MERCY CORPS AGRIFIN

8th ale AGRIFIN LEARNING EVENT

15th- 16th October 2024
Nairobi, Kenya

Enabling rural economies:

Creating lasting impact for the digital ecosystem in Africa.

#ALE2024
#AgriFinALE2024

Realizing Africa's AI Opportunity:
Addressing systemic challenges

Presentation by:

Philip Nelson

Director, Software Engineering,
Google Research

Aisha Walcott-Bryant

Lead, Google Research Africa &
Senior Staff Research Scientist

Proprietary + Confidential

Google Research

We harness the power of AI to advance Google products and address societal challenges, working closely with global users, communities and partners to impact the lives of billions.

2K
Languages

3K
Ethnic Groups

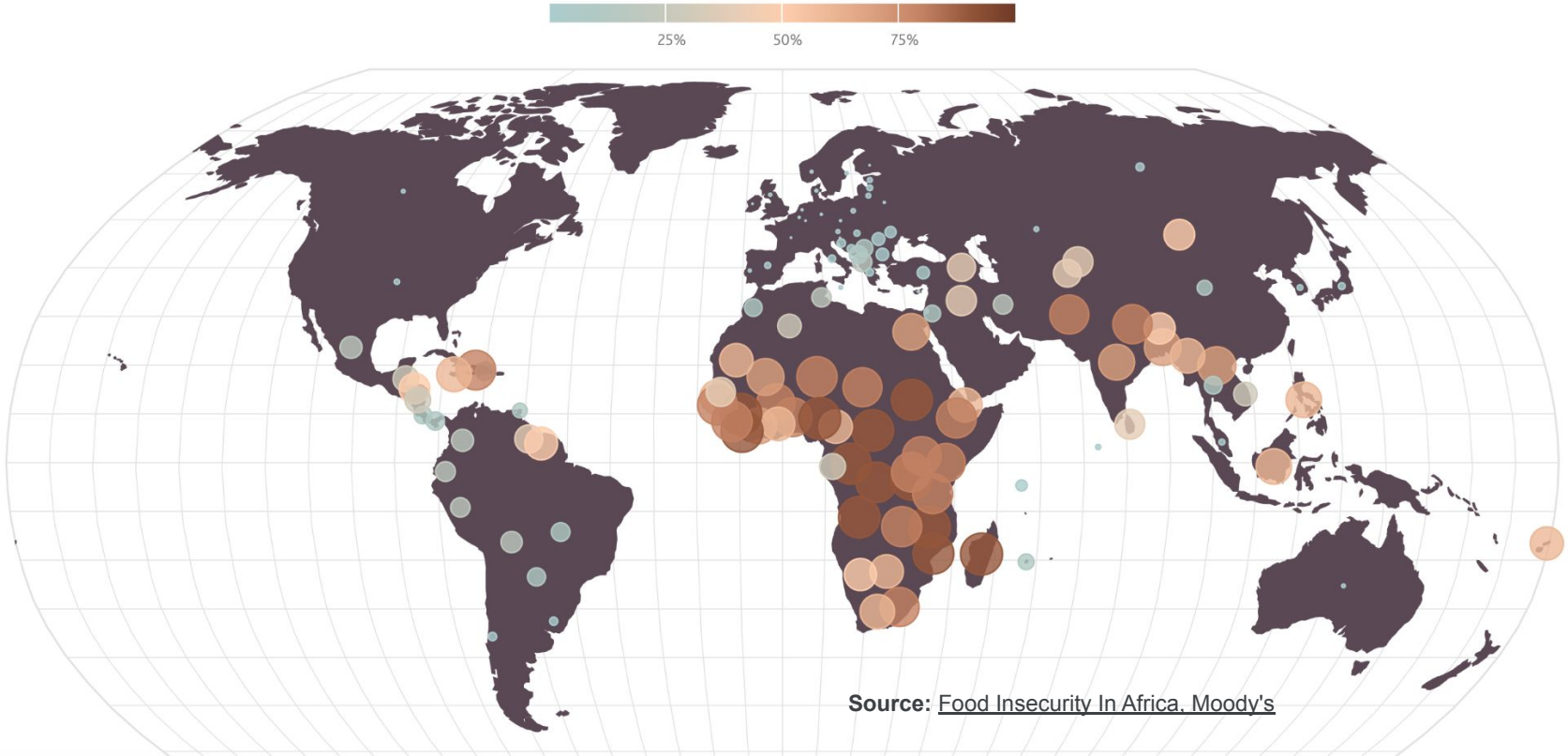
>40%
of youth on the planet by 2030

3B+
Population Growth by 2050

MOODY'S

Three billion people worldwide couldn't afford healthy food in 2020. One-third were Africans.

Share of population who couldn't afford a nutritious diet in 2020, according to The World Bank:



Source: Food Insecurity In Africa, Moody's

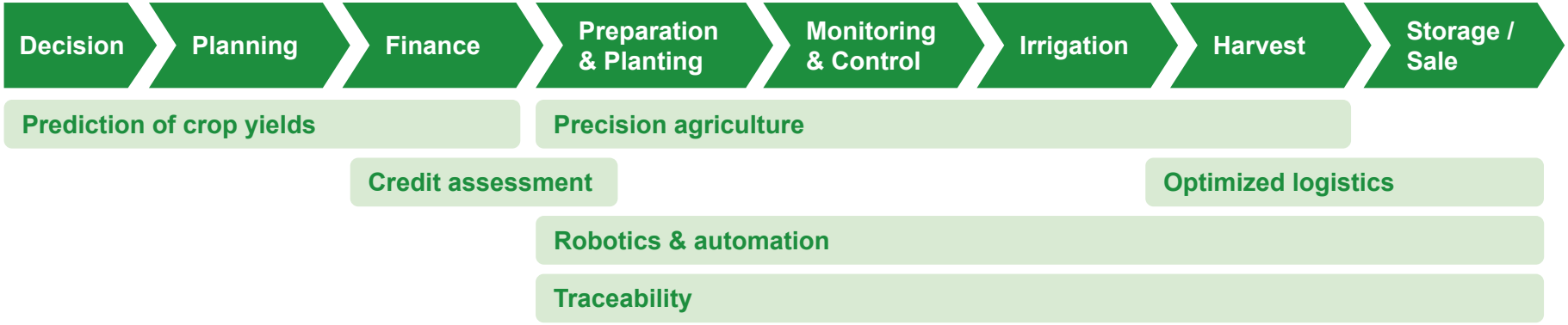
Proprietary + Confidential

Every $1 invested in digital technology in sub-Saharan Africa will create over $2 in wider economic value for the region by 2030.

Source: Google & Public First

Proprietary + Confidential

AI will transform agri-food systems along the agriculture value chain in LMICs



Case study: Hello Tractor

Hello Tractor launched an innovative platform that connects tractor owners with farmers. Tractors are fitted with low-cost IOT devices which collect data about the farm and the tractor to provide predictions on, for example, tractor maintenance or likely crop yields.

Proprietary + Confidential

Google's Digital Sprinters Framework: To realize the AI opportunity, public and private sector need to collaborate across four pillars.

Physical capital

Enable access to the internet through affordable data, devices and compute.

Human capital

Foster digital skills development to enable AI usage and tool development.

Technology

Promote the adoption of innovative technologies. Enable responsible and localized innovation.

Competitiveness

Advance the digital economy through suitable policies and regulation.

Source: Google Digital Sprinters Framework

Proprietary + Confidential

Physical capital: closing the digital divide

58% of adults in SSA are not connected to the internet.

Investments needed for:

→ **Data**
Infrastructure expansion and innovative solutions for last-mile.

→ **Devices**
Ultra affordable smartphones and financing schemes.

→ **Compute**
Centralized data centers and local compute power on mobile devices

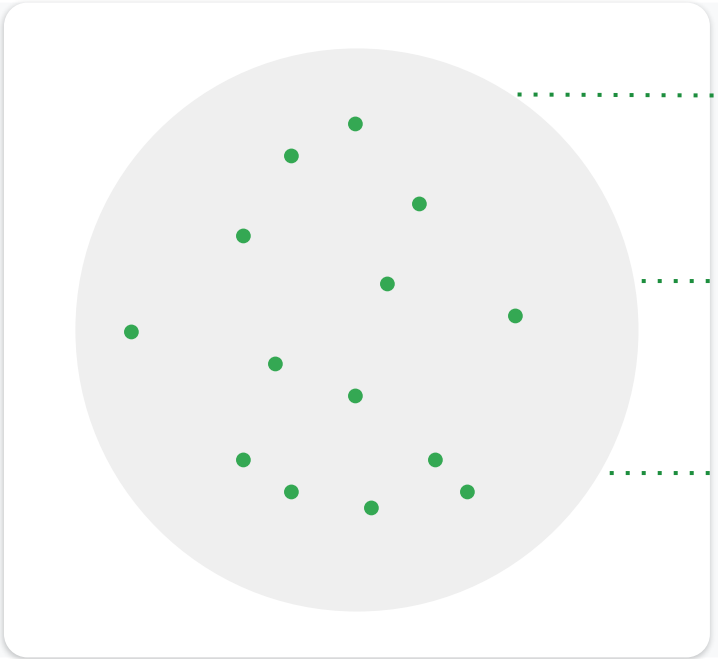
Source: GSMA, Alliance for Affordable Internet (2020)

Proprietary + Confidential

Human capital: AI-ready workforce

Governments must invest in AI education and training.

Building an AI-ready workforce calls for a collaborative, society-wide effort involving government, the private sector, and educational institutions.



AI Learners

with basic AI literacy

AI Implementers

who use and adapt AI tools at work

AI Innovators

who can help to shape how the technology evolves

Source: Google's AI Sprinters Framework

Proprietary + Confidential

Technology: Bold & Responsible, together

Data

High-quality datasets are essential for training effective AI models that minimize bias and can be tailored to meet specific needs.

→ Open data standards

→ Secure data sharing infrastructure

→ Copyright and privacy protection

Localization

For AI to have a broad impact, solutions must be rooted in local contexts.

→ Local languages

→ Local tool optimizations

→ Local user needs

Responsible AI

As with any nascent technology, AI also holds some risks. A bold, responsible and collaborative approach is needed to enable responsible innovation.

→ National AI strategies & regulations

→ Robust AI governance

→ Bold & responsible AI

Source: Google's AI Sprinters Framework, Boorkings

Proprietary + Confidential

Google Research Africa:

To build a world-class African research organization that is delivering sustainable societal and business impact for Africa and the world.

Proprietary + Confidential

Google Research Africa: Overview

Focus

Open Buildings

Food Security

Weather

African Languages

Collaboration

Ai For Maternal Ultrasound

Access To Maternal Care

Tuberculosis Screening With Ai

Proprietary + Confidential

Food Security - Early Work

Food Insecurity Forecasting
Early warning systems for vulnerable populations at risk of food insecurity

Plant Phenotyping
Transforming climate resistant seed breeding at scale with AI

AI Assisted Actionable Ag Advice
Providing locally relevant advice to increase smallholder productivity

Mission: To build AI-driven tools that empower communities to achieve global food security.

MERCY CORPS AGRIFIN | 8th ale AGRIFIN LEARNING EVENT | 15th- 16th October 2024 Nairobi, Kenya

Thank you for your attention.