play true

Anti-Doping Intelligence System Project - Roadmap

WADA/ Science and Investigations Symposium

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WORLD ANTI-DOPING AGENCY

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.

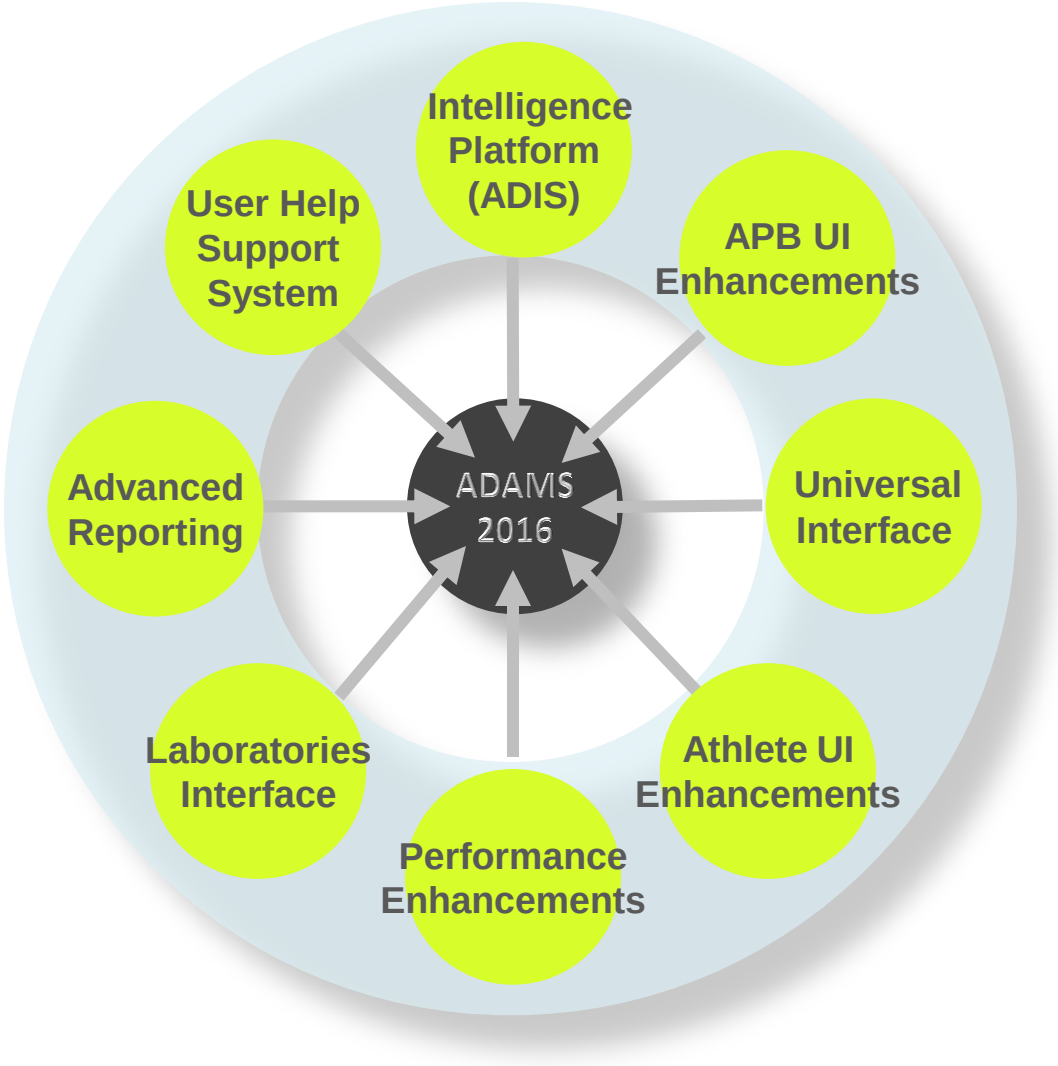
- **Numerous Major Event Organizers used ADAMS during events in 2013 and 2014**
  - 2014 Commonwealth Games Federation - Glasgow
  - ODESUR South American Youth Games, Lima 2013
  - XVII Mediterranean Games, Mersin 2013
  - 2014 Winter Olympic and Paralympic Games, Sochi

- **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.

ADAMS 2016 Project

PROJECT SCOPE



ADIS Project

PROJECT SCOPE

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.

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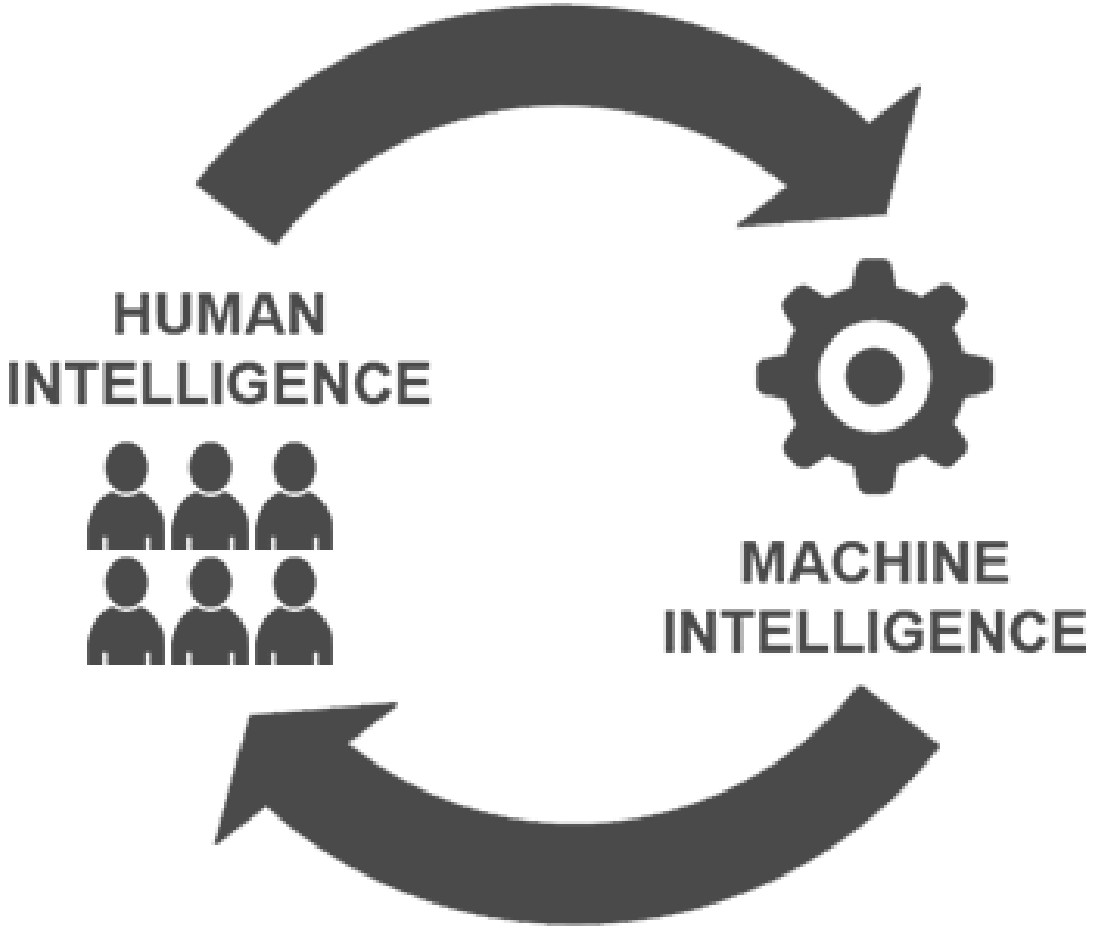
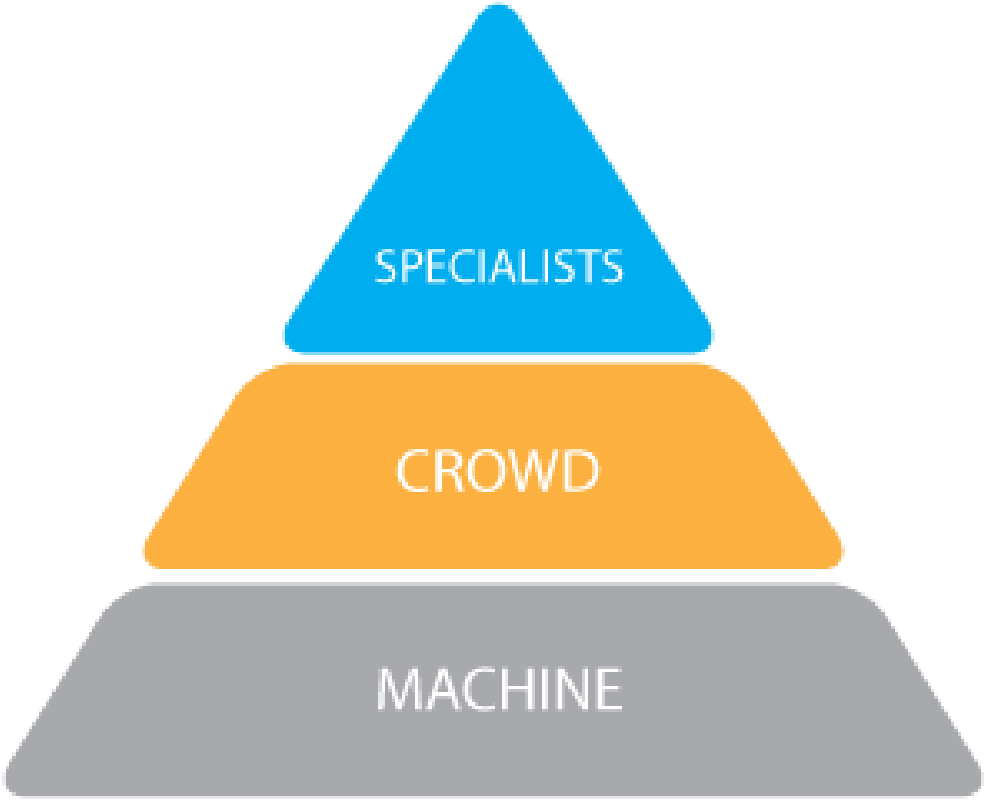
MACHINE LEARNING



Intelligence - positive reinforcement loop

DATA MINING AND CORRELATION

THE IDEAL DATA WORKFORCE



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

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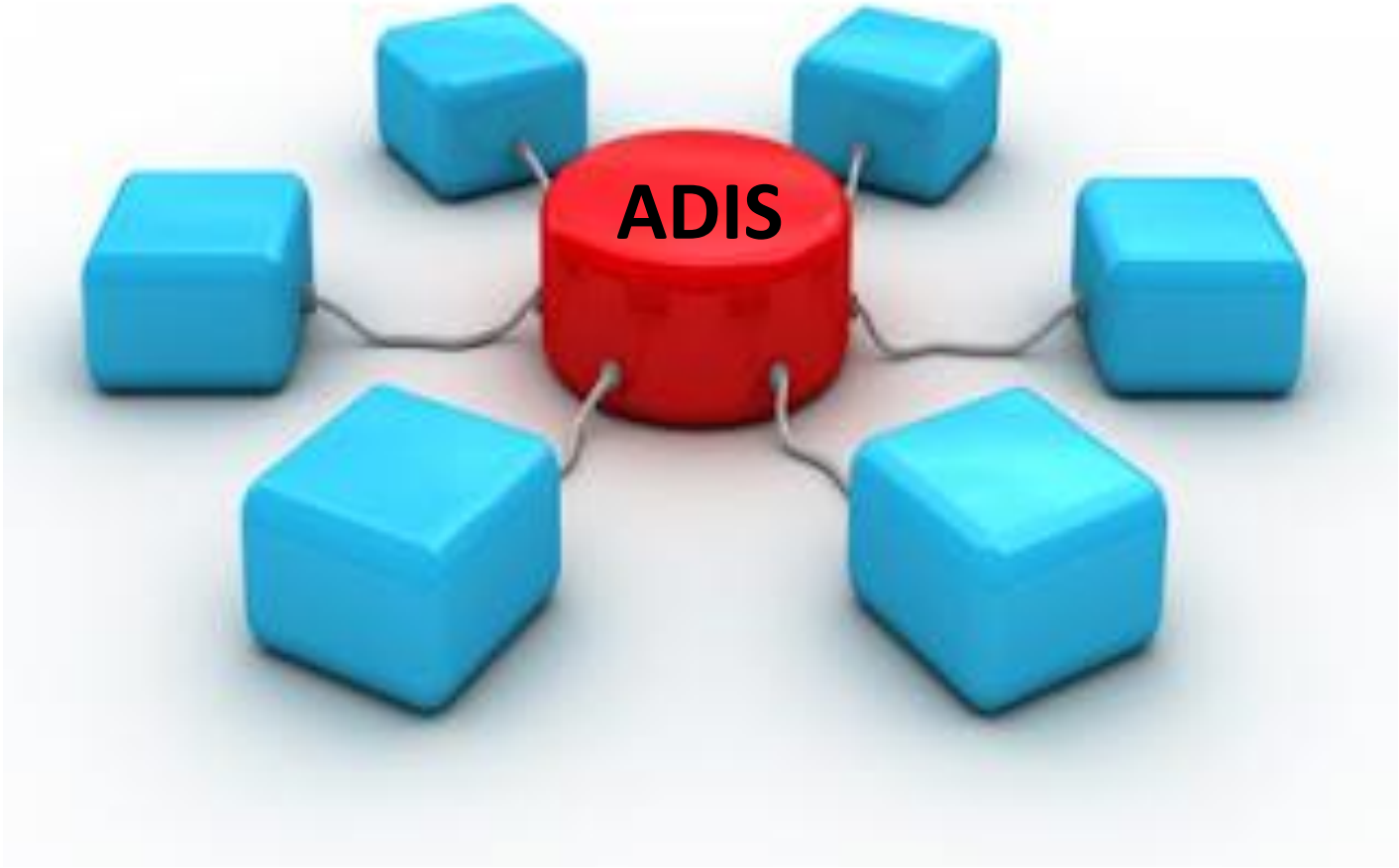
DATA SHARING

Collaboration is the goal!



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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.

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DATA SHARING AND COLLABORATION SOLUTION

- **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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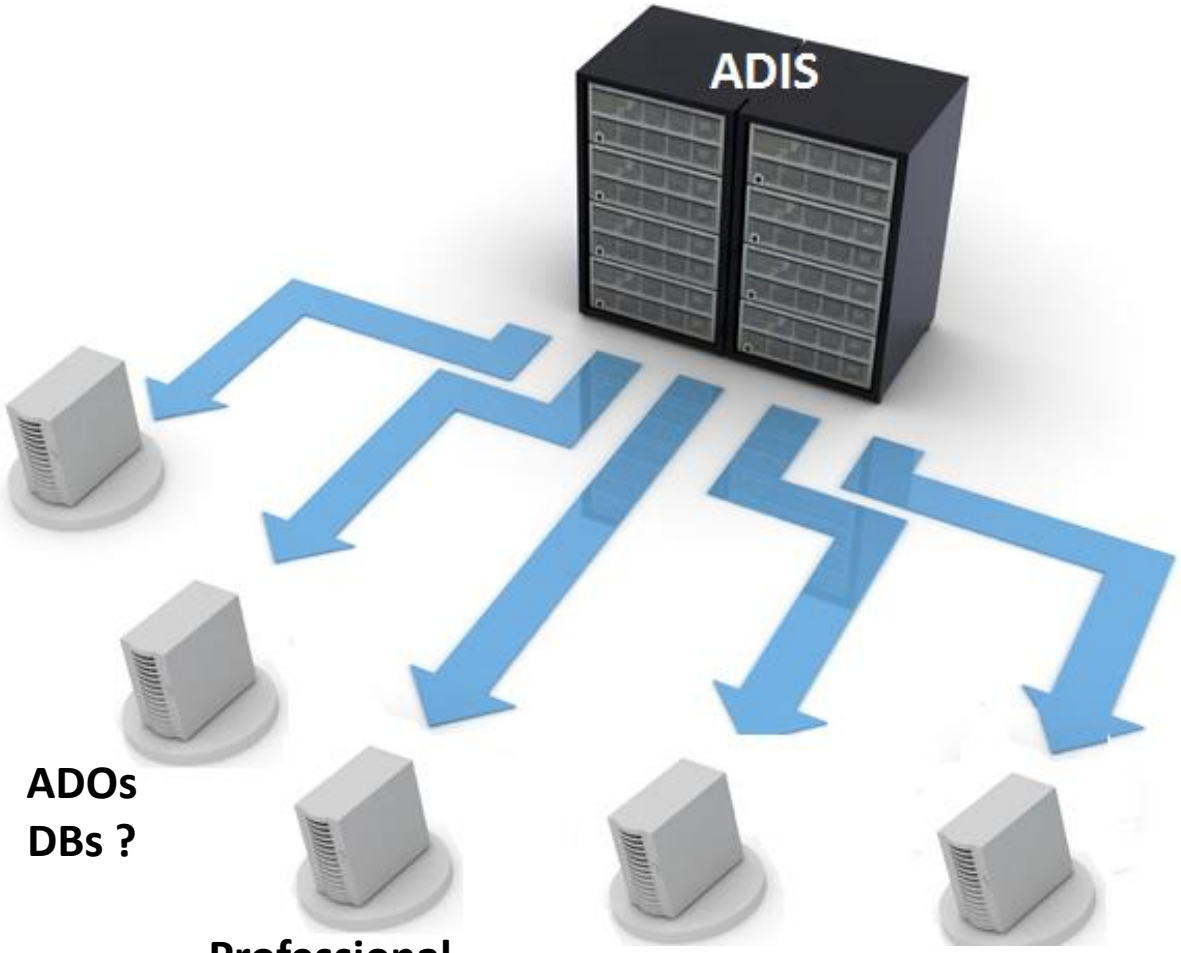
INTERFACING OTHER DATABASES



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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.