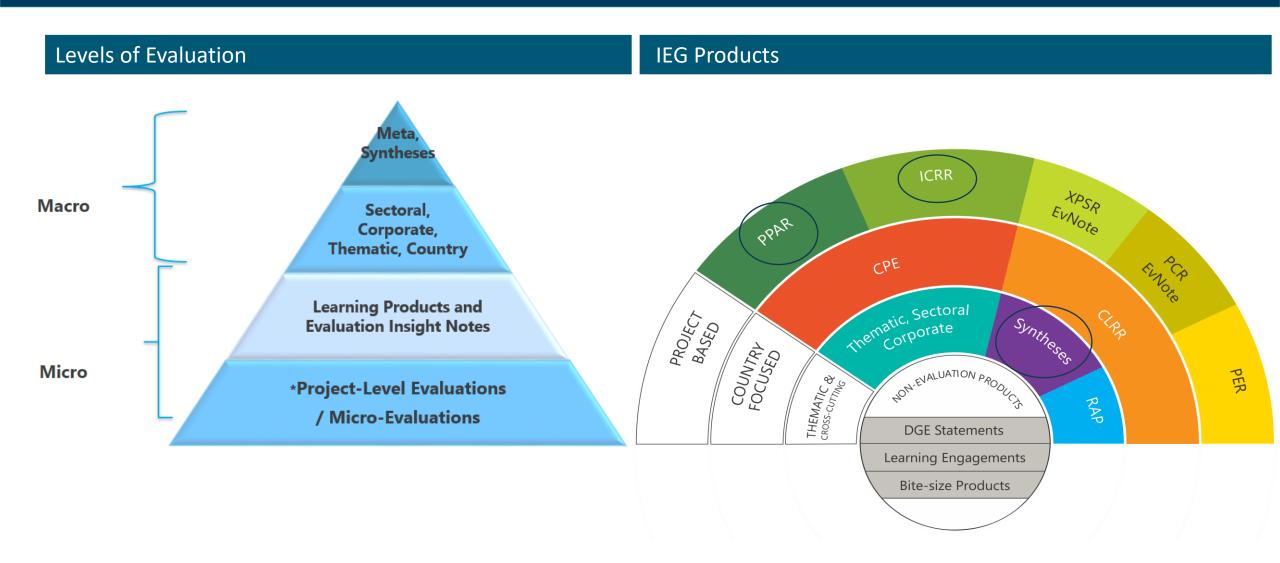
Al &ML in Action:

Revolutionizing Efficiency and Innovation in Evaluation

Christopher Nelson: Manager Sustainable
Development and Infrastructure, World Bank IEG



Where IEG sees opportunities for AI and ML



Machine Learning & Al for Synthesis and Completion Reports (ICRs)



1. An example of Machine Learning at work: Evaluation Insight Note (EIN) Methodology

The Question: How has the World Bank integrated resilience into food security operations?





181 Projects

PORTFOLIO REVIEW

Identified 112 active and 69 closed and evaluated World Bank lending projects between FY16-22 that had a Food Security Theme Code.



4 Pillars

CATEGORIZATION

Organized into pillars of food security outlined by the Food and Agriculture Organization of the United Nations (FAO): availability, access, utilization, and stability.



2 FAO Indexes

MAPPING

Charted for resilience aspects and analyzed lessons for closed projects.

ML Impact: Five elements for successfully building resilience for food security projects

5. Country level programming to synergize across sectors, themes and WBG partners

1. Addressing multiple issues at the same time

4. Using decentralized approaches, including community engagement

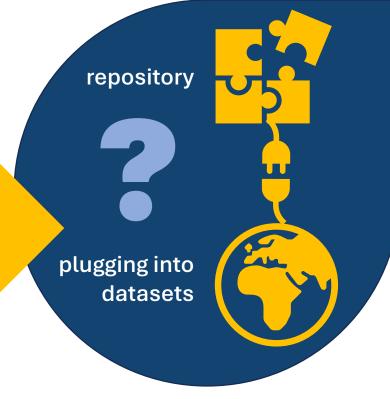
2. Increased use of agricultural technology and innovation

3. Promoting the role of the private sector to move the needle on FNS



2. An example of AI incorporation at work: a better data platform for AI prompts in evaluation work

The Question: **How can we build the required internal data architecture to respond to AI tools?**





2400 Projects

PORTFOLIO

Since 2017 reform – all reviewed projects in data repository in templated format



3 Elements

CATEGORIZATION

- Business Intelligence
- Disaggregation
- Internal and External benchmarking



2 Al functions

Project Level & Curated Datasets

Utilize AI at project level AND for curated Data

WB Data Infrastructure with IEG Data Hub 2024 **SOURCES MANAGE ANALYZE & VISUALIZE** Data Hub data set* Ingest, Transform, Model, Authoritative, and pre-defined **ENTERPRISE** Integrate and Organize reports for decision making Operations, Finance, Corporate etc. **Standard Reports** Extend and customize **PARTNER** prebuilt Standard Reports Power BI Dataset w/ Semantic Model UN, IMF etc. Data Studio **Enterprise Data Lake Create Custom reports PROCURED** and Lakehouse Self-Service data mash up Bloomberg etc. **Data Preparation** Create Custom visualization and reports **OPEN** Perform AI/ML code driven Power BI / Tableau OWID, OECD etc. analytics Data Science (Databricks) **DEPARTMENTAL Enterprise Datasets** API Services, JDBC/ODBC, (including user upload shared data) **BYOD** Upload and XLS share data IEG Data Hub Interface FURL "http://iegdatahub/" **ACCESS** (for IEG staff only) • Use and/or Modify and Share Custom Power BI IEG Report Templates **Data Explorer** IFC Access curated Standard Reports **Enterprise Datasets and Reports** Access curated data sets from Data Explorer **Existing BI Reports** are catalog in Data Explorer Access curated IFC reports from IFC's BI platform (requires special access)

*Data Hub data set

*The Operations IEG's data set is IEG-owned data combined with Operations data within the Enterprise Data Lake. It is what you connect to through Power BI when you select a data set:

Operations

Tools that have an interface for direct user access



WBG user IEG

Connected live to the Power BI dataset: Operations IEG in Corporate - Operations accessible to ADB Management and Staff. It may be shared outside ADB with appropriate permissions.