

# Perceptions and the drivers underpinning change in a transforming global world.

Wayne Dredge



# Perceptions and Solutions

1. In all low-income countries across the world today, how many girls finish primary school?
  - A. 20%
  - B. 40%
  - C. 60%
  
2. Where does the majority of the world population live?
  - A. Low-income countries
  - B. Middle-income countries
  - C. High-income countries

# Perceptions and Global Policy

3. In the last 20 years, the proportion of the world population living in extreme poverty has
- A. Almost doubled
  - B. Remained more or less the same
  - C. Almost halved
4. What is the life expectancy of the world today, born in 2016?
- A. 50 years
  - B. 60 years
  - C. 70 years

# Perceptions and Global Policy

5. There are 2 billion children in the world today, aged 0 to 15 years old. How many children will there be in the year 2100, according to the United Nations?
- A. 4 billion
  - B. 3 billion
  - C. 2 billion
6. The UN predicts that by 2100 the world population will have increased by another 4 billion people. What is the main reason?
- A. There will be more children (age below 15)
  - B. There will be more adults (age 15 to 74)
  - C. There will be more elderly (age 75 and older)

# Perceptions and Global Policy

7. How did the number of deaths per year from natural disasters change over the last hundred years?
- A. More than doubled
  - B. Remained about the same
  - C. Decreased to less than half
8. There are roughly 7 billion people in the world today. Which configuration shows best where they live?
- A. 1 billion in Europe, 4 billion in Asia, 1 billion in Africa and 1 billion in America
  - B. 1 billion in Europe, 3 billion in Asia, 2 billion in Africa and 1 billion in America
  - C. 1 billion in Europe, 3 billion in Asia, 1 billion in Africa and 2 billion in America

# Perceptions and Global Policy

9. How many of the world's 1-year old children today have been vaccinated against some disease?
- A. 20%
  - B. 50%
  - C. 80%
10. Worldwide, 30-year old men have spent 10 years in school, on average. How many years have women of the same age spent in school?
- A. 9 years
  - B. 6 years
  - C. 3 years

# Perceptions and Global Policy

11. In 1996 tigers, giant pandas and black rhinos were all listed as endangered. How many of these three species are more critically endangered today?

- A. Two of them
- B. One of them
- C. None of them

12. How many people in the world have some access to electricity?

- A. 20%
- B. 50%
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# Perceptions and Global Policy

13. Global climate experts believe that over the next 100 years, the average temperature will . . .

- A. Increase, get warmer
- B. Remain the same
- C. Decrease, get colder



# Perceptions and Global Policy - Answers

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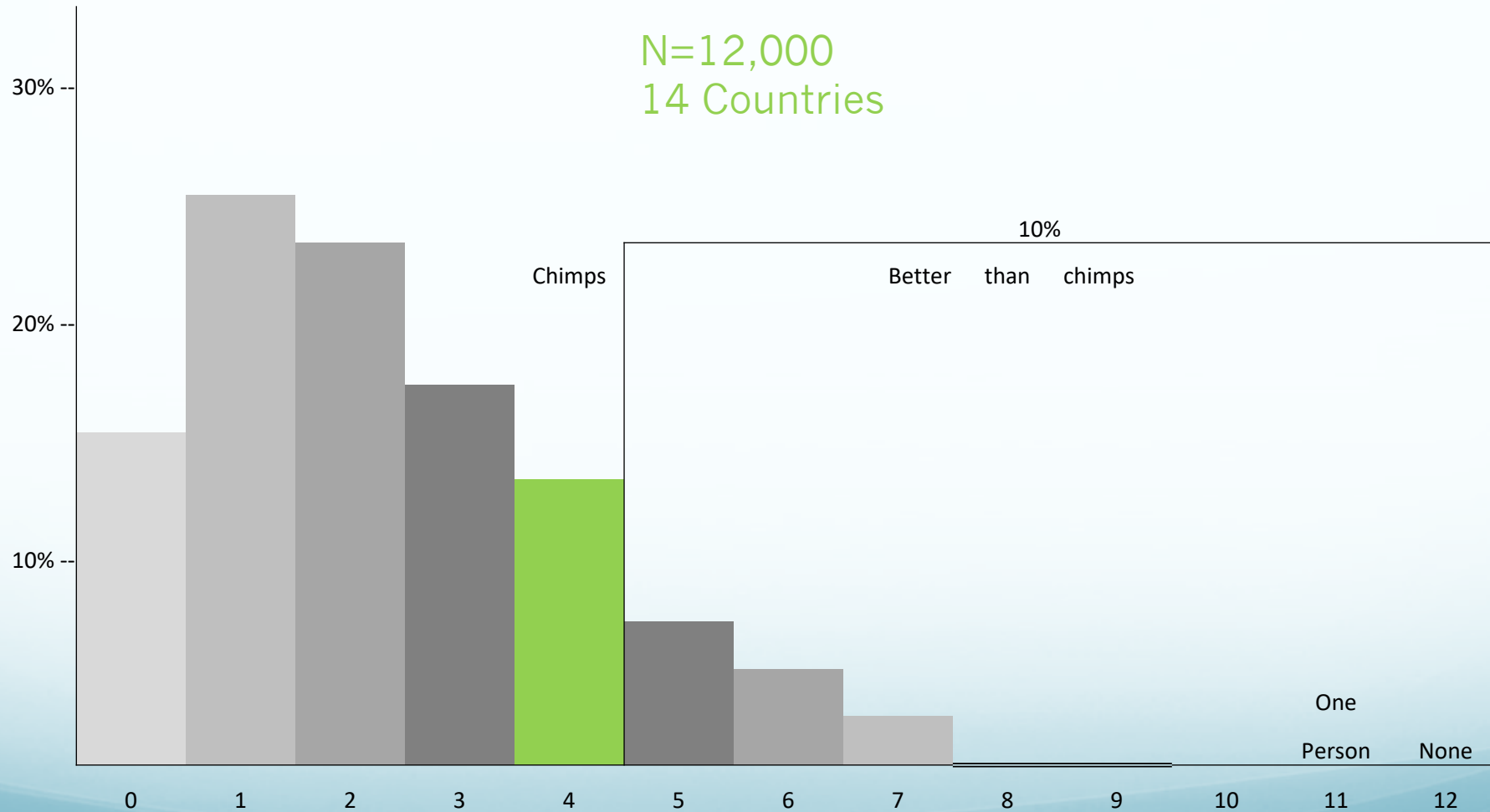
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# Who should be making global policy?





You Should!

Why?

**1** NO POVERTY



**2** NO HUNGER



**3** GOOD HEALTH



**4** QUALITY EDUCATION



**5** GENDER EQUALITY



**6** CLEAN WATER AND SANITATION



**7** RENEWABLE ENERGY



**8** GOOD JOBS AND ECONOMIC GROWTH



**9** INNOVATION AND INFRASTRUCTURE



**10** REDUCED INEQUALITIES



**11** SUSTAINABLE CITIES AND COMMUNITIES



**12** RESPONSIBLE CONSUMPTION



**13** CLIMATE ACTION



**14** LIFE BELOW WATER



**15** LIFE ON LAND



**16** PEACE AND JUSTICE



**17** PARTNERSHIPS FOR THE GOALS



**THE GLOBAL GOALS**  
For Sustainable Development

# SDG 2.4.1

*“By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.”*

**SDG's 1, 2, 3, 12, 15**

Ingrid Caron  
James Alexander  
Mitchell Henderson  
Tom Hooke  
Richard Quigley  
Robbie Byrne  
Bruce Thompson  
Frank Lenssinck  
Gary Spence

**SDG's 1, 2, 3, 6, 14, 15**

Billy Browning  
Albertus Hanekom  
Sarah Keough

**SDG's 1, 2, 3, 7, 13**

Johnny Gardner  
Andrew Ham  
Dustin Pascoe  
Samuel Smith

**SDG's 1, 2, 3, 8**

Antonio Zegers  
Jarrod Amery  
Brooke Barkla  
Tammy Kruckow  
Andrew Todd

**SDG's 1, 2, 3, 12**

Alexandra Camm  
Jason Cotter  
Nick van den Pol  
Shannon Harnett

**SDG's 1, 2, 3, 4, 9**

Nicholas Krebs  
Catherine Velisha  
Andrew Rosychuk  
Dawn Trautman  
Edward Pincknew  
David Butler

**SDG's 1, 2, 3, 9, 11**

Lucy MacLennan  
Alastair Trickett

**SDG's 1, 2, 3, 9, 16, 17**

Amy Cronin  
Jodie Souter  
Bertille Fages  
Judith de Vor  
Tracy Brown  
Phil Weir  
Edward Jones  
Hannah Senior

**SDG's 1, 2, 3, 15**

Shota Morigami?  
Linda O'Neill  
Jamie Lockhart  
Teresa Meadows  
Emma Patterson-  
Taylor

**SDG's 1, 2, 3, 9, 12**

Thiago Macitelli  
Bernie Byrnes Luke  
Cantrill  
Harry Kelly  
Paula-Lee Pownall  
Frank Mandersloot  
Ben McLaughlin  
Sam Steggle  
James Stobart

**SDG's 1, 2, 3, 9, 12, 13, 14, 17**

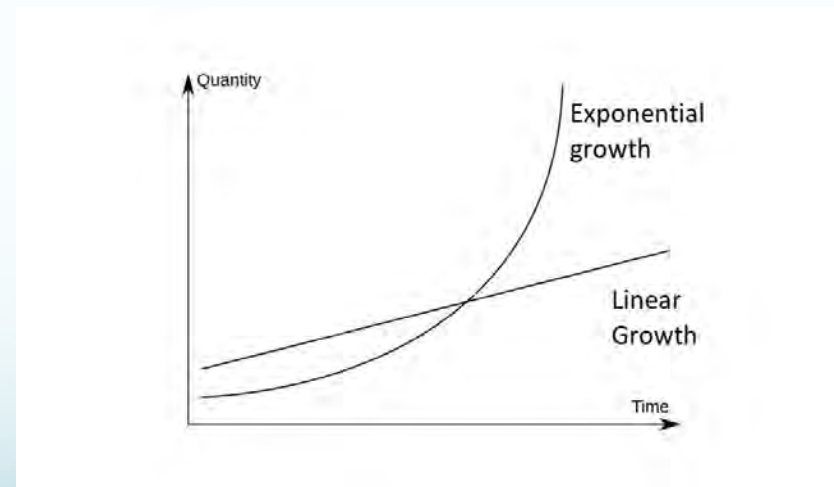
Kate Dempsey  
Nicola Harrison  
Ranga Huruba

**SDG's 1, 2, 3, 8, 12, 15, 16**

Gareth Lamberton  
Aoife Behan

How are we achieving this though?

## Exponential Growth



# Technologies riding Moore's Law

1. Infinite Computing
2. Sensor & Networks
3. Robotics
4. 3D Printing
5. Synthetic Biology
6. Digital Medicine
7. Nanomaterials
8. Artificial Intelligence

# 6 Ds – Exponential Framework



# Examples

- **The cost of 3D printing has dropped by a factor of 400 in the past seven years**
- **Industrial robots cost 1/23 of what they did just five years ago**
- **Drones are 143-times cheaper than they were in 2010**
- **Sequencing the human genome is 10,000-times less expensive than it was in 2009**
- **Cognitive and Quantum Computing, including Artificial Intelligence and Deep Learning**
- **Explosion in Connectivity: over six billion Internet users by 2020; a trillion connected devices in the Internet of Things, such as sensors, wearables, trackers, etc.**
- **Exponential Technology Spurs Exponential Innovation**
- **In 2010 we had 70 countries in extreme poverty, in 2015 we had 35**
- **1999 connectivity cost around US\$1,245 per GB per second, in 2012 it was down to US\$23**
- **In 1992 it was US\$220 for a million transistors now its less than US\$0.06**



# Relevance to the world today

- The development of a network is the number of users it has squared
- Leapfrogging technology – the Icelandic language doesn't have a word for locomotive – they went from horse and carts to planes
- Developed countries have established institutions that are becoming increasingly brittle – disruptive national politics aren't keeping pace with disruptive international technologies and collaboration

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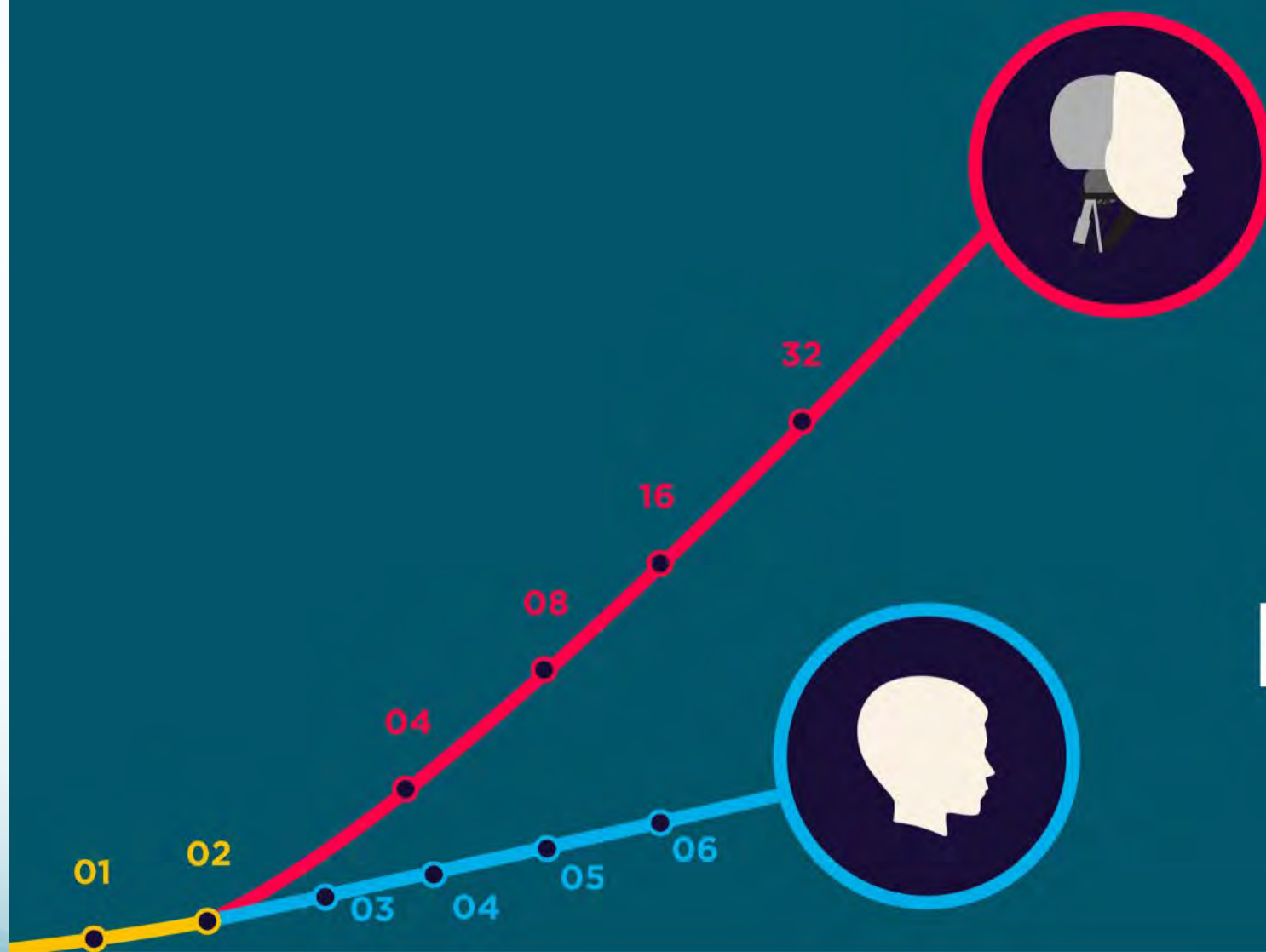
## Polio

- Work first started on a vaccine for Polio in 1935
- Hilary Koprowski tests Polio Vaccine on himself 1948
- A licensed vaccine for all three types of Polio became available by 1963
- Polio declared eradicated from the America's in 1994

## COVID-19

- First detected on November 17<sup>th</sup> 2019
- February 25<sup>th</sup> 2020 COVID-19 Genome Sequence published
- February 25<sup>th</sup> – present day – Vaccine trials on animals underway
- March 17<sup>th</sup> 2020 – First human trials for COVID-19 vaccine approved

Reminder:  
technology is  
**exponentiell**  
but humans are  
**linear**



## Phaistos Disc



1850 B.C. and 1600 B.C.

# Who's telling our story and where?

- International Policy frequently attempts to address problems that people or countries are already developing solutions for
- In a global world we need informed global solutions not unilateral reactions
- We only achieve that if everyone forms parts of the conversation

*“The fete of the world is in the hands of the people who bother to turn up.”*

**Robynne Anderson**

Founder and President of Emerging Ag Inc.  
Director General of the International Agri-Food Network  
Canadian Farmer