

# **GEI Working Group on Training and Professional Development**

5th meeting - Jan 18, 2023

# Agenda

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Lightning talks from GEI partners

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GEI's strategy to support YEEs (presentation and Q&A)

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Data science in evaluation (presentation)

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Tour de table

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Next steps

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# Lightning Talks

- DEval
- WFP
- ALNAP

# Evaluation Management

## Online course

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# Managing evaluations

Good evaluation management is key for having quality evaluations and them being used: management teams are the link between decision-makers and evaluators.

## Learning objective

Participants reinforce their knowledge on evaluation management, so they can plan and support in a more effective and critical way the development of quality evaluations.

## Target

Professionals from Latin America who manage evaluations or who want to learn how to do it. It is aimed at public sector, NGOs, civil society, development organizations, among others.

# Evaluation Management Course Overview



## Time investment

14 weeks  
(84 hours)



## Modality

E-learning with  
tutor support



## Sessions

4 Thematic  
synchronous  
sessions (optional)



## Virtual Environment

Learning Management  
System (LMS) **NEO**

# Evaluation Management Course

## Modules & Steps

0

### INTRODUCTION

Basic concepts to manage evaluations

1

### PLANNING THE EVALUATION

**Step 1.**  
Identify the evaluand

**Step 2.**  
Map the stakeholders

**Step 3.**  
Identify the evaluation purposes

**Step 4.**  
Analyze evaluability

**Step 5.**  
Describe the theory intervention

**Step 6.**  
Decide the scope and focus

**Step 7.**  
Develop evaluation questions

**Step 8.**  
Frame the methodological design.

**Step 9.**  
Analyze the evaluators profile

**Step 10.**  
Prepare the terms of reference

**Step 11.**  
Review and select proposals

2

### OVERSEEING THE DEVELOPMENT OF THE EVALUATION

**Step 12.**  
Review the work plan

**Step 13.**  
Accompany the field work

**Step 14.**  
Review the evaluation report

**Step 15.**  
Communicate the results

3






### FOSTER EVALUATION USE

**Step 16.**  
Use evaluation recommendations

**Transversal axes:**  
*gender and human rights approach, participation and use.*

# Evaluation Management Course

## Evaluation

Participation in forums		20%
Preview practical case – group work		15%
Preview practical case – individual work		15%
Practical case – Final		20%
Final test		30%

*Minimum grade:*

**80/100**



# 1st Cohort

## Evaluation Management Participants



April – June 2022



20 students started  
17 students finished



Entry and exit tests average grades:  
63/100 vs 93/100



# Evaluation Management

## Online course

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**WFP EVALUATION**

# WFP Evaluation Capacity Development

GEI Lightning Talk

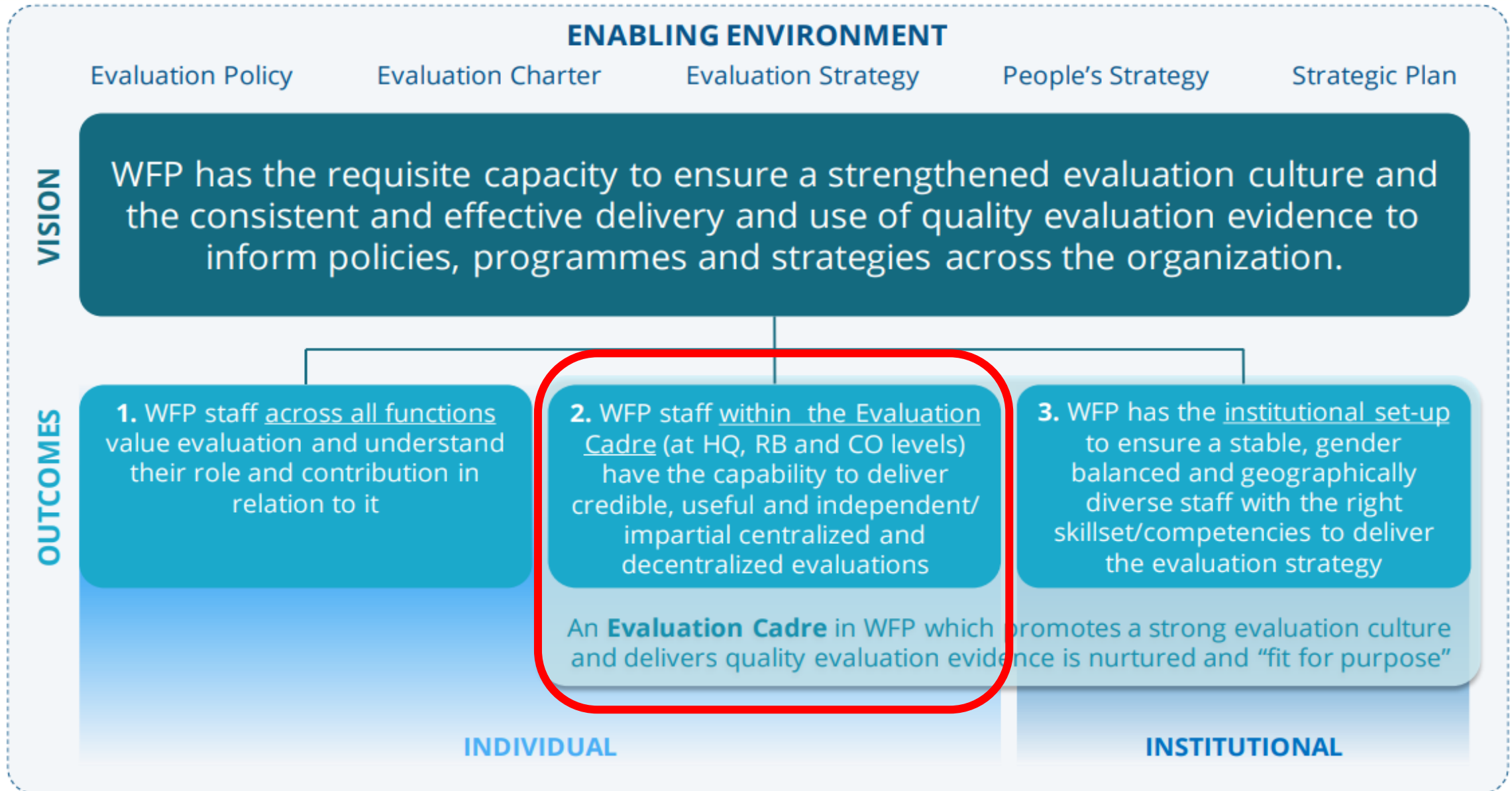
January 2023



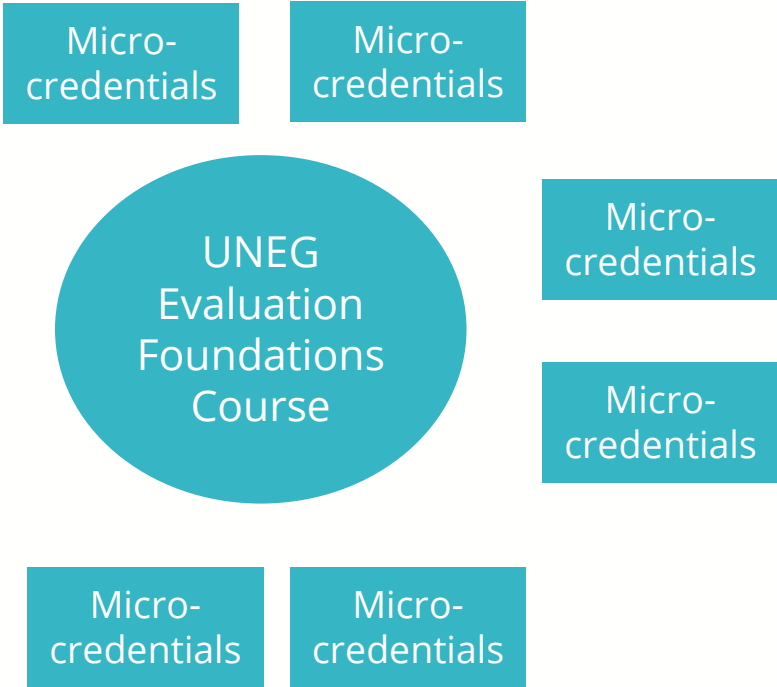
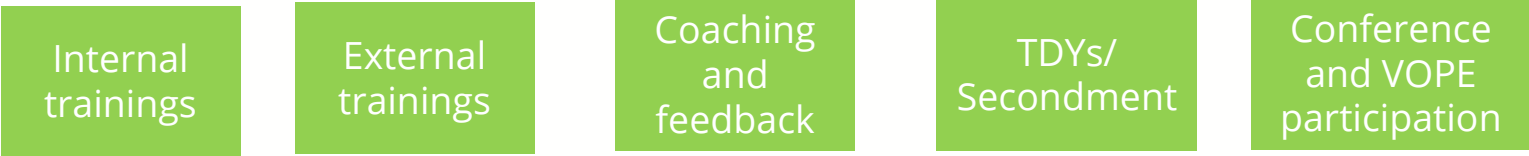
World Food Programme

SAVING LIVES  
CHANGING LIVES

# Big Picture: WFP Evaluation Capacity Development Strategy



# Learning Paths: Existing & Under Development Initiatives



# Micro-Credentialing Scheme (Collaboration with UNSSC)

## What is it?

**Flexible approach** which allows learners to tailor their **learning path/portfolio** based on their needs and professional development and provides a framework for recognition of achievement of learning outcomes

*Micro-credentials are a record of focused learning achievement verifying what the learner knows, understands or can do (short period). They are typically focused on a specific set of learning outcomes in a narrow field of learning and achieved over a shorter period of time. Micro-credentials include assessment based on clearly defined standards and are awarded by a trusted provider. It is underpinned by relevant quality assurance following agreed standards*

## Who is it for?

WFP Evaluation Cadre focusing initially on intermediate level

## Development

Phase 1: Develop Quality Standards Framework and 4 Pilot Micro-credentials

- Advisory Group
  - Advise on Micro credential Quality Standards Framework
  - Review pilot micro-credentials to ensure in alignment with framework
- Micro-credential developers (subject matter experts)

# Micro-Credentialing Scheme Key Elements

**Learning Outcomes** aligned to UNEG Evaluation Competency Framework

## Micro-credential components

- Learning Outcomes
- Any prior knowledge and or/skills that a learner needs to have
- Audience and level
- Clear description of the content/curricula per learning outcome
- Articulation of how the learning modalities contribute to the Learning Outcomes
- Clear description of level of effort (hours required) for the different learning modalities
- Additional detail of the assessment methods and modalities

## Learning Modalities



Online or classroom-based training  
Coaches/mentors (external)  
On the job application / practicum experience  
→ Assessment (external but informed by internal components)

## Key Roles:

- Micro-credential developer
- Learning provider(s) – including mentors and coaches
- External assessment provider
- Scheme Administrator

A person wearing a colorful striped jacket and a black helmet is riding a motorcycle away from the camera on a paved road. The motorcycle is heavily loaded with white sacks. A blue bag with the WFP logo and the text 'Programa Municipal de Alimentos BOLIVIA' is prominently displayed on the back. The road is flanked by dry, brownish vegetation and hills in the background under a clear sky.

# Thank you!



[wfp.org/independent-evaluation](https://wfp.org/independent-evaluation)



[wfp.evaluation@wfp.org](mailto:wfp.evaluation@wfp.org)



[@WFP\\_Evaluation](https://twitter.com/WFP_Evaluation)



via Giulio Cesare Viola 68, Rome - Italy



# ALNAP



## What have we learned about evaluation training, during COVID?

### GEI Lightning talk

January 2023



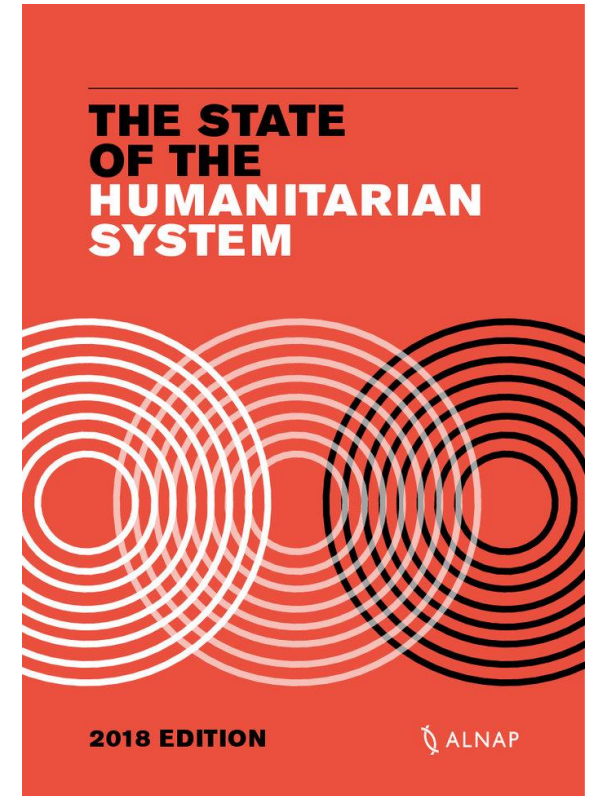
**MONITORING  
& EVALUATION**

 **ALNAP**

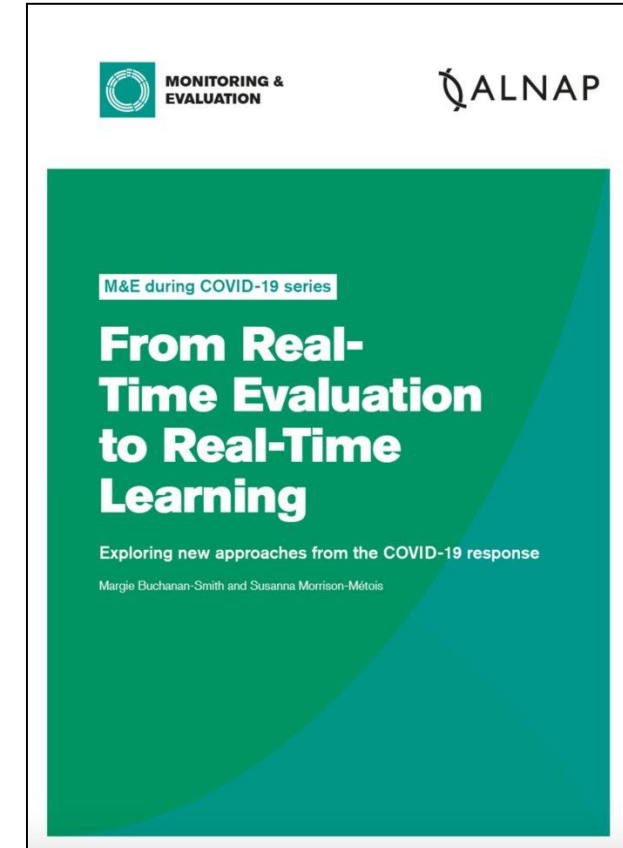
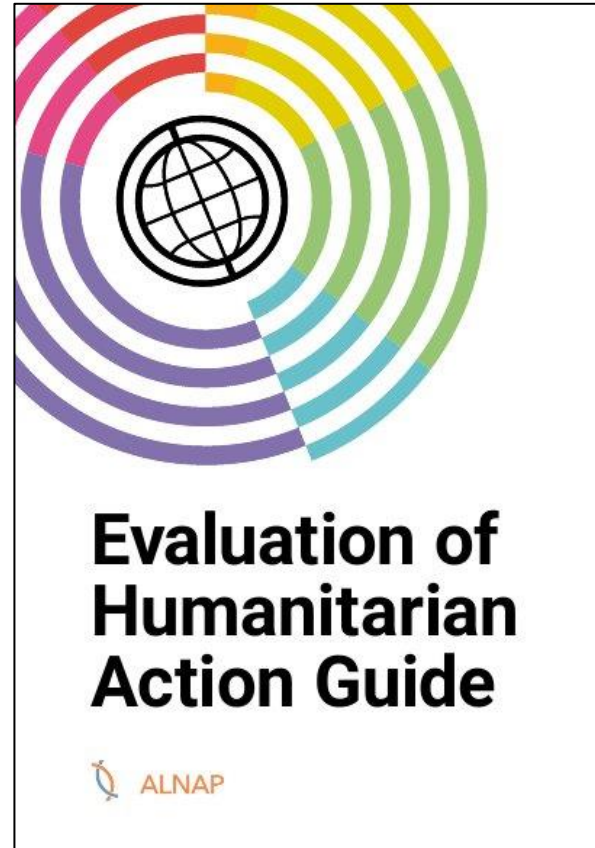
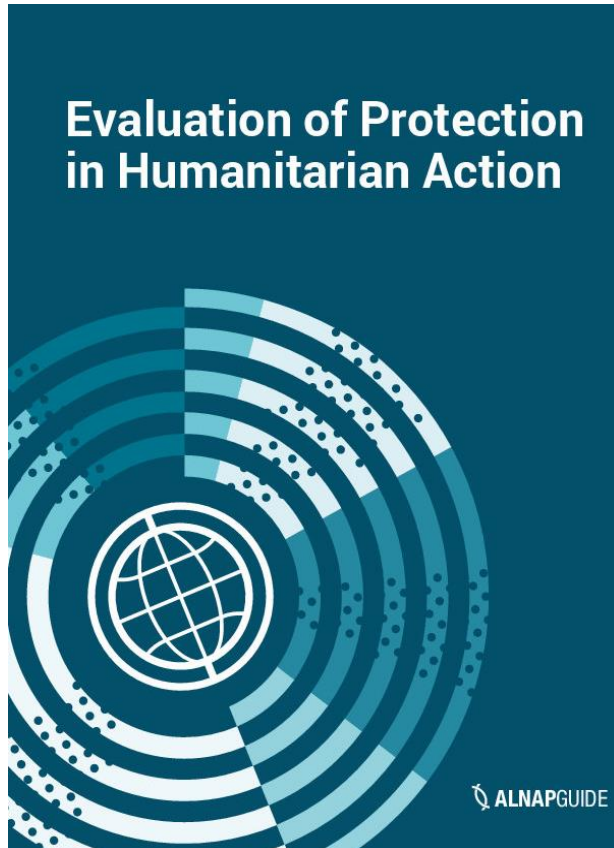
# Active Learning Network for Accountability and Performance in Humanitarian Action



- **System-wide network** of 100+ humanitarian organisations
- **Mandate:** to improve performance through better learning and evaluation
- **Flagship publication:** State of the Humanitarian System Report



# ALNAP M&E guidance



# Humanitarian Evaluation Skills Building

## Before COVID

- **In person & interactive**
- **Likeminded audience**
- **Selected participants**
- **Tied to larger event**
- **Focus on networking**



# Evolved into online knowledge exchanges

- **Online & interactive**
- **Segmented audiences**
- **Democratic access**
- **Standalone & shorter**
- **Tied to research work & theme**

**= greater reach & more diverse**



**EVENT**

**25 MAR**

**Watch ALNAP Webinar:  
How is COVID-19  
transforming M&E?**

25 March

## But important lessons learned

- Don't invite ghosts
- Make them work for it
- Invite everyone, select few ?

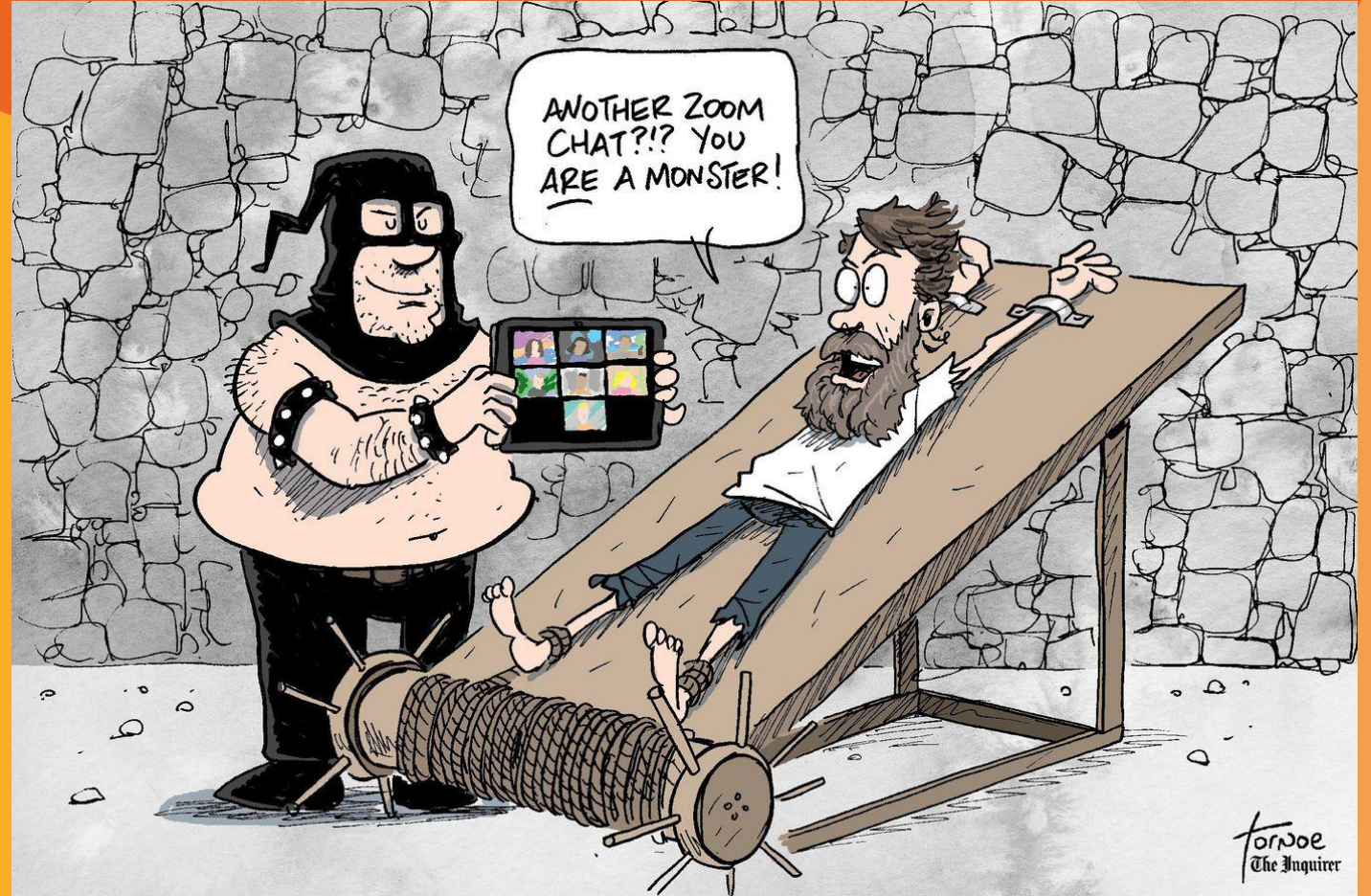
We love:

Interactive, engaging online exchanges  
with breakouts, challenges and group work

....but don't underestimate 1 way communication & webinars



...but online networking is a nut we have yet to crack



# Strengthening Young and Emerging Evaluators (YEE)

GEI Strategy

Working Group Training and Professional Development

18.01.2023



# Introduction



Only GEI cross-cutting strategy that is not thematic, but related to a specific target group



Related to GEI's knowledge, training and professional development work

Strategy development still ongoing

# Support to Young and Emerging Evaluators

**Objective:** GEI contributes to enhancing the individual skills and capacities of young and emerging evaluators in developing countries.

*To improve access of YEEs from developing countries to high quality M&E TPD activities*

- Practical skills: hands-on career opportunities
- competencies: customized trainings
- Scholarships & Networking Opportunities
- Career development guidance
- Outreach


*To enhance the availability and use of relevant YEE-related knowledge products and resources*

- YEE specific knowledge products
- Knowledge Platform
- YEE specific events

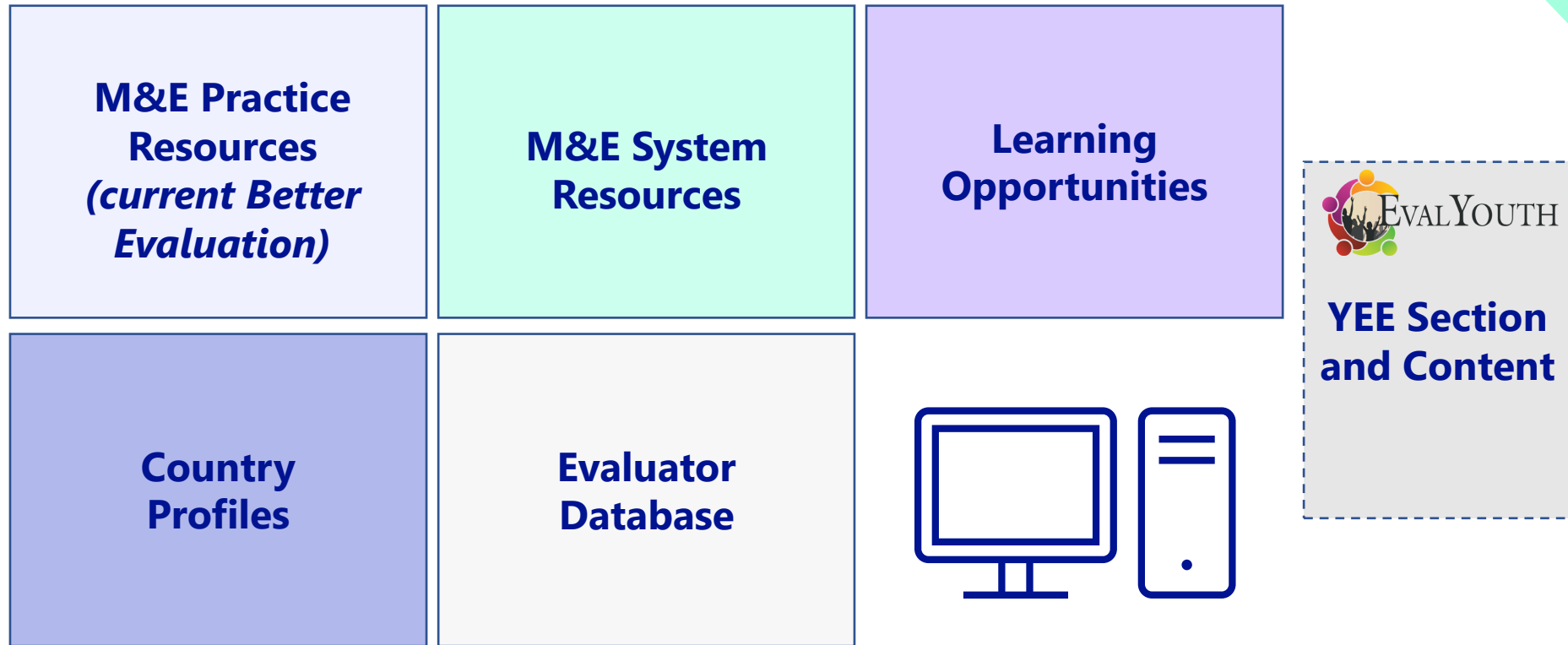


- Core Partner: Collaborate with EvalYouth and build on their work
- Jointly convene institutions in support of YEEs to foster bilateral knowledge sharing among GEI partners, develop partnerships for coordination and collaboration

# What have we done so far...

<b>Hands-on learning program</b>	<p>Coordinate task team for concept development Support tender &amp; contracting process Gather feedback/lessons learned</p>	<p>Clear Centres </p>
<b>Career support modules</b>	<p>Participate in Steering Committee to develop career package Translation into five languages &amp; regional adaptation Implementation of two trainings per region</p>	<p>UNFPA </p>
<b>IPDET</b>	<p>Scholarships for training program</p>	<p>Uni Bern, CEval</p>
<b>GEI Launchpad</b>	<p>Coordinate program development and implementation</p>	<p>WFP, UNDP, CDB, Companies</p>
<b>Hackathon (2020)</b>	<p>Support organization and selection process; moderate events.</p>	<p>IPDET </p>
<b>Outreach</b>	<p>Include YEE aspects into Knowledge Platform concept</p>	<p>Better Evaluation </p>

# GEI Knowledge Platform's Major Components



# Open questions for discussion

- How can the GEI best support YEEs in the field of **training and professional development**?
- How can the GEI best support YEEs in the field of **knowledge generation and sharing**?
- How can the GEI best support **career development** of YEEs?
- Where can we create **synergies among partners** in delivering these activities?

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 [globalevaluationinitiative.org](https://globalevaluationinitiative.org)

# Data Science in Evaluation

Working Group Training and Professional Development

18.01.2023

# Data Science in Evaluations

**Virginia Ziulu**

Data Scientist

Independent Evaluation Group, World Bank



# 1 | Motivation

```
if (n) {
  if (a) {
    for (; 0 > i; i++)
      if (r = t.apply(e[i], n), r === !1) break
  } else
    for (i in e)
      if (r = t.apply(e[i], n))
} else if (a) {
  for (; 0 > i; i++)
    if (r = t.call(e[i], i, e[i]))
} else
  for (i in e)
    if (r = t.call(e[i], i, e[i]))
return e
},
trim: b && !b.call("\uffeff\u00a0") ? function(e) {
  return null == e ? "" : b.call(e)
} : function(e) {
  return null == e ? "" : (e + "").replace(/^\s+|\s+$/g, "")
},
makeArray: function(e, t) {
  var n = t || [];
  return null != e && (M(Object(e)) ?
),
isArray: function(e, t, n) {
  var r;
  if (t) {
    if (n) return e.call(t, e, n);
```

# Terminology

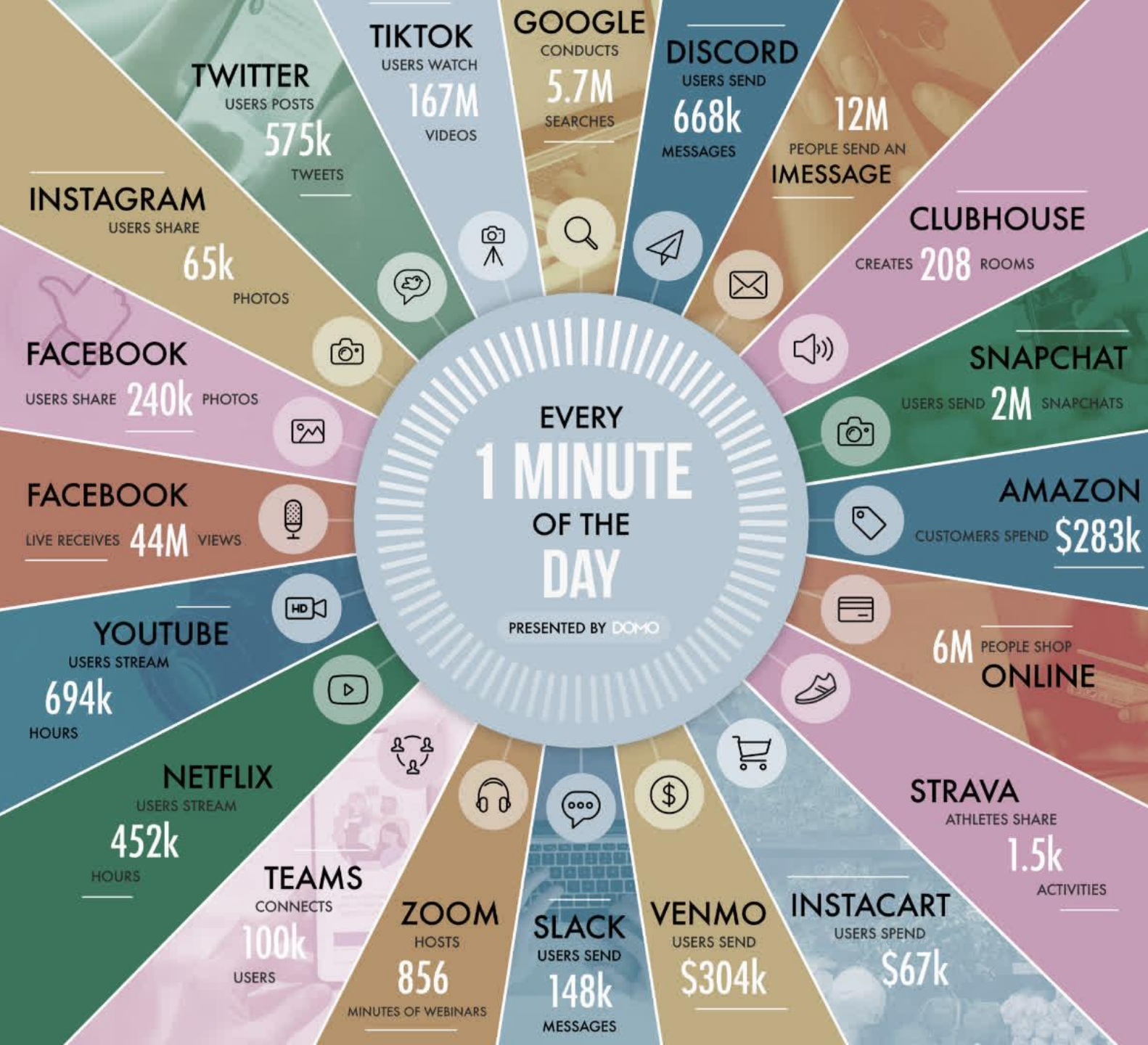
**Data Science** is an interdisciplinary field that involves scientific methods, specialized programming, advanced analytics, and artificial intelligence (AI) to extract knowledge from structured or unstructured data.

**Machine Learning**, a subset of AI, refers to a set of algorithms that can automatically learn from data without being explicitly programmed.

**Deep Learning** refers to a set of algorithms that mimic the way the human brain operate (artificial neural networks).

# Big Data Opportunities

- Explosive growth in the volume of available data.
- 80-90% of available data is unstructured (text, photographs, satellite images, call detailed records, etc.).
- Large repositories of publicly available data.
- Increase in computational capacity allows to tap new data sources.
- Possibility to augment traditional data sources (e.g., census and Survey data).
- Possibility to obtain geographically disaggregated data.



Source: Domo, 2021.



# Potential for Data Science in Evaluations

- **Efficiency:** to manage and analyze data in a semi-automated manner.
- **Validity:** enhanced validity of findings via the application of innovative techniques.
- **Breadth:** enhanced breadth of evaluations via the expansion of types of evaluative inquiry.



## Data Sources:

# Imagery Data

- Image data are one of the most ubiquitous data sources.
- Types of image data include daytime optical satellite imagery, nighttime optical satellite imagery (nighttime lights data), digital photos (streetscape data, geocoded photos shared through social media), crowdsourcing data (such as OpenStreetMap).
- In the context of evaluations, imagery data is mostly use for geospatial analysis.
- Satellite imagery is particularly useful. There is a global 5-decade time series of satellite data.
- In addition to traditional GIS methodologies to process and analyze imagery data, deep learning techniques can contribute to more nuanced analyses.



# Data Sources:

# Text Data

- Text analytics is increasingly becoming ubiquitous due to the staggering amount of unstructured data that is generated daily (including web pages, different types of documents, and social media posts).
- Internal documents (such as project documents) are a particularly valuable resource in the context of evaluations.
- Text data (unstructured) can be analyzed by generating counts, groups, and categories of words.
- More complex techniques allow to understand the semantic meaning conveyed in text. This is useful, for example, to classify project documents across multiple categories, identify the main topics in a collection of documents, or identify the main sentiment (i.e., positive, negative, or neutral) on a document.

# 2 | Applications in Evaluations

# Identification

Identification and description of the evaluation portfolio through semi-automatic means.

# Measurement

Descriptive analysis to understand change across different geographies/time periods.

## Uses of Data Science in Evaluations

# Relevance

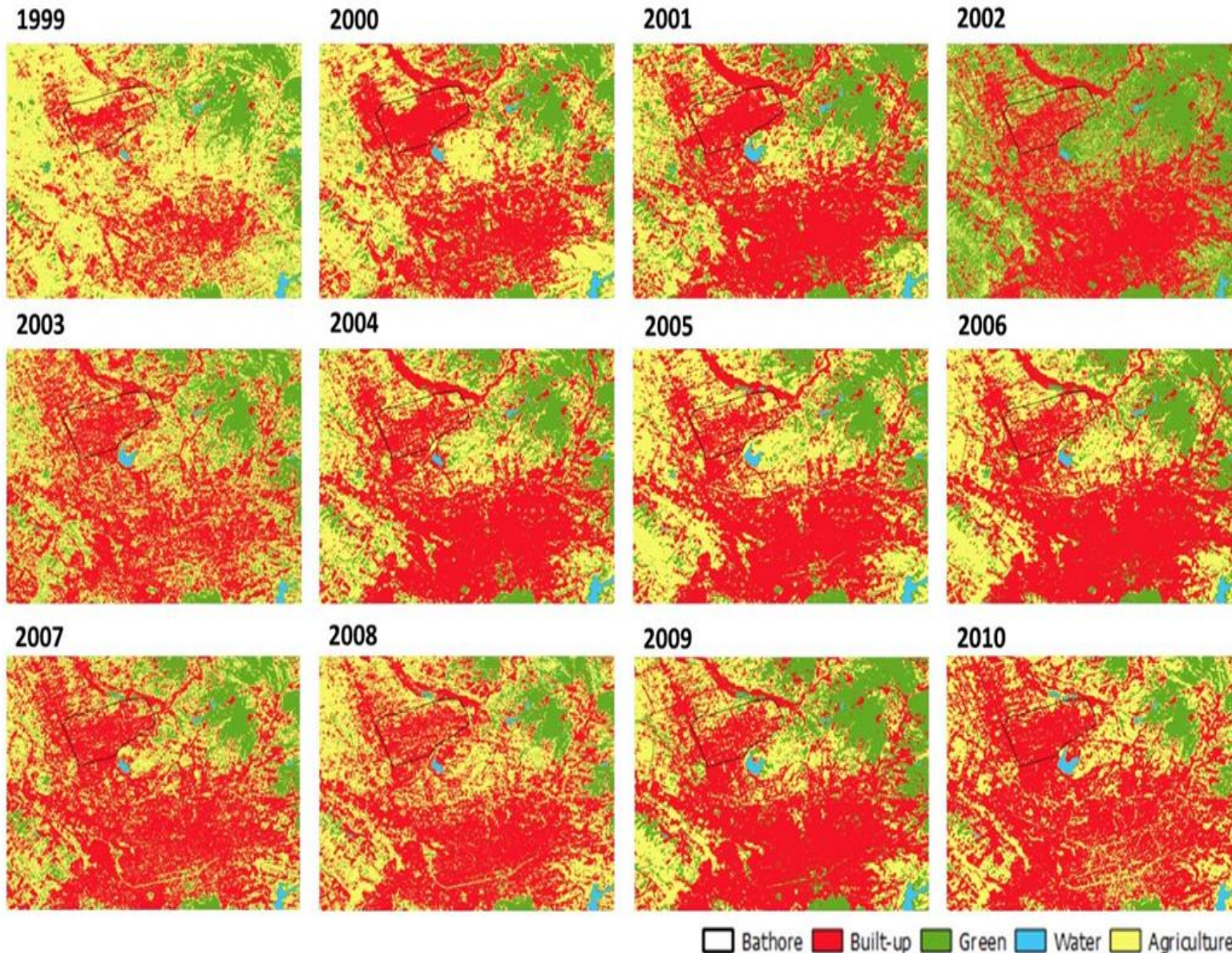
Appropriateness of project objectives and measures the extent to which efforts fit with the local needs and the strategies of targeted communities.

# Effectiveness

Allows to understand the extent to which the expected specific goals have been reached through the project activities and efforts.







Location: Tirana (Albania). Data source: Landsat.

## Measurement

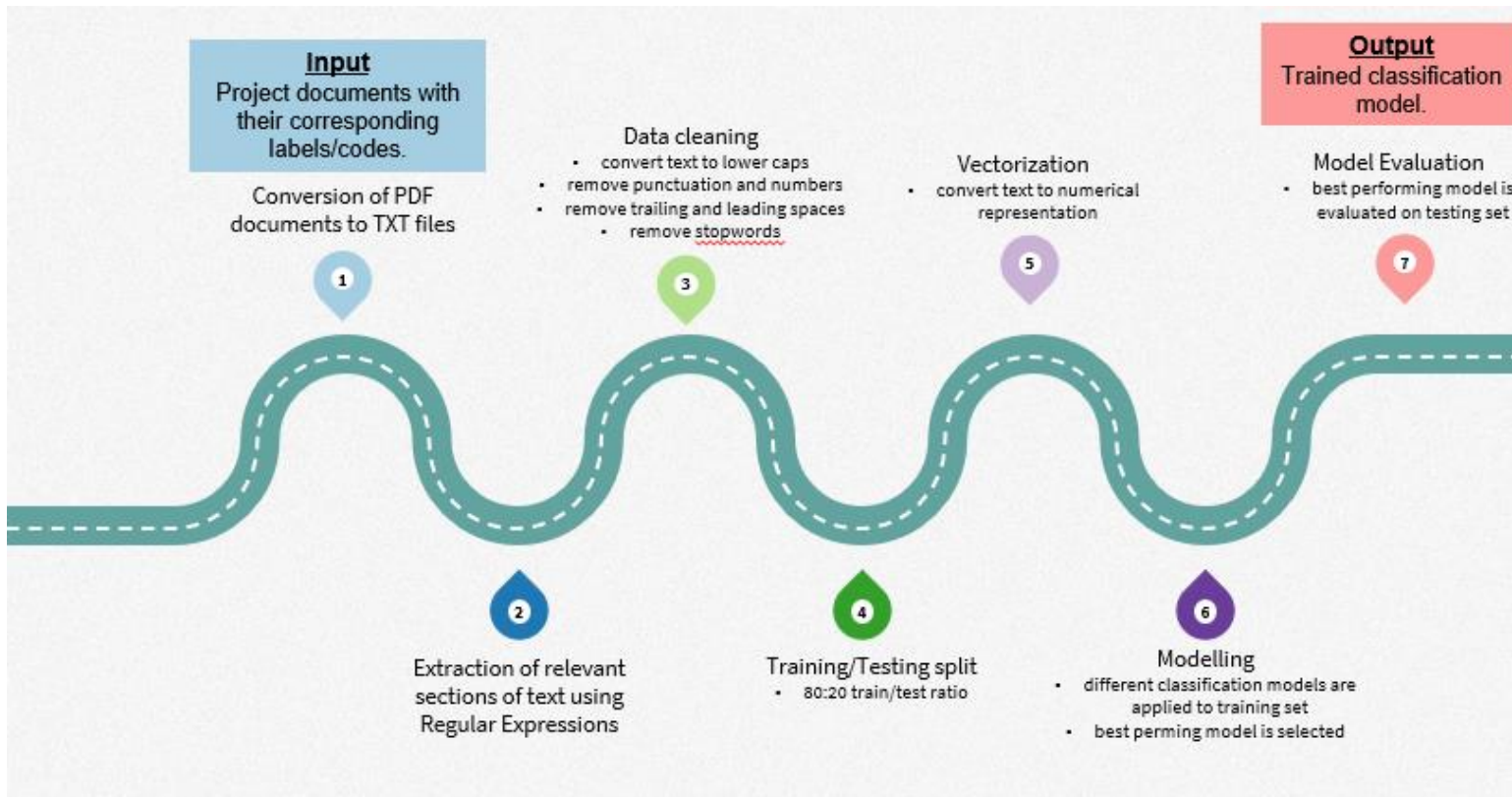
- **Objective:** to understand to what extent horizontal density changed in upgraded neighborhoods in Tirana (Albania).
- **Data source:** optical daylight satellite imagery.
- **Methodology:** supervised classification of satellite imagery to derive land use/land cover model.

# Relevance

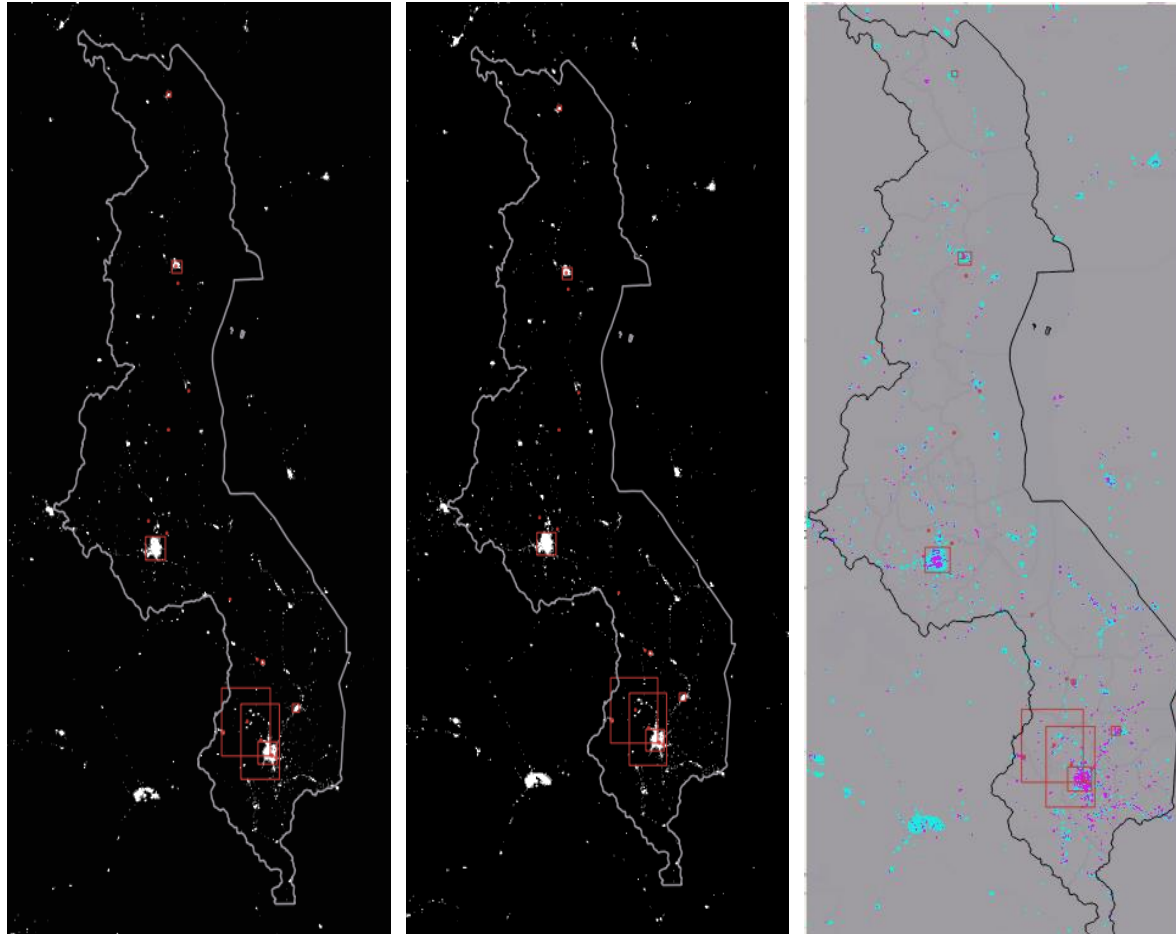
- **Objective:** to understand the shift in the composition of the World Bank portfolio after the implementation of a multisectoral program (Human Capital Project). The analysis aimed to quantify the differences in portfolio composition: (i) before and after the implementation of the program, and (ii) for those countries that were part of the program versus those countries that were not part of the program.

- **Data source:** 800+ project documents.

- **Methodology:** classification (NLP or natural language processing).



Pipeline used to train classification model.



Nighttime lights in Malawi in 2013 (left) and 2019 (middle). The map on the right shows the difference in radiance between 2013 and 2019 (blue represents more light, magenta represents less light, gray means no change). Data source: Visible Infrared Imaging Radiometer Suite (VIIRS) and Living Standard Measurement Study (LSMS).

## Effectiveness

- **Objective:** determine the effectiveness of large-scale development intervention in Malawi.
- **Data source:** optical nighttime satellite imagery.
- **Methodology:** gridded geospatial analysis + difference-in-differences analysis. Used a counterfactual design based on the identification of both “treatment” and a “control” areas.

# 3 | Practical Considerations

# How to Start?

- Data Science can be a useful complement to traditional methods but does not replace a clear evaluation design.
- Start slowly and incrementally (automatization of manual tasks, descriptive analyses).
- Teams require a combination of data scientists, subject matter experts, and evaluators.
- In parallel, it is important to increase the data science literacy of teams working on evaluations.
- Focus on replicable models.
- Experimentation to determine which methodologies work best.



# Practical Challenges

- **Access to data:** there is a large amount of publicly available data. More advanced applications might require the purchase of specific data (e.g., very high-resolution satellite imagery).
- **Software:** most applications require the use of specialized software (such as Python, R, ArcGIS, or QGIS).
- **Computational capacity:** more complex applications (such as deep learning or those based on imagery) might require additional computational capacity.
- **Data cleaning and processing:** the initial stage of data cleaning and processing is essential and tends to be the most time-consuming.
- **Validity challenges:** specially for geospatial analysis, it is important to 'groundtruth' imagery data.





# Ethical Considerations

- **Impartiality:** some data could incur in implicit biases against certain protected groups (e.g., race or gender).
- **Interpretability and Transparency:** complex data science methods (such as deep learning) typically achieve high accuracy but act as a “black box”. There are some approaches to help with this (XAI or Explainable Artificial Intelligence).
- **Responsibility:** data processing steps and methodological decisions need to be clearly documented. Code needs to be reproducible.



**Thank You!**

# Tour de Table

Working Group Training and Professional Development  
18.01.2023

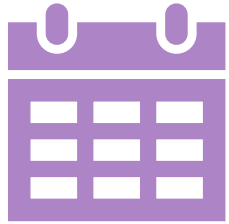
# Next steps

Working Group Training and Professional Development  
18.01.2023

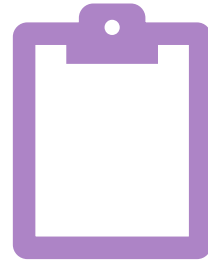
# Next Steps (what is coming up)

- Task Teams update
- New Task Team: Evaluator competency framework comparative assessment and learning pathways in the GEI network
- If you have a proposal for collaborative work with other GEI partners please let us know: [vthebo@worldbank.org](mailto:vthebo@worldbank.org)
- GEI Global Team: work on GEI instructor database

# And finally...



Next **meeting** in April/May **2023**



Please fill out the post-meeting [survey](#)




Please remember to share with us any information you would like to highlight in future WGTPD sessions!

# Thank you!

 @GEI\_GlobalEval

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 [globalevaluationinitiative.org](https://globalevaluationinitiative.org)