



EBF Open Symposium
N° 13 From Cyberspace - Staying Connected
17-20 November 2020

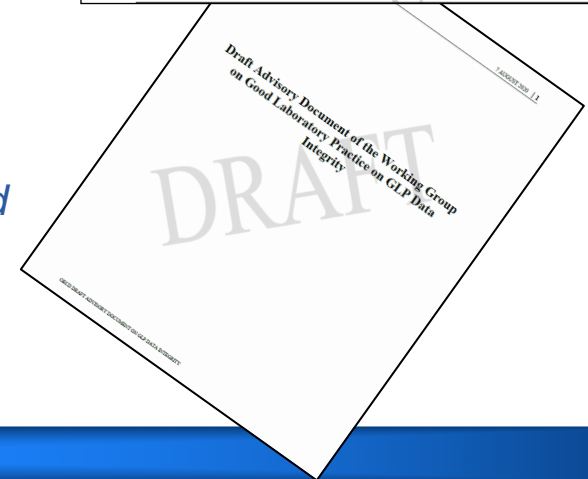
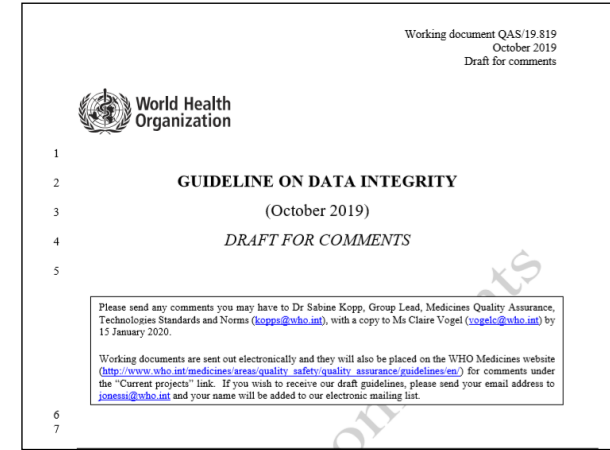
Feedback from the EBF - The historical discussions (OS 2018/2019) and interactions with software developers

Cecilia Arfvidsson, on behalf of the EBF

Data Integrity – Continued regulatory focus

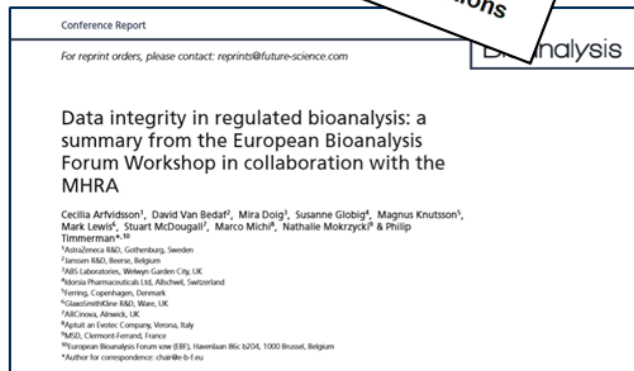
WHO and OECD Draft Guidelines in 2019 and 2020

- *“Data governance and data integrity (DI) are important elements in **ensuring the reliability of data and information** obtained in production and control of pharmaceutical products. The data and information should be complete as well as **meeting “ALCOA” principles.**”*
- *“In recent years, the **number of observations** made regarding the integrity of data, documentation and record management practices during inspections ... has been **increasing**. Possible causes for this may include (i) too much reliance on human practices; (ii) the use of computerized systems that are not appropriately managed and validated; and (iii) failure to adequately review and manage original data and records.”*



Data Integrity and EBF

- MHRA 'GXP' Data Integrity Guidance issued in March 2018.
- EBF workshop arranged at the OS 2018 in collaboration with the MHRA
- To provide **insight** and **understanding** of regulatory data integrity expectations – focus on **data integrity** and **audit trails**
- **Outcome** - Open up the **dialogue** for enhanced interaction between **software developers, pharma/CROs** and **regulatory authorities** to understand current, and define future, system Data Integrity capabilities¹.



¹Arfvidsson C, Van Bedaf D, Doig M *et al.* Data integrity in regulated bioanalysis: a summary from the European Bioanalysis Forum Workshop in collaboration with the MHRA. *Bioanalysis* 11(13), 1227–1231 (2019).

EBF E-environment Workshop at EBF OS 2019 - Building Common Understanding for Future System Solutions

- Bring software developers, Pharma/CRO labs and regulatory authorities together



export.txt file is created locally and can be edited without audit trail before saving on the file server

After acquisition and processing of data create export.txt file from final results table copy entire project to folder on departmental server

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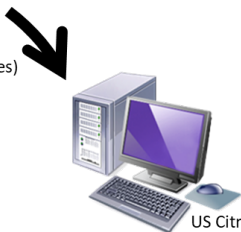


Local instrument PC



Folder on departmental server (write-once privileges)

Import export.txt file from folder into LIMS



US Citrix Server / desktop PC

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import sequence.txt file in instrument Batch editor



Personal folder on departmental server

Save sequence.txt file from analytical run on departmental server

- Highlight **current key DI challenges**, focusing on the data transfers in the **LC/MS workflows**
- What are the **missing functionalities** in today's process?
- What can the **software developers** do to **help improve** the current situation?

EBF E-environment Workshop at EBF OS 2019 - Building Common Understanding for Future System Solutions

- The “**interface landscape**” is often the key issue for most bioanalytical labs and workflows when it comes to DI
- EBF focus - a **joint mission** to resolve the current interface and secure data transfer issues
- WS a successful **first step** towards a **consensus** and an **increased dialogue** between the software developers and the bioanalytical community
- **Outcome** - two clear and **concrete messages**:
 - From the **BioA community** – the software developers need to explain what they require from the BioA community to “make it happen”.
 - From the **software developers** - the BioA community needs to agree on a joint request for the software developers to focus their efforts.



EBF Continuous dialogue with the software developers

- **Long-term solution** not available in the next few years
 - Secure transfer of the **complete data set**
 - **File-less transfer** using a vendor neutral interface
- **Customized solutions** available - time and cost expensive
- EBF acts only in the **non-competitive space** for the benefit of the entire BioA community
 - An advantage in the identification of a **limited** but **sustainable solution**
- Stepwise approach to **break the current status quo** and to showcase that progress can be made if/when all agree on a common standard

EBF proposal for a generic data transfer

- Focus on the data used for **integration purpose** in the **bi-directional** data transfers between information management (**IM**) system and **LC/MS**
- Using only a **minimum data set**, strictly required to **safeguard DI**
- The minimum data set **agreed by the EBF e-environment team** and **presented for the EBF core community** in May 2020
- **Published on-line *Bioanalysis*** in July 2020¹



¹Arfvidsson C, Van Bedaf D, Globig S *et al*. Improving data integrity in regulated bioanalysis: proposal for a generic data transfer process for LC-MS from the European Bioanalysis Forum. *Bioanalysis* 12(14), 1033-1038 (2020).

Generic fields in the transfer from IM to LC/MS system



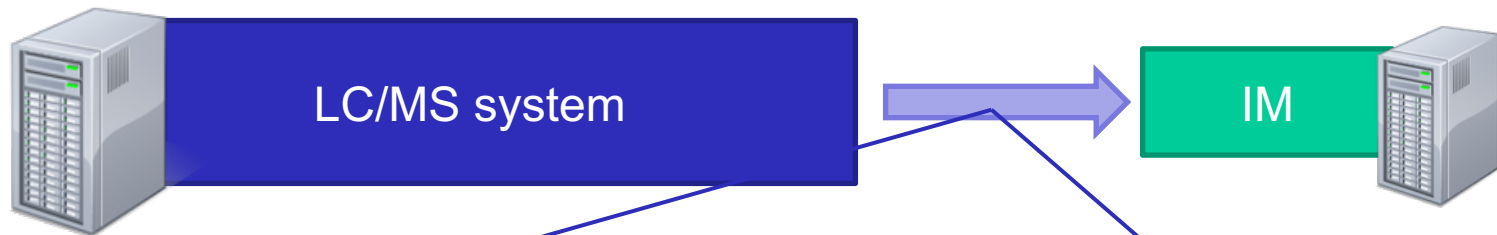
Run/File-specific

- Study / Project
- Run / Batch file
- User (GLP)
- Plate Barcode
- File Name

Sample-specific

- Sample name/ID
- Sample barcode/ID
- Analyte (s)/ Internal Standard name
- Dilution factor
- Order Number
- Plate Position
- Sample type
- Concentration

Generic fields in the transfer from LC/MS to IM system



Run/File-specific

- Study
- Run
- Date/Time
- User
- Plate Barcode
- File Name
- User Comments

Sample-specific

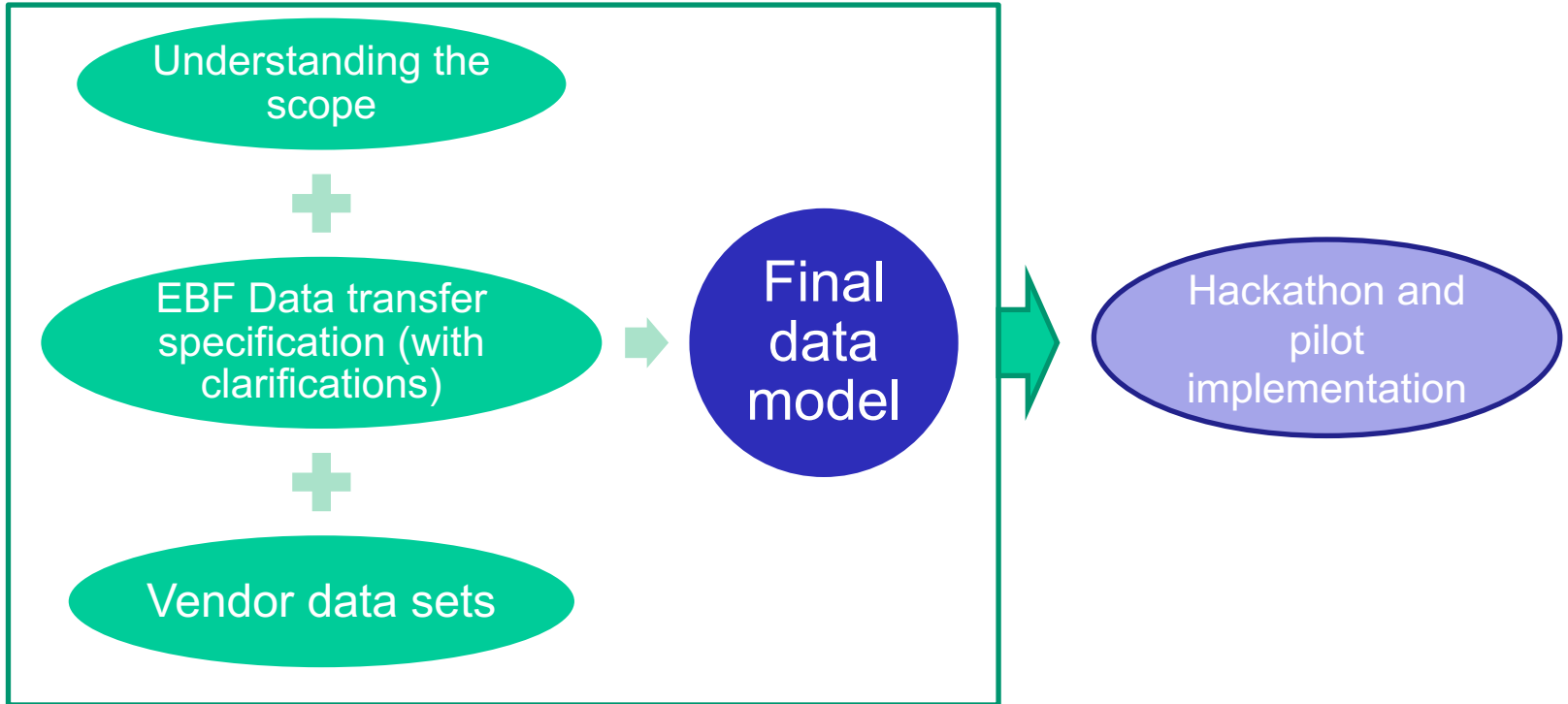
- Sample name/ID
- Sample barcode/ID
- Analyte (s)/ Internal Standard name
- Analyte raw data (peak area, height, ratio...)
- Analyte (s) conc data
- Dilution factor
- Plate position

EBF engagement and scope

- Every BioA lab has its **own workflows - complexity** of the data format to be transferred easily **accelerates**
- The EBF e-environment team has tried to come **as close as possible** when building the generic list for the software developers to work on.
- Important to move this forward as **a community** - likely some additional **internal harmonization** needed to prevent from creating **new ambiguity** to the software developers as the journey continues
- EBF will **not propose further technical details**. It's now with the software developers to work with their customers to develop these solutions.
- **Early adaptors** can hopefully be used as **an example** for others to then follow.

Software developer engagement

- All software developers in **agreement** - the time and cost required to have a technical solution ready for implementation is low – **this is not complex** so let's get it done!



Future perspective - towards the long-term DI solution

- Current data transfer **proposal** - an **inspiration** to facilitate additional steps?
 - additional platforms
 - all data
 - long-term storage and archiving
 - file-less interface solution
- Multiple **questions** and **challenges** to be addressed and resolved as the complexity increase
 - How to handle the outputs from the different plate-readers (>1 wavelength, replicates on the same sample, blank subtraction ...)?
 - How to define rules for exceptions (negative/text/empty values ...) ?



A continuous engagement and dialogue between all relevant parties is critical to reach further progress

Acknowledgment

- EBF e-environment team:
 - Magnus Knutsson (Ferring)
 - David Van Bedaf (Janssen R&D)
 - Susanne Globig (Idorsia)
 - Mark Lewis (GlaxoSmithKline)
 - Stuart McDougall (Arcinova)
 - Marco Michi (Menarini)



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- EBF core community



- Software developer team:
 - Gidion de Boer (ThermoFisher)
 - Neil Loftus (Shimadzu)
 - Dave Abramowitz (Sciex)
 - Arjan Timmerman (Waters)
 - Burkhard Schaefer (BSSN-software)

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