Anti-Doping Intelligence System Project - Roadmap

WADA/ Science and Investigations Symposium

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ADAMS Data in Numbers

OVERVIEW

• **ADAMS - Central clearinghouse of all anti-doping information**
  – Contains Athlete Whereabouts, Biological Passports, Testing Data, and TUEs for over 48,014 athletes from 232 nationalities.
  – Used by 99 International Sport Federations and 100 National (+ Regional) Anti-Doping Organizations.

• **Numerous Major Event Organizers used ADAMS during events in 2013 and 2014**
  – 2014 Commonwealth Games Federation - Glasgow
  – ODESUR South American Youth Games, Lima 2013
  – XVII Mediterranean Games, Mersin 2013
  – 2014 Winter Olympic and Paralympic Games, Sochi

• **As of October 2014, the ADAMS data repository contained**
  – 274,343 Athlete profiles, an 9% increase since April 2014
  – 14,163 Therapeutic Use Exemptions (TUEs) *
  – 828,691 Analytical results reported by laboratories, a 16% increase since April 2014.

* Due to the application of the new Data Retention policy in ADAMS, TUEs are no longer retained beyond 18 months from the end of their validity.
**Data Collection and Sharing**
- Identify required and desired types of intelligence
- Collection, ingestion and storage of intelligence
- Intelligence analysis.
- Sharing of intelligence.
- Linkage Capabilities to other Databases

**Data Mining and Correlation**
- Powerful & Fast Search Engines
- Data Correlation capabilities
- Data visualization capabilities
  - Data charts
  - Data Links

**Machine Learning and Pattern Recognition**
- Recognize Patterns.
- Machine Learning concentrating on learning discrimination rules.
- Make decisions about patterns.
Intelligence - positive reinforcement loop
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DATA MINING AND CORRELATION

THE IDEAL DATA WORKFORCE

SPECIALISTS

CROWD

MACHINE

ENABLED BY THE IDEAL PLATFORM
ADIS
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DATA COLLECTION

Data Intelligence Types

• Biological Passport (Blood & Urine Test Results)
  – ALL SOURCES (ADO’s, IF’s, etc.), Analytical tools

• Whereabouts, TUE & DCOR
  – ADAMS, SIMON, EUGENE, Electronic Sample Collection (Paperless)

• ADO Intelligence
  – Witness interviews, Tip lines, Intelligence reports

• Law Enforcement Intelligence Sharing
  – Customs seizures / WCO, Customer lists (SW’s, Arrests & Interpol Op)

• Internet
  – Social media, PED / Bodybuilding Discussion Forums, Search engines, Undercover activity

• Competition Results
  – Competition Results, Athletes' Stats
Collaboration is the goal!
DATA SHARING AND COLLABORATION CHALLENGES

• Absence of common platform, protocol and process for sharing
  – Several standards to access, share and integrate data.
  – Numerous policies and regulations.

• Fear and concerns over sharing
  – Security.
  – Privacy protection.
  – Use of the data.

• Lack of resources and motivation to share
  – 'Too Complicated' and 'Time Consuming'.
  – Unclear requirements and expectations for participation.
• Create a shared knowledge environment.
  – Identify standards to access, share and integrate data.
  – Make it easy to participate.
  – Foster and maintain Antidoping community interest.
  – Linkage Capabilities to other Databases

• Encourage interagency cooperation to facilitate public-private coordination.
  – Establish data sharing agreements.
  – Optimize restrictions on data, consistent with proprietary and other interests.
  – Focus on outcomes, not just access.
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INTERFACING OTHER DATABASES

GLOBAL LAW ENF. DBs?

ADOs DBs?

Professional Leagues DBs?

SIMON?

“OTHER”? 
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INTERFACE TYPES

• **Bi-directional**
  – A bi-directional interface involves true two-way communication between the two system.

• **Unidirectional**
  – The system performs its treatment of data and transmits results to the interface host system in one direction only.

• **Restricted - No Data Exchange.**
  – The system performs queries in the interface host system looking for possible data correlation inside the database. If data correlation is found, a point of contact is provided.