team Members

- Economic and Food Safety Authority (ASAE)

- National Institute of Health Dr. Ricardo Jorge (INSA)

- Croatian Food Agency (HAH)

Task 1: Project management and coordination

Task 2: Framework development

Task 3: Framework testing

Task 4: Sustainability and dissemination activities

Task 5: Quality assurance and impact evaluation

- **Improve/**Restructure **the dynamic sampling forms** module;

- **Develop the application that will run on the mobile devices**;

- **Prepare/Improve the existing system in order to receive the data submitted** through the mobile app;

- Prepare/Improve the **existing system so real-time communication** with the mobile devices that are on the field is possible;

- **Data filled in through the use of digital sampling forms**, must be able to be   exported to a physical format;

- Investigate and implement other means to gather information via the mobile devices while on the field;

- **Implement interfaces between systems** (national LIMS) so a two-way communication is possible; and last but not least

- Plan and implement an automatic PT.ON.DATA FoodEx2 classification system for sampling descriptions

Questions? Thank you for your attention!
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