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Foresight & Futures

A NEW HUMANITARIAN NARRATIVE



February 26th 2018
CERN, IDEASQUARE

BALANCED TEAMS

HUMANITARIAN SYSTEM

NEEDS A REVOLUTION

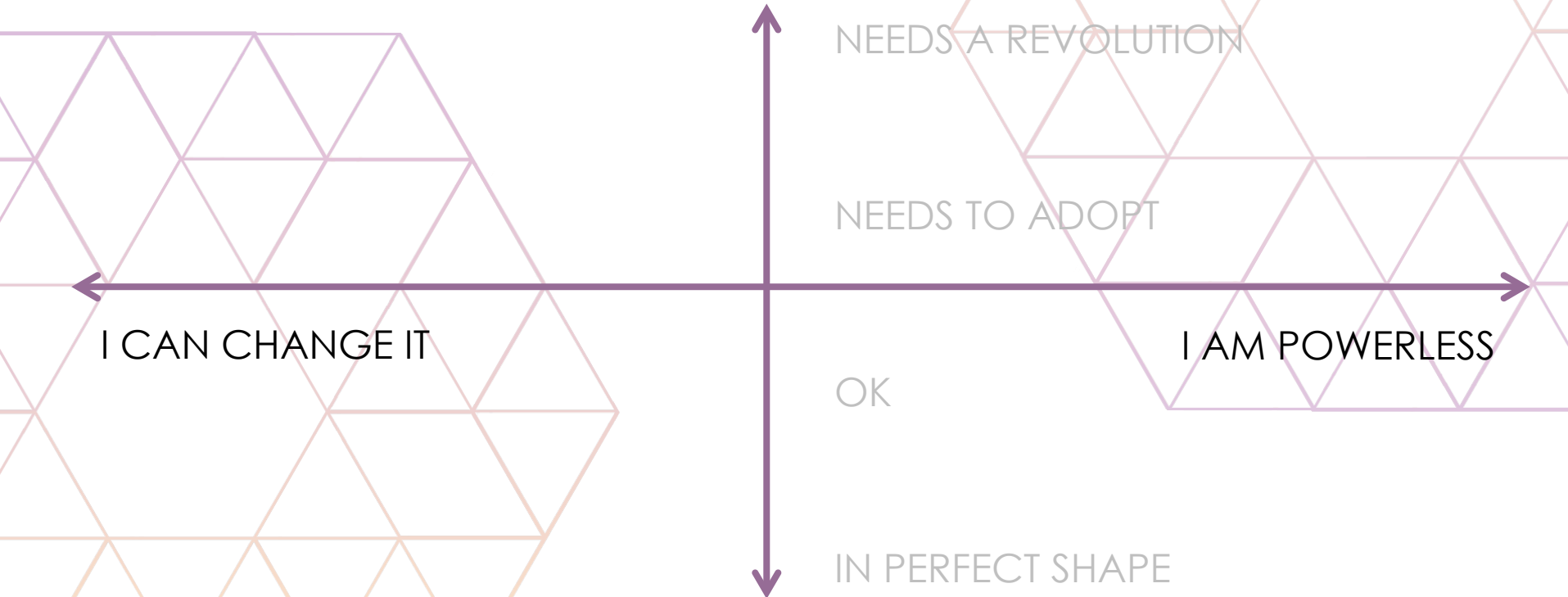
NEEDS TO ADOPT

OK

IN PERFECT SHAPE

BALANCED TEAMS

HUMANITARIAN SYSTEM

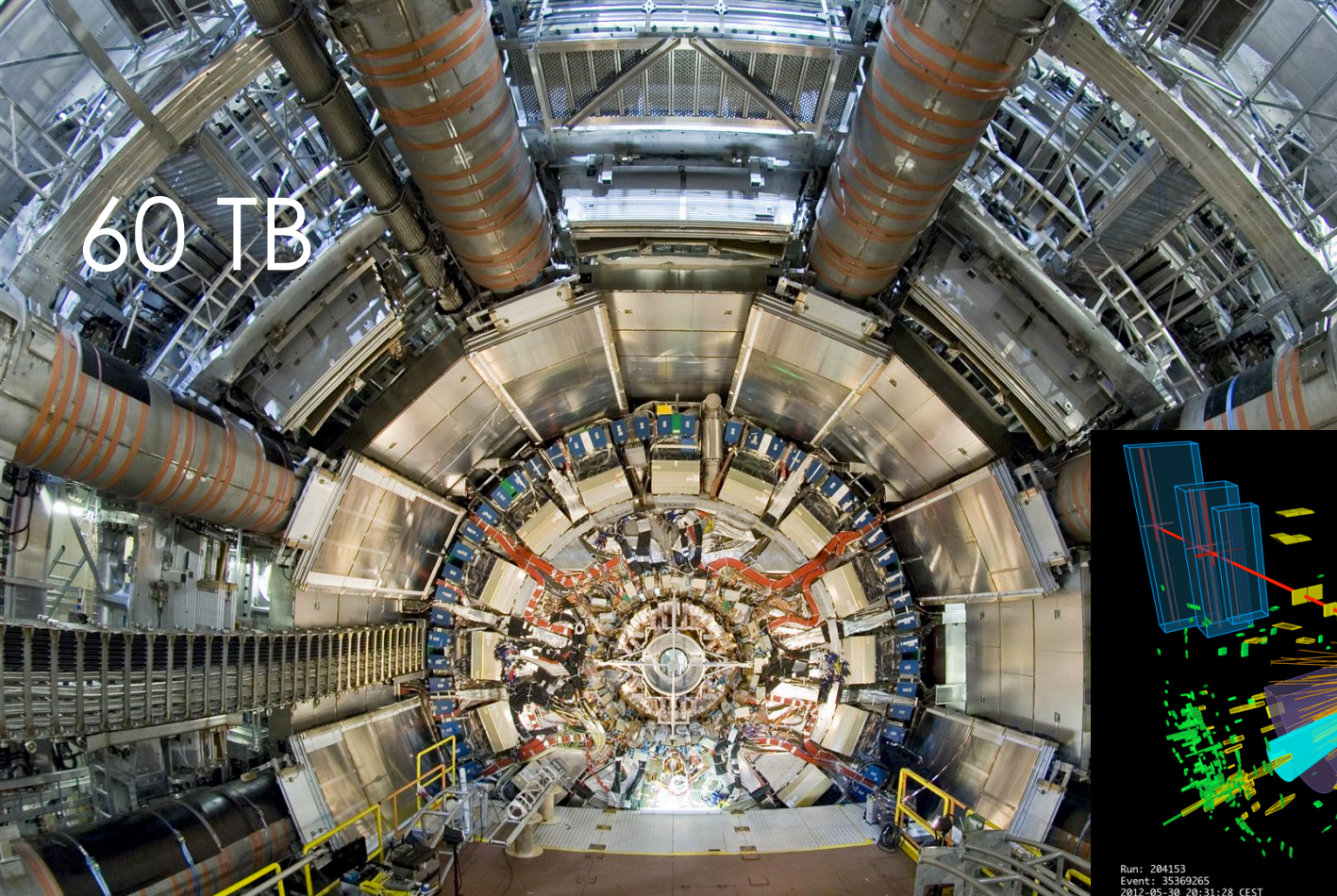


CERN, PHYSICS, TECHNOLOGY

FORESIGHT PRACTITIONER

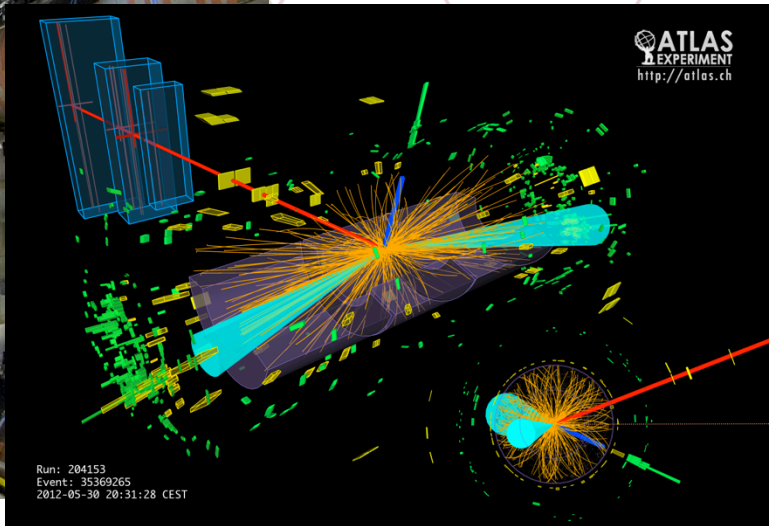


- Particle Physics, Large Hadron Collider, Higgs Boson
- Silicon & Diamond Detectors, HUGE data analysis



60 TB

DATA



DATA

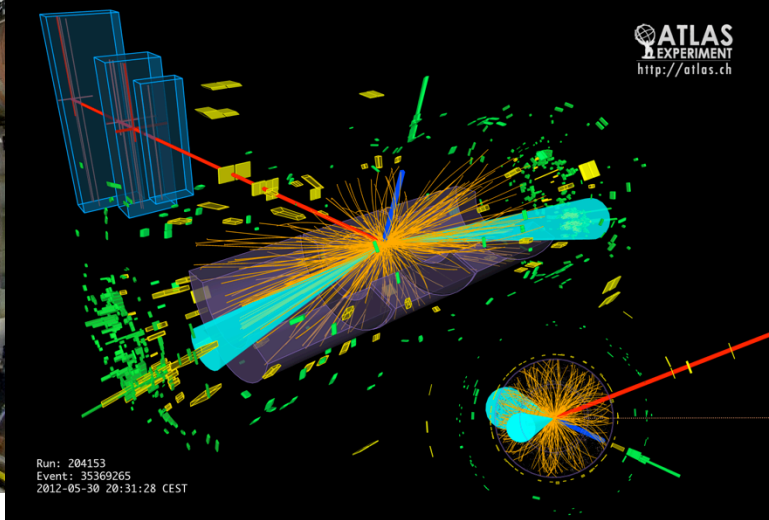
60 TB/s > (Internet: ~50 TB/s)

=>

150 GB/s

=>

1 GB/s

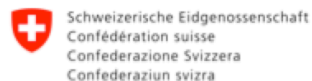


THE Port

HUMANITARIAN HACKATHON AT CERN



- E.g. Better Body Bag



A Partnership Program hosted by UNOPS

GHL is a cross-sector partnership of leading humanitarian organisations working together to tackle common challenges, envisions more efficient, effective and sustainable humanitarian action as a result of forward-thinking, locally-driven, and globally integrated ecosystem in which innovation can flourish.



Disclaimer No.0

NOT COMMUNICATION EXPERT

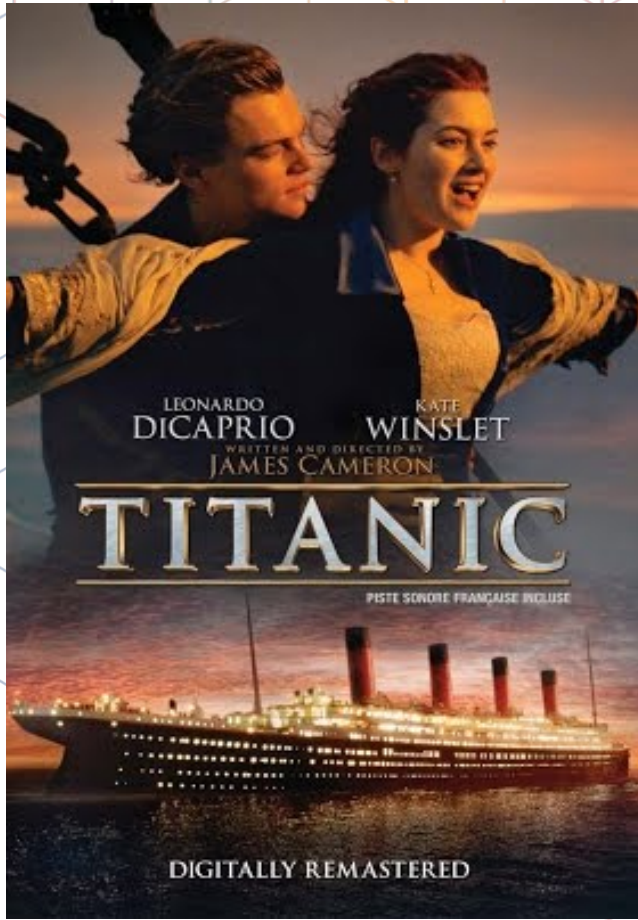
Disclaimer No.1

NOT FORCASTING



Disclaimer No.2

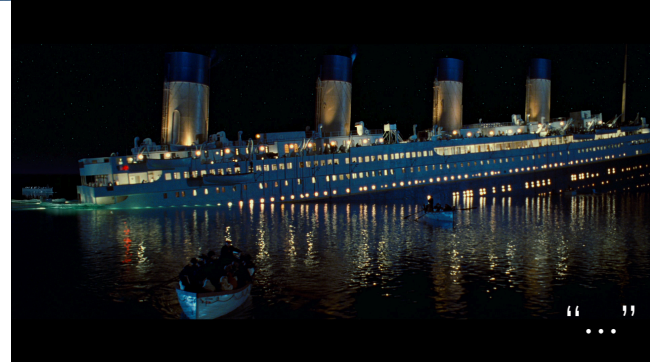
EXTREME COMPRESSION



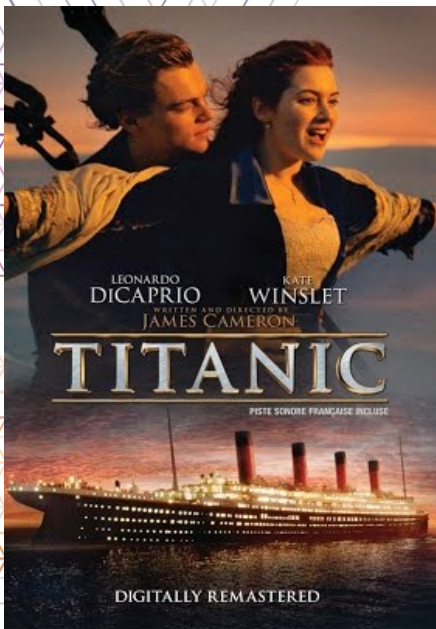
“DAAA-DAAA-DADA-DADADA”



“But this ship can't sink!”



“Rome & Juliet on a boat”



Creating Flight Simulator Scenarios for our 'World Pilots'



WHY?

"All these new things, these new inventions and new powers, come crowding along; every one is fraught with consequences, and yet it is only after something has hit us hard that we set about dealing with it."

- Elhadj?, Francesco?, Peter?, Yves?

WHY?

"All these new things, these new inventions and new powers, come crowding along; every one is fraught with consequences, and yet it is only after something has hit us hard that we set about dealing with it."

- H.G. Wells, 1932

WHY? Innovation!

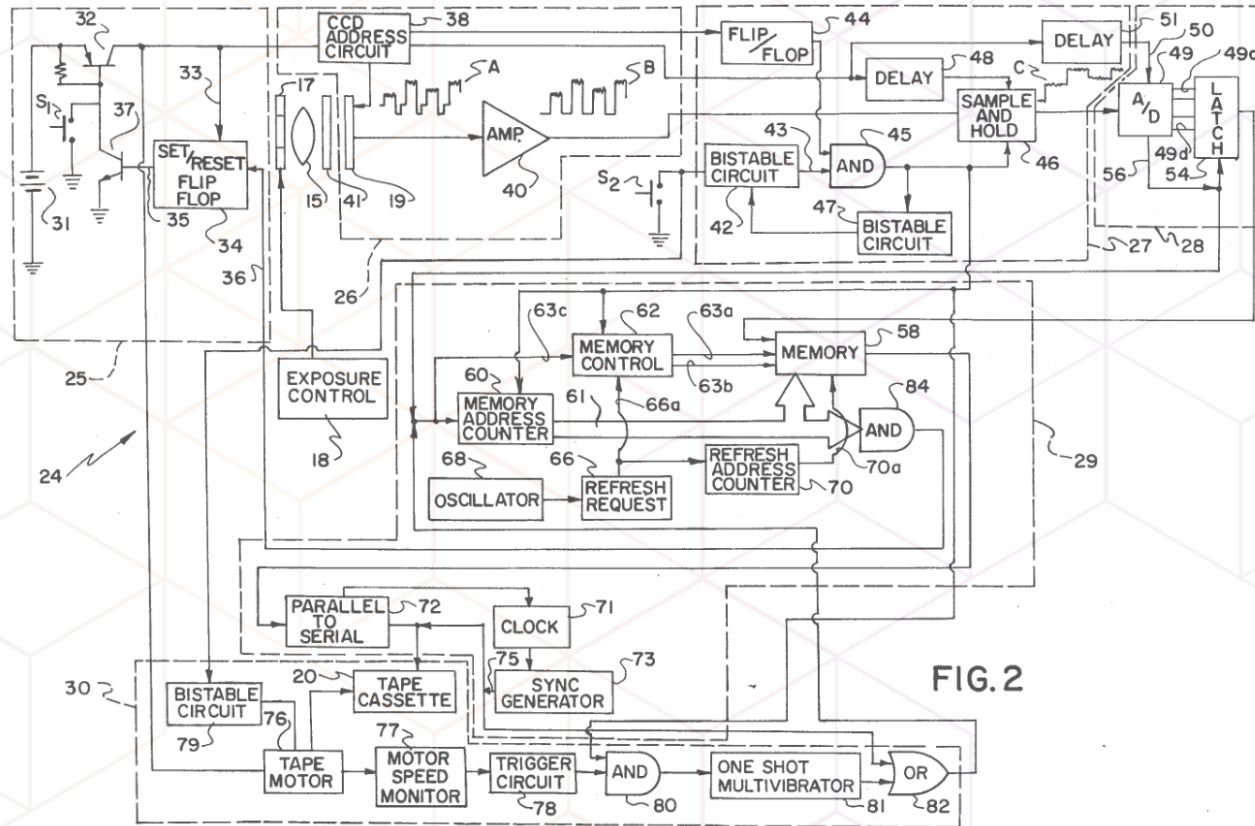
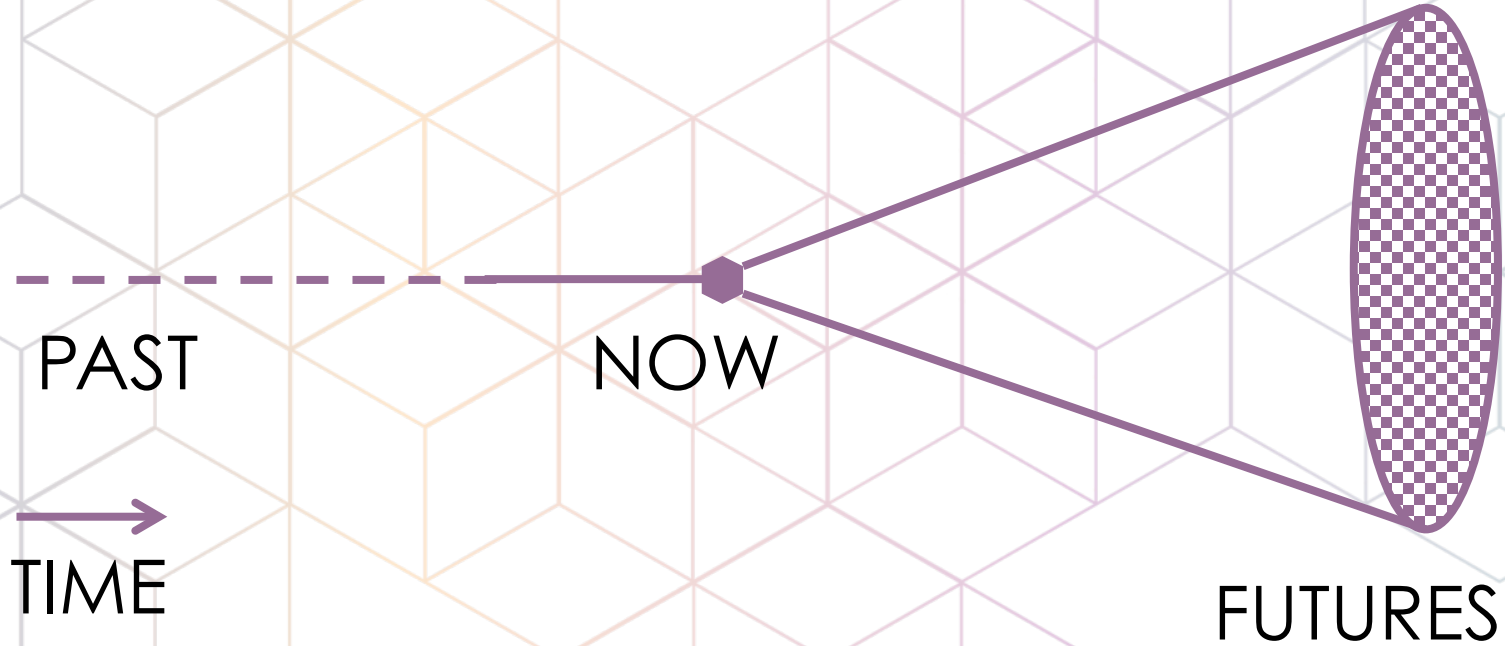


FIG. 2

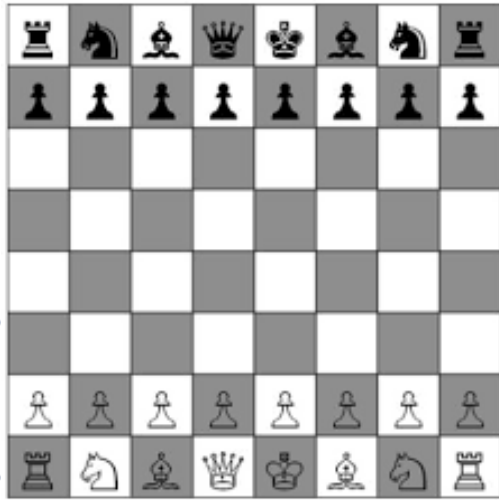
The Future?



The Futures!

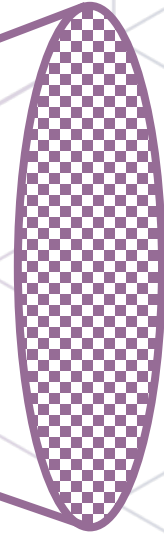


The Futures of CHESS



→
TIME

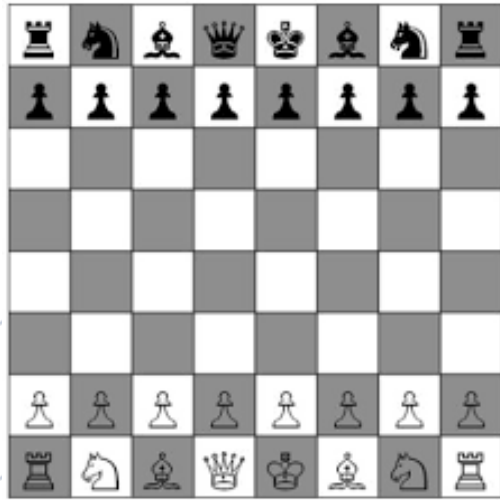
NOW 0
1



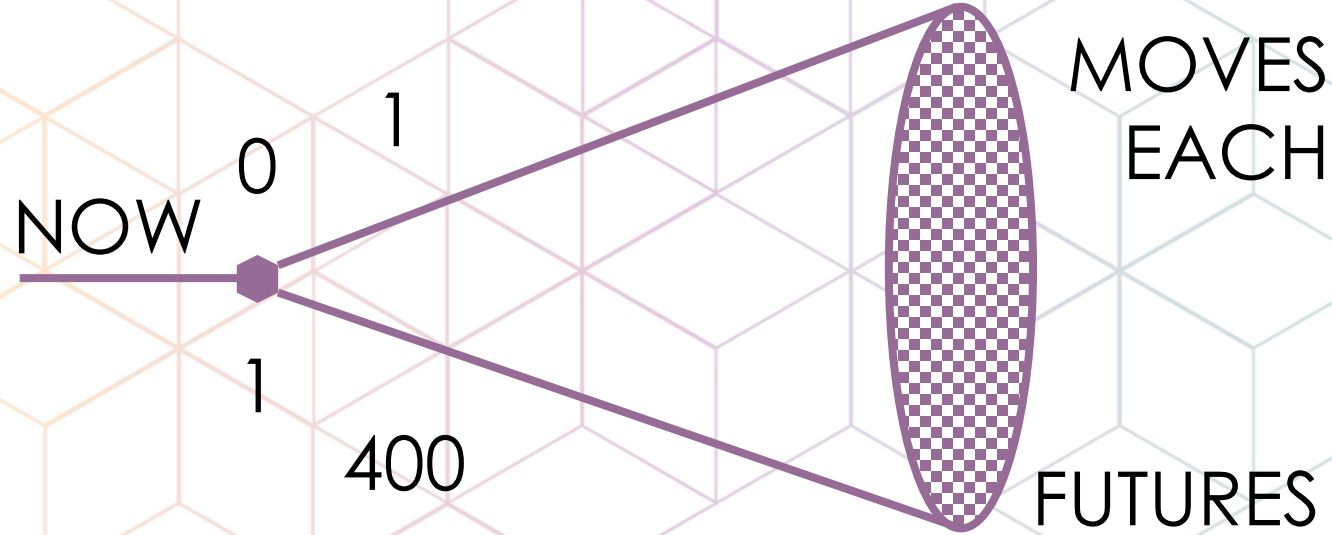
MOVES
EACH

FUTURES

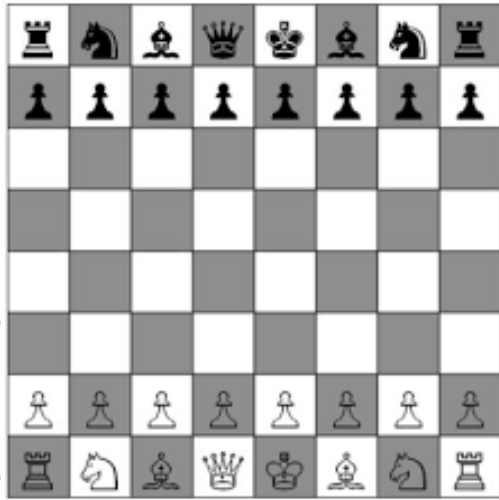
The Futures of CHESS



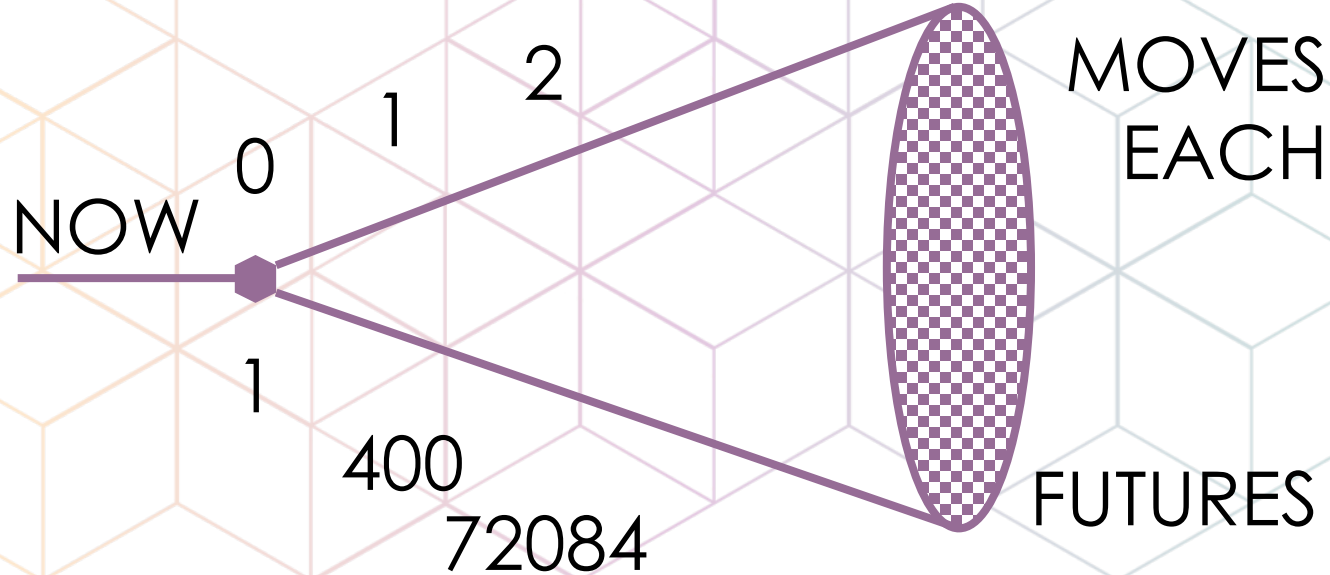
→
TIME



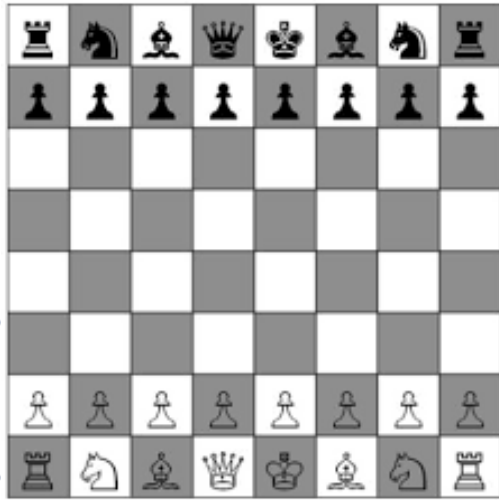
The Futures of CHESS



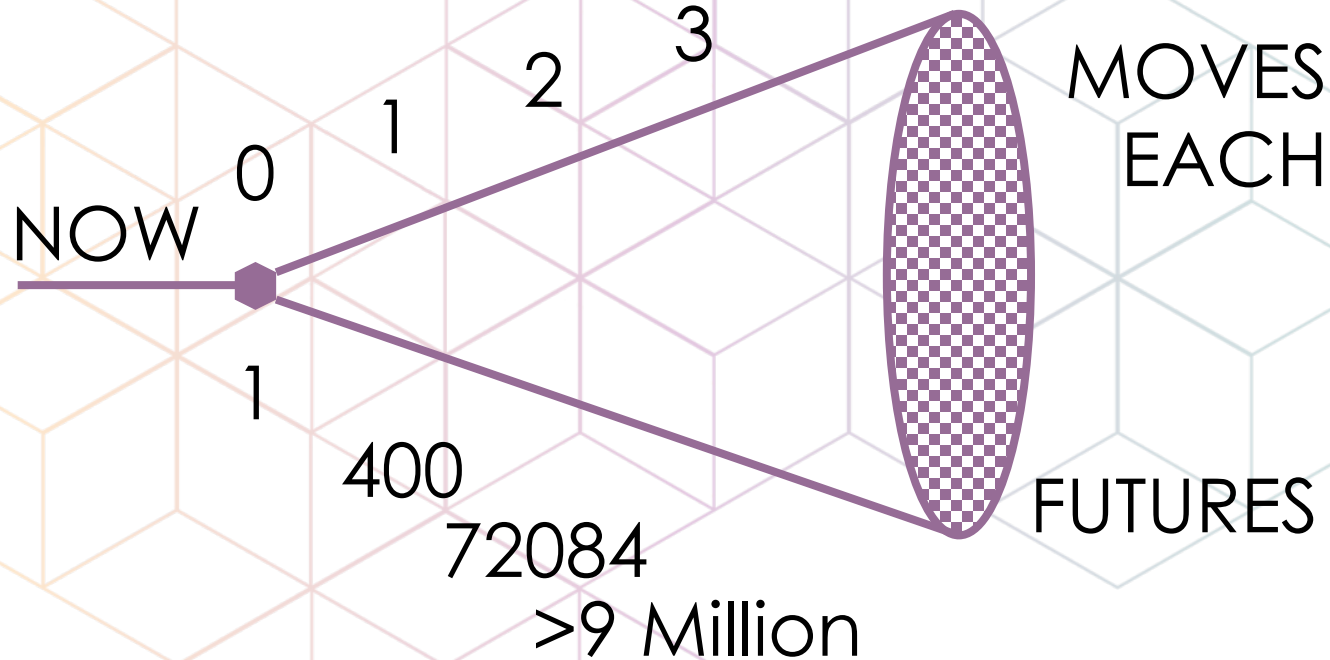
→
TIME



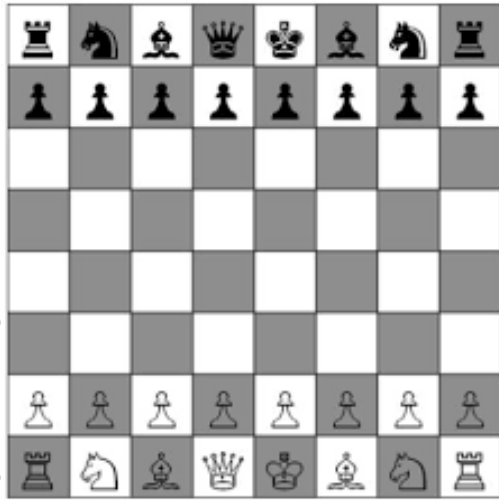
The Futures of CHESS



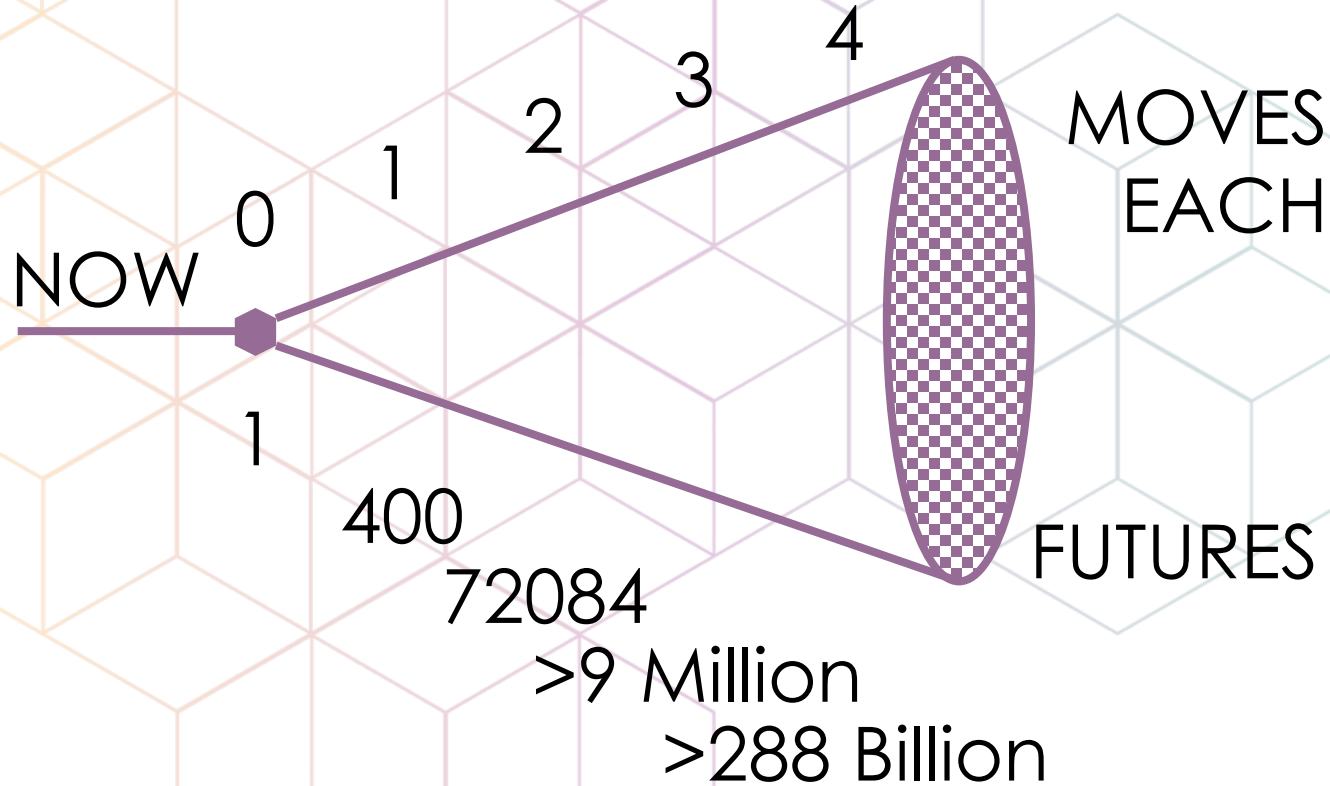
→
TIME



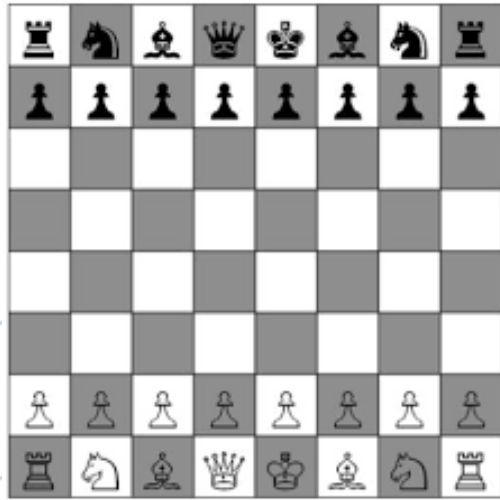
The Futures of CHESS



→
TIME



The Futures of CHESS Boundaries



→
TIME

NOW

BLACK
WINS

WHITE
WINS

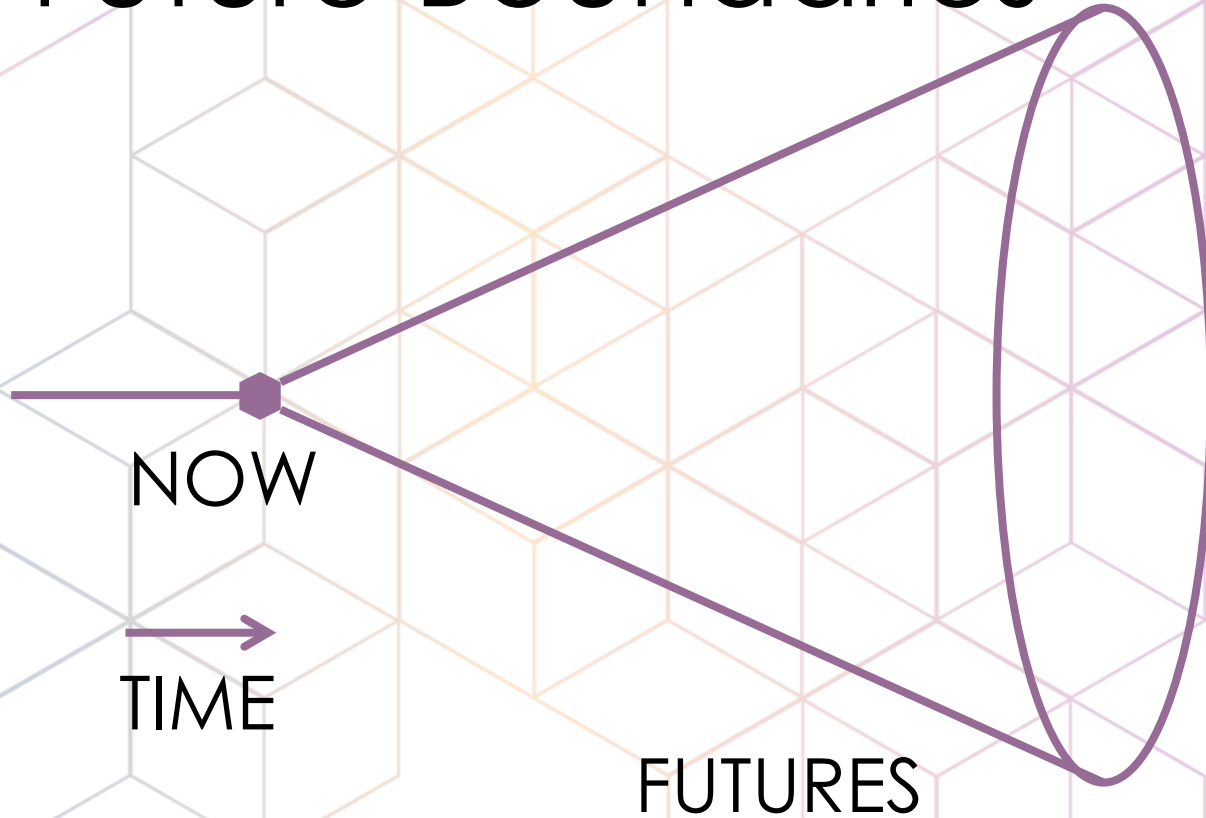
UNFINISHED

DRAW

Future Boundaries

IMPOSSIBLE

POSSIBLE



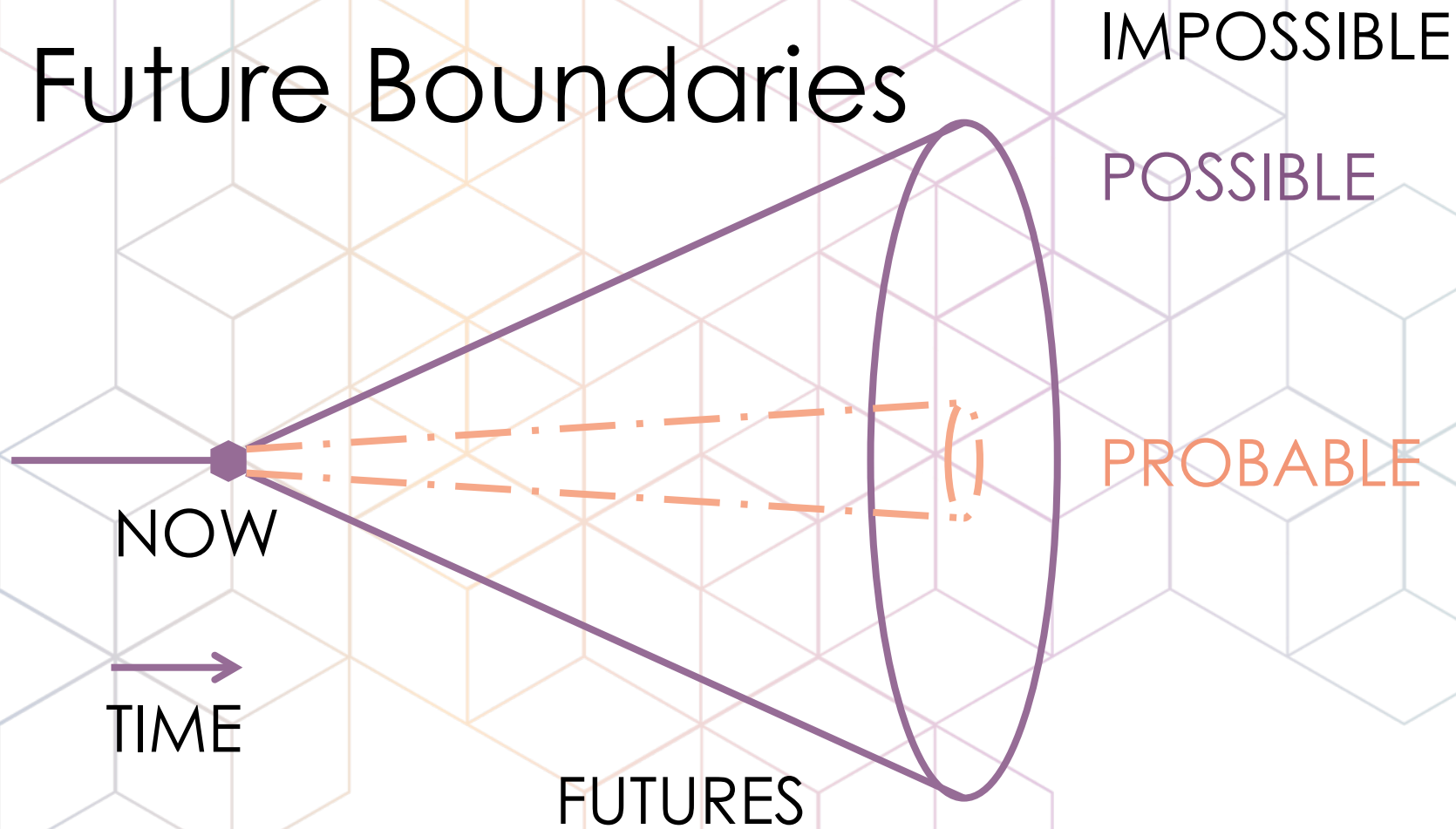
NOW



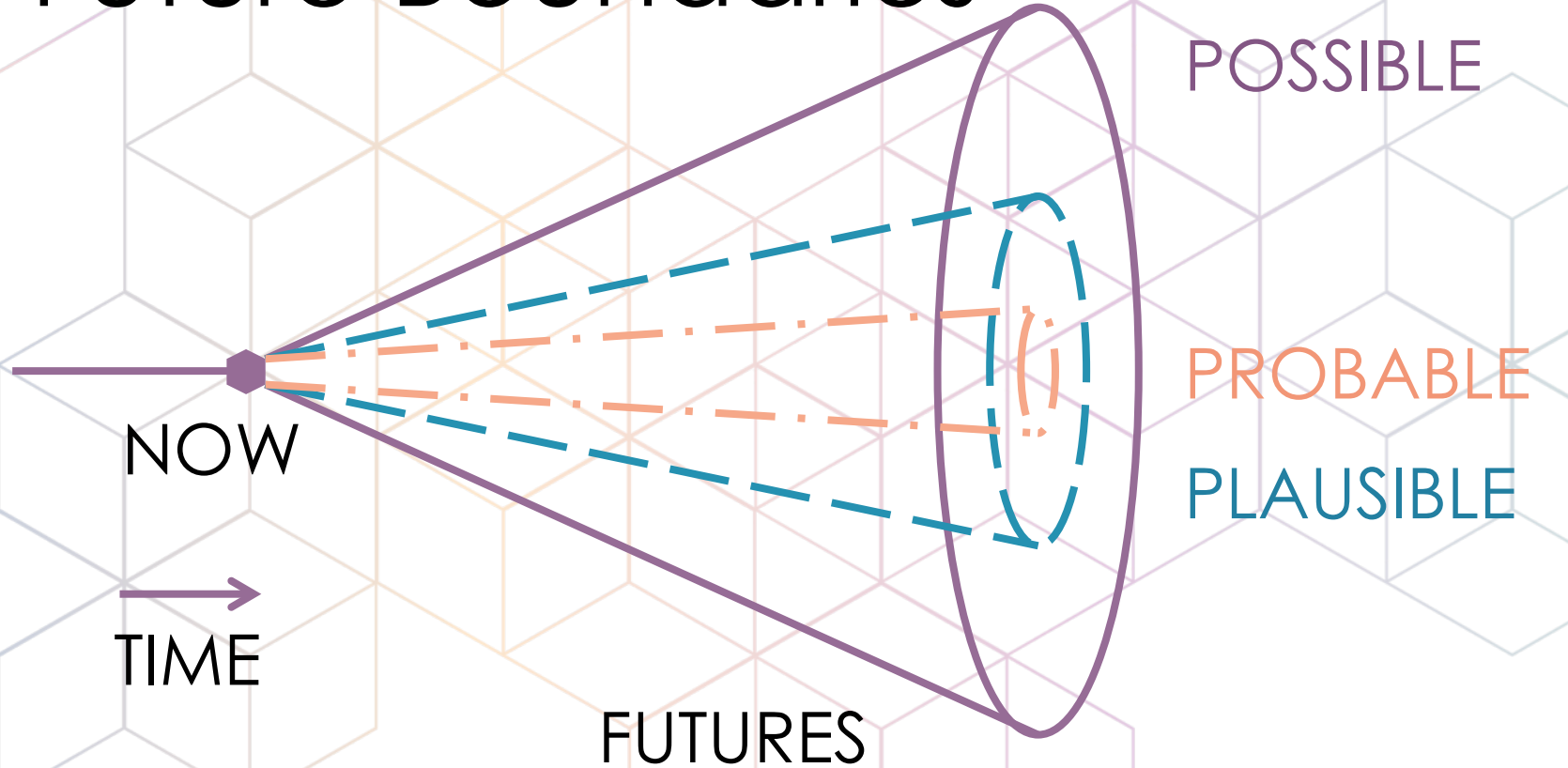
TIME

FUTURES

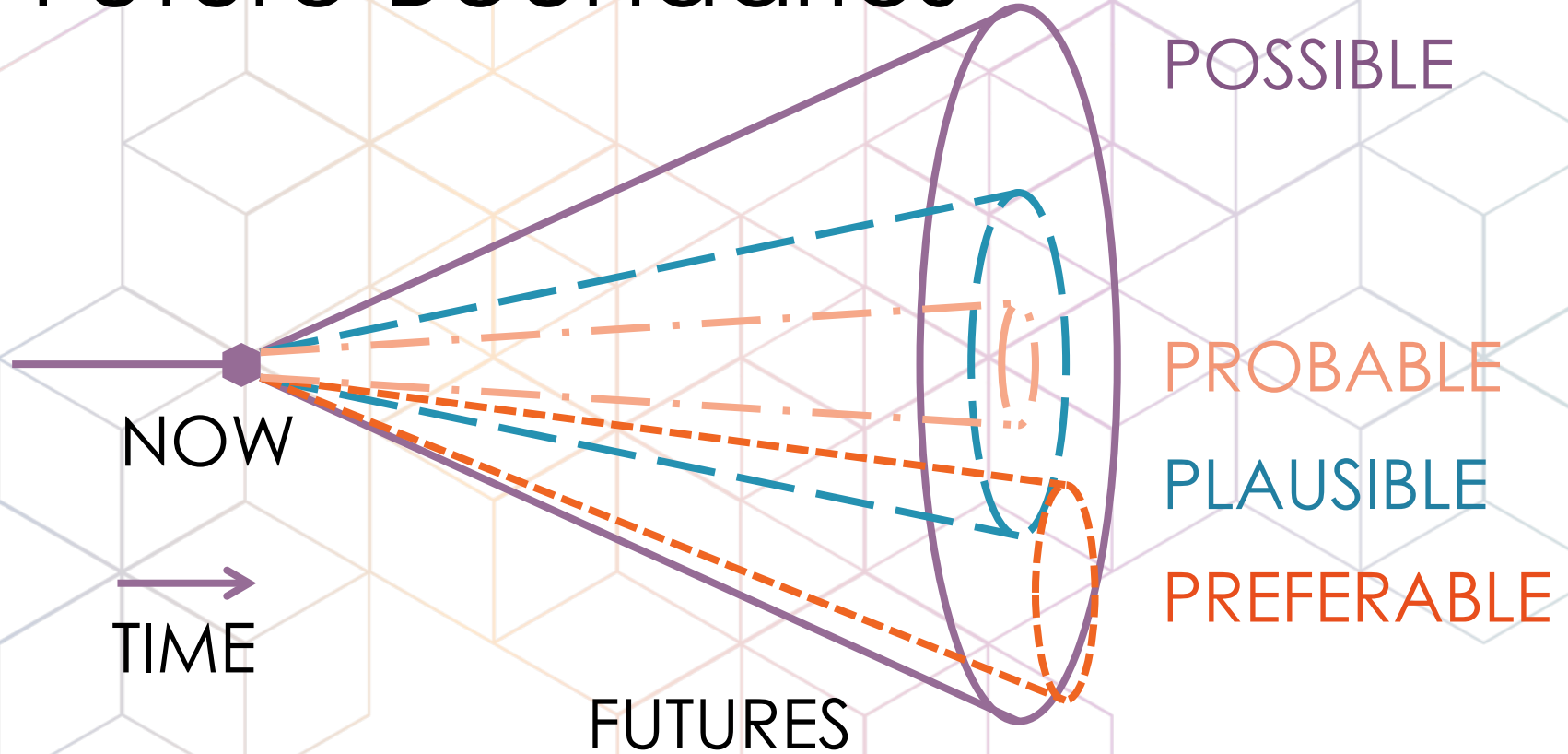
Future Boundaries



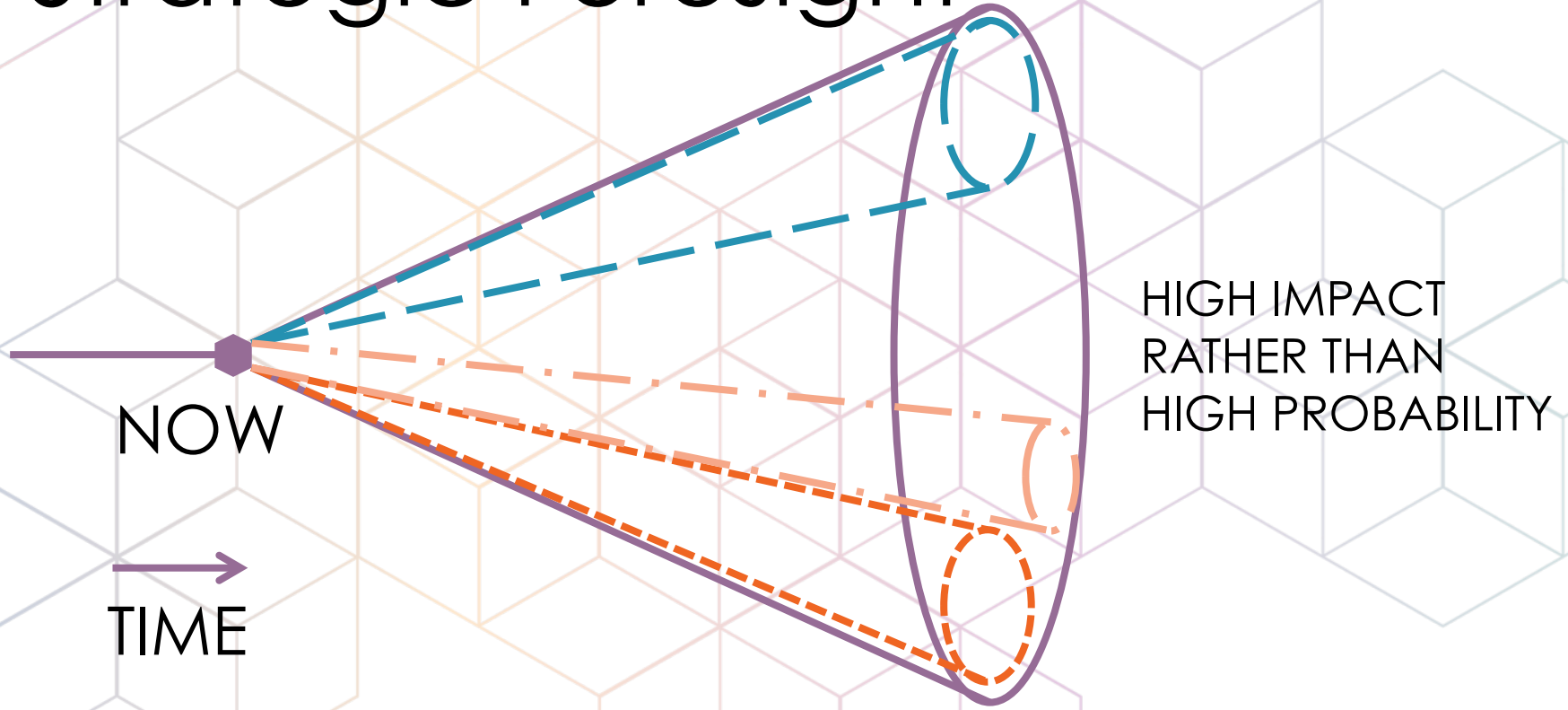
Future Boundaries



Future Boundaries

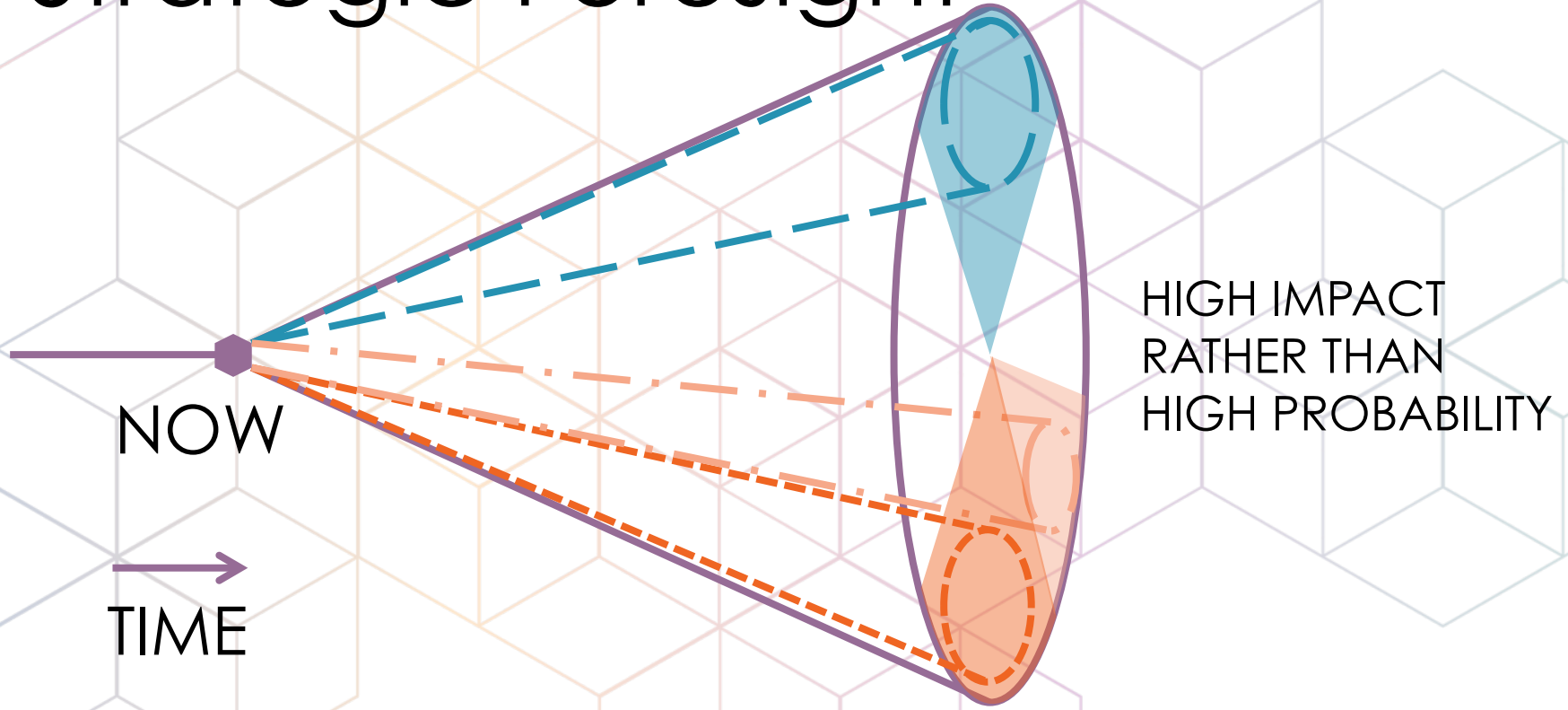


Strategic Foresight



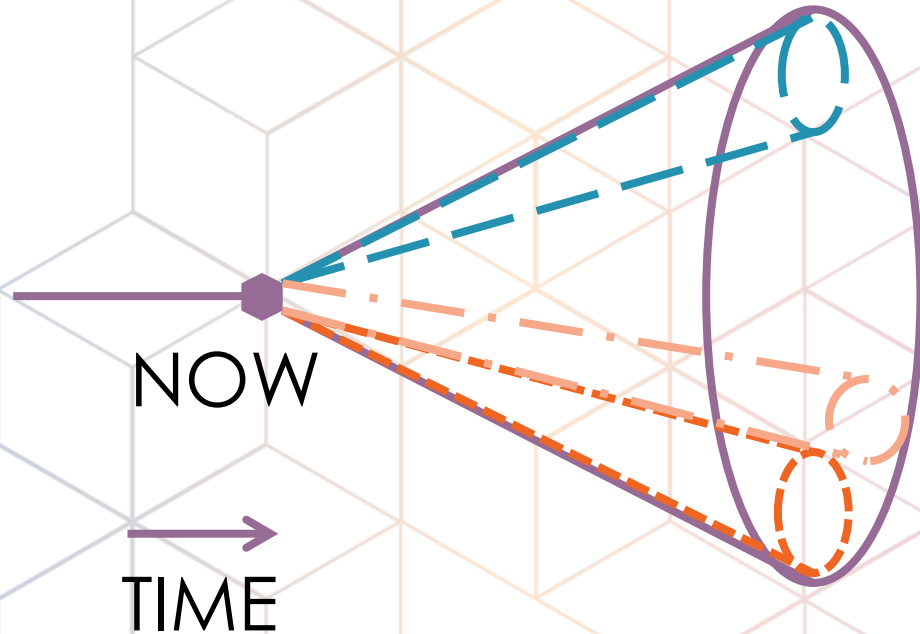
OPTIMIZED FOR PREPAREDNESS

Strategic Foresight



OPTIMIZED FOR PREPAREDNESS

Strategic Foresight



“Any useful statement about the futures should at first appear ridiculous.”

- Dator's second law

OPTIMIZED FOR PREPAREDNESS

NASA Computing

1969



“In 45 years each of you will carry more than our entire computing in your pockets”
- could have been a very ridiculous & useful statement



Flight Simulator Metaphor

PRAPARDNESS SCENARIOS



- Combinations of low probability high impact scenarios
- Optimized for preparedness

Flight Simulator Scenarios

WATERLANDING



1 in 100.000 pilots will might need to perform a water landing

Creating Flight Simulator Scenarios for our 'World Pilots'



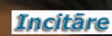
26TH & 27TH FEB. 2018

HUMANITARIAN FORESIGHT & FUTURES CO-CREATION WORKSHOP

POWERED BY:



IdeaS



SUPPORTED BY:



New Humanitarian Narrative: Phase 1: HFFC17



#HFFC17

Humanitarian Foresight & Futures Co-creation
4th April 2017, CERN, IdeaSquare

26TH & 27TH FEB. 2018

HUMANITARIAN FORESIGHT & FUTURES CO-CREATION WORKSHOP

POWERED BY:



SUPPORTED BY:



New Humanitarian Narrative: Phase 2:



Agenda:

- 11h30 - Welcome (5 mins.)
- 11h35 - Team forming (5 mins.)
- 11h40 - Introduction to Strategic Foresight Planning & Influencers (15 mins.)
- 11h55 - Current Humanitarian Narrative (5+5 mins.)
- 12h05 - Possible Narrative Disruptions (5+5 mins.)
- 12h15 - Intermission Storytelling (5 mins.)
- 12h20 - Disruptive Scenarios (10+5 mins.)
- 12h35 - Windtunneling (5+5 mins.)
- 13h45 - Future Narrative Metaphor (5+5 mins.)
- 13h55 - Final Remarks & Q&A (5 mins.)

What is the current humanitarian metaphorical narrative?

(5 mins)

Example of metaphorical narratives:

A Private Sector Company:
Current Decision Makers



An Academia Collaboration
Current Physics Outreach

What is the current humanitarian metaphorical narrative?

(5 mins)

What are possible disruptions to these narratives?

(5 mins)

LIFE EXPECTATION

Früher war alles schlechter

Life Expectation

In Great Britain
at Birth



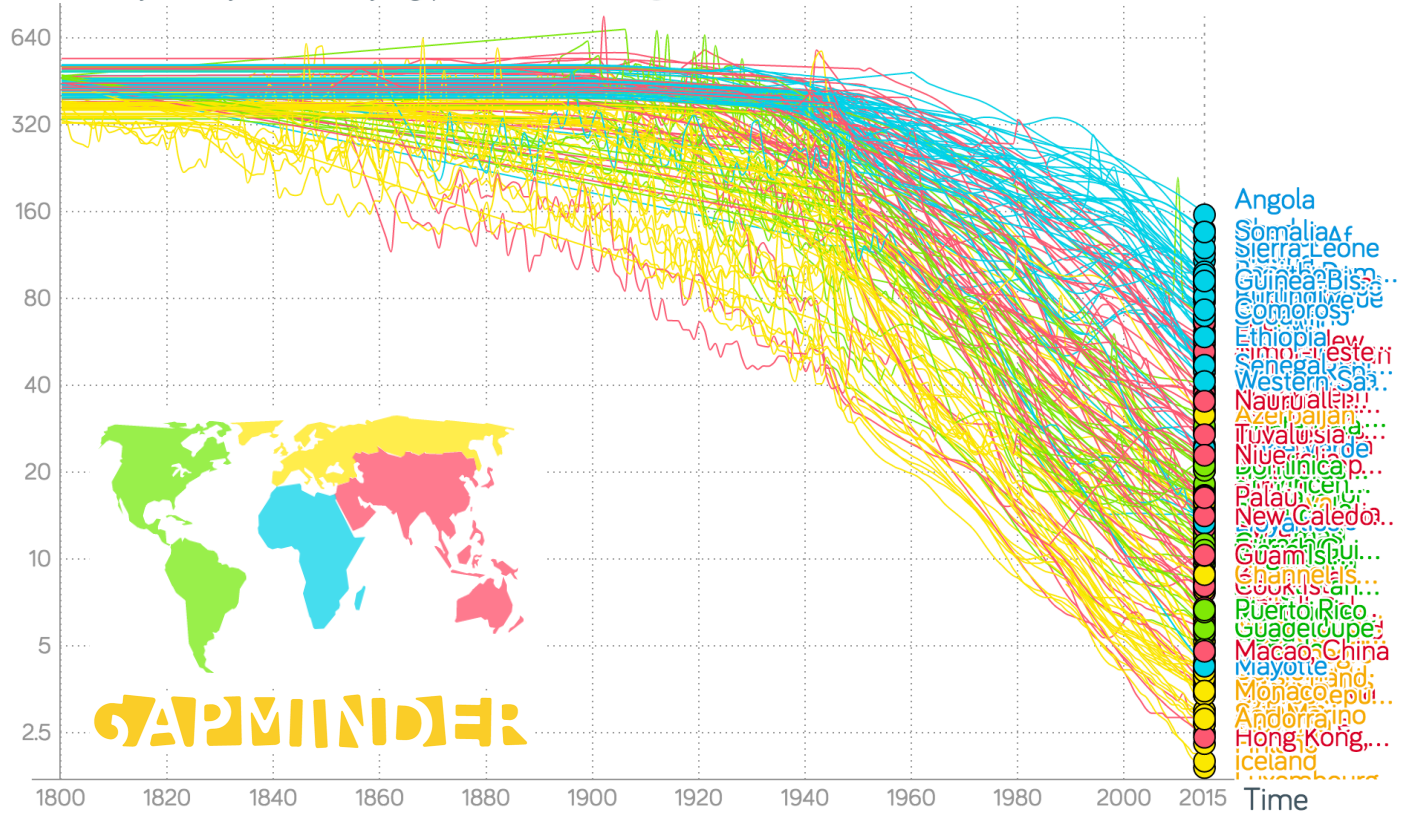
DER SPIEGEL

QUELLE: OUR WORLD IN DATA; HUMAN MORTALITY DATABASE; KERTZEL AND LASLETT; WRIGLEY AND SCHOFIELD

LIFE EXPECTATION

Child mortality (0-5 year-olds dying per 1000 born) ?

▲ DATA DOUBTS



GAPMINDER

WAR DEATHS

von **20**
War Deaths per 100000 population

Früher war alles schlechter

War Deaths

10

0

1946 '50 '60 '70 '80 '90 2000 '13

Koreakrieg
1950 – 1953

Vietnamkrieg
1955 – 1975

Iran/Irakkrieg
1980 – 1988

Afghanistankriege
1978 – 2001

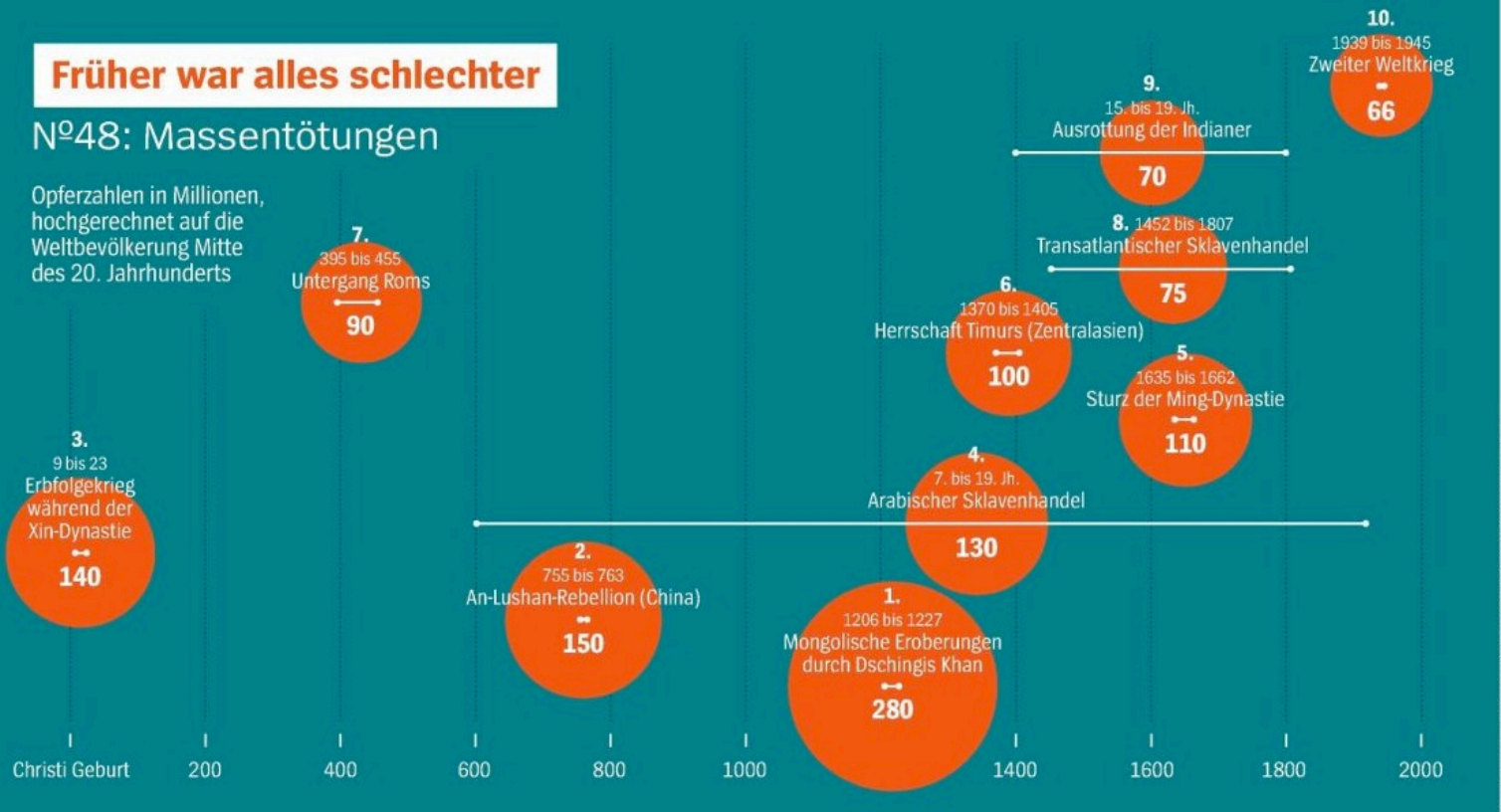
Syrienkonflikt
2011 – heute

'CONFLICT' DEATHS

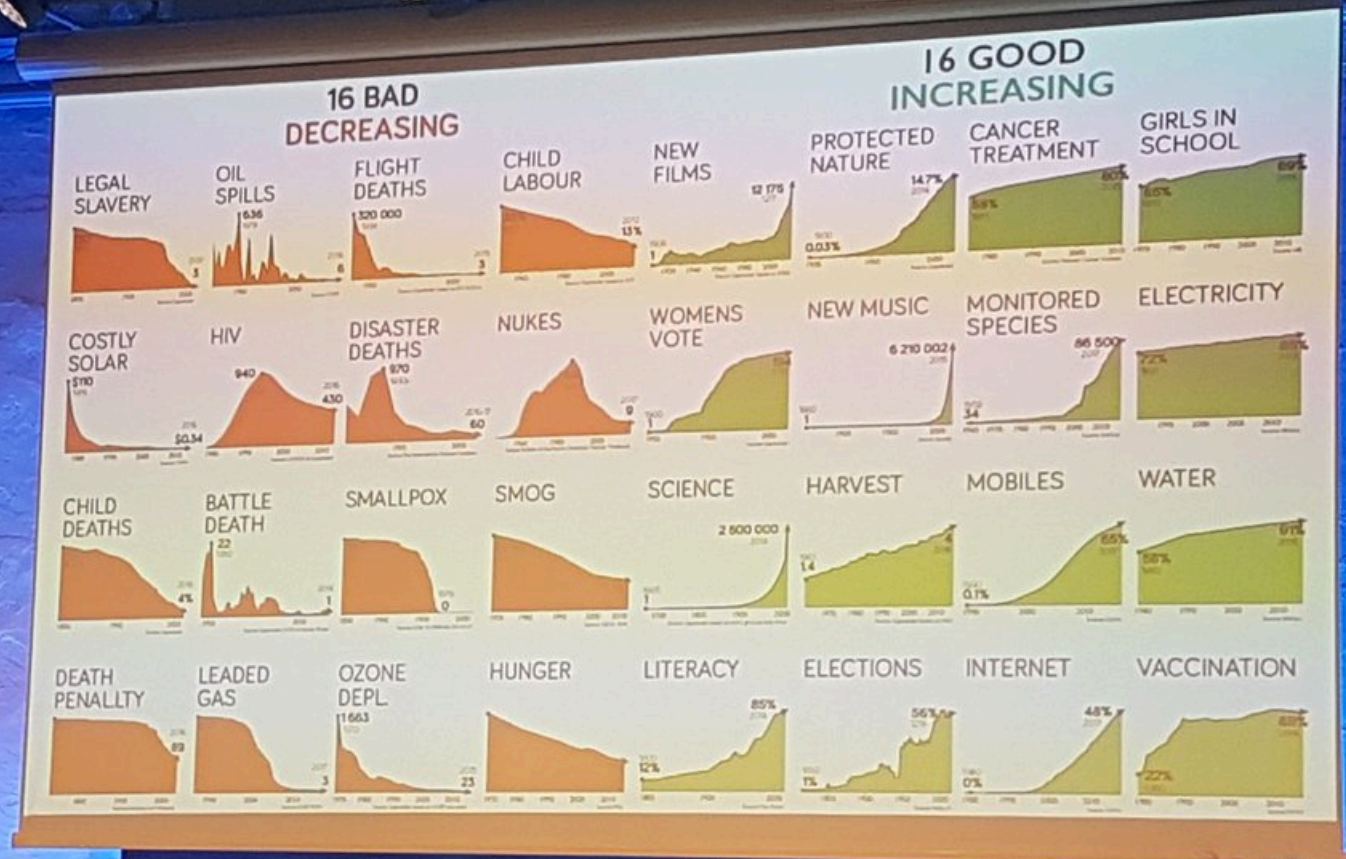
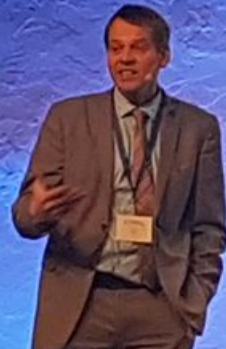
Früher war alles schlechter

N°48: Massentötungen

Opferzahlen in Millionen, hochgerechnet auf die Weltbevölkerung Mitte des 20. Jahrhunderts

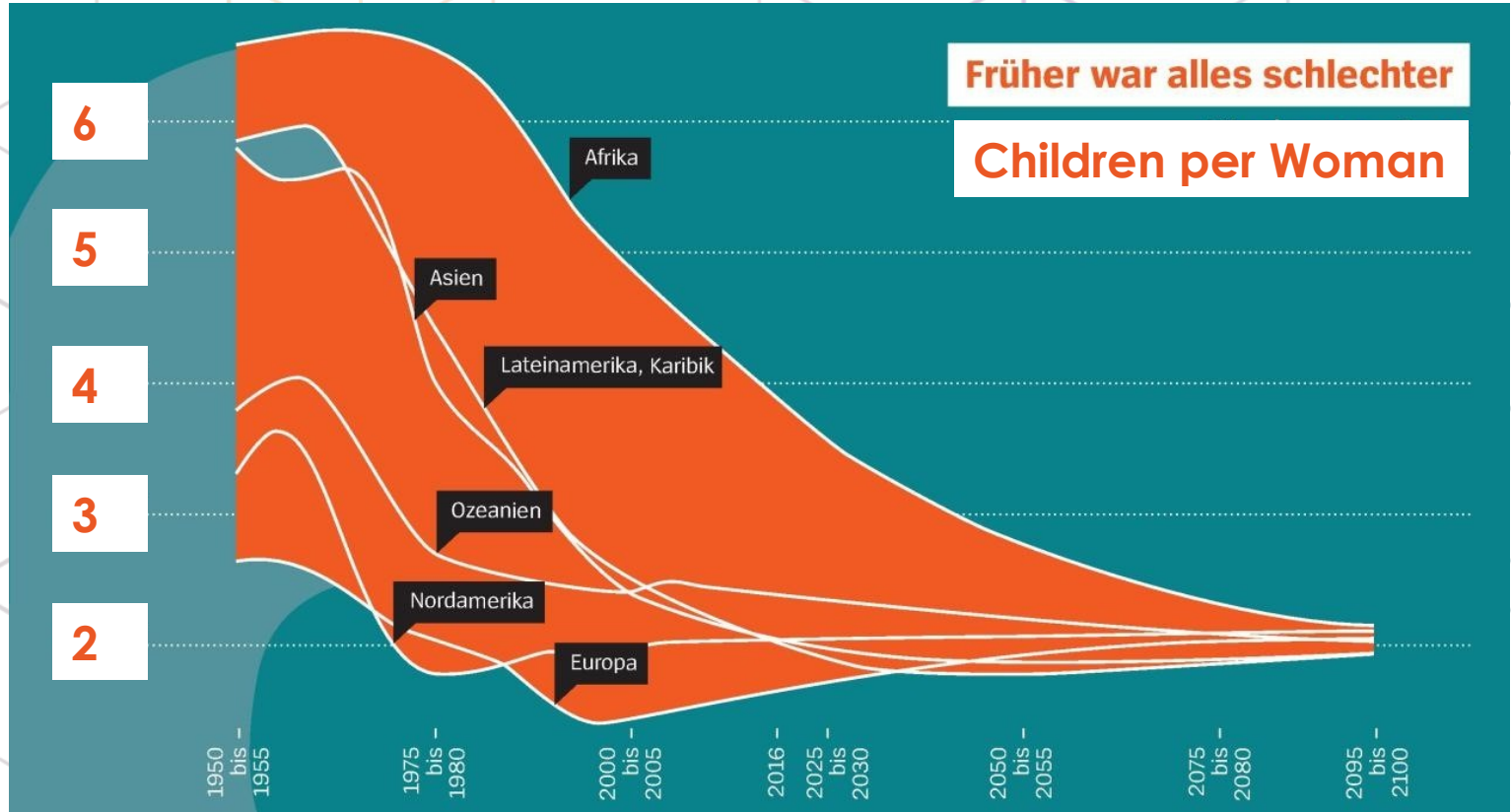


QUELLEN: MATTHEW WHITE 2012, STEVEN PINKER 2011, DER SPIEGEL

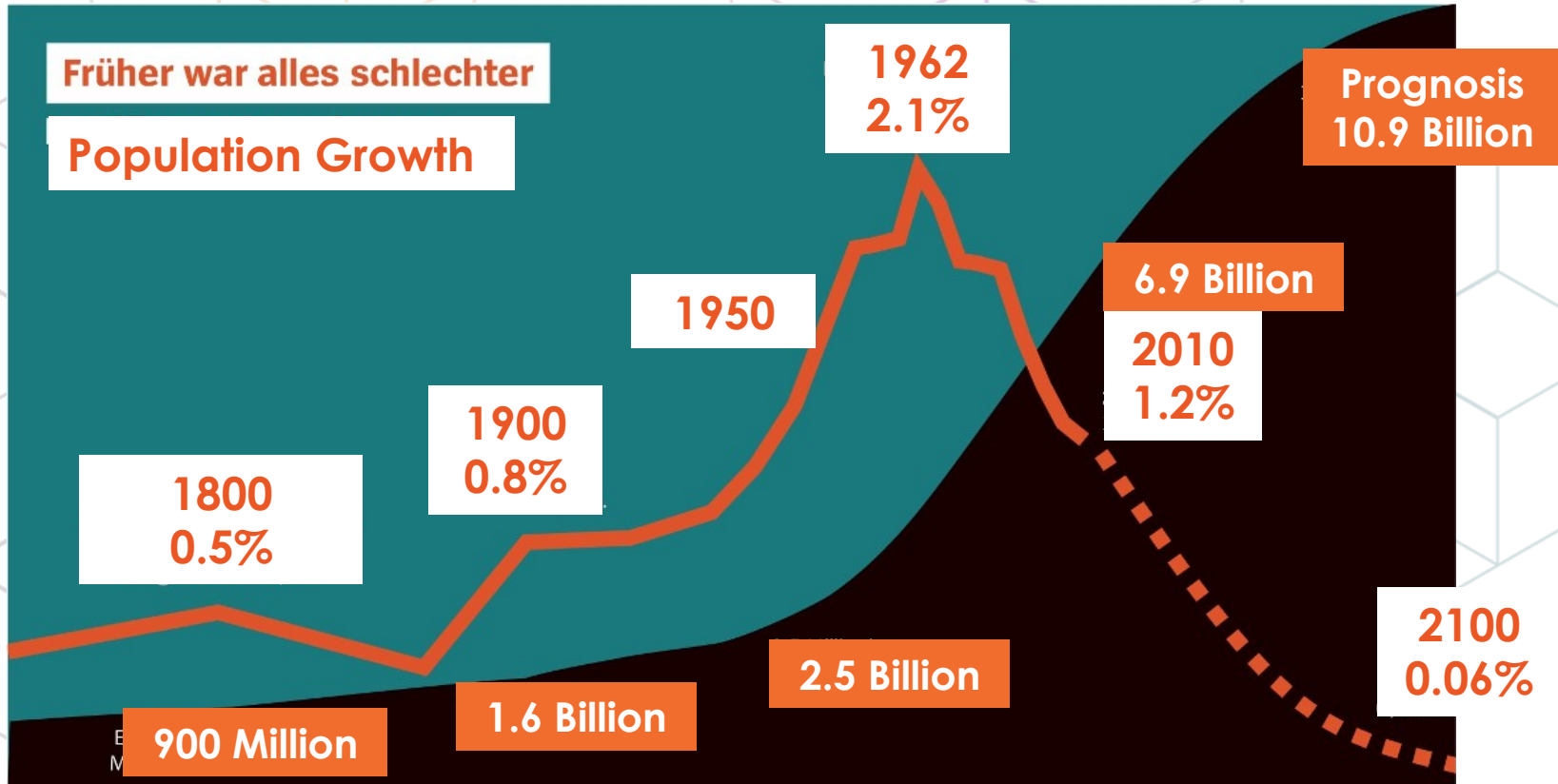


“People believe the world is getting worse! But look at Statistics not at Media!” - Ola Rosling

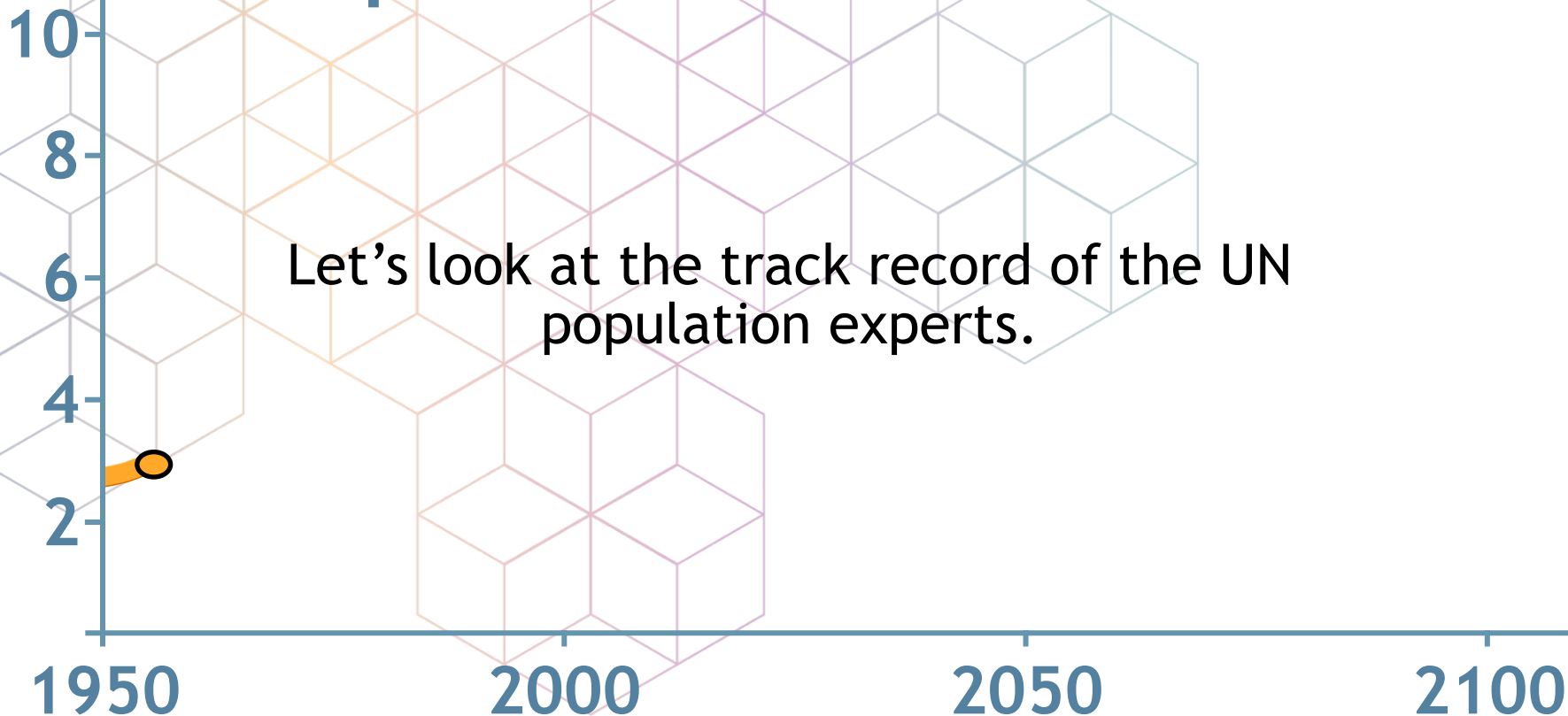
FORECAST: WORLD POPULATION



FORECAST: WORLD POPULATION



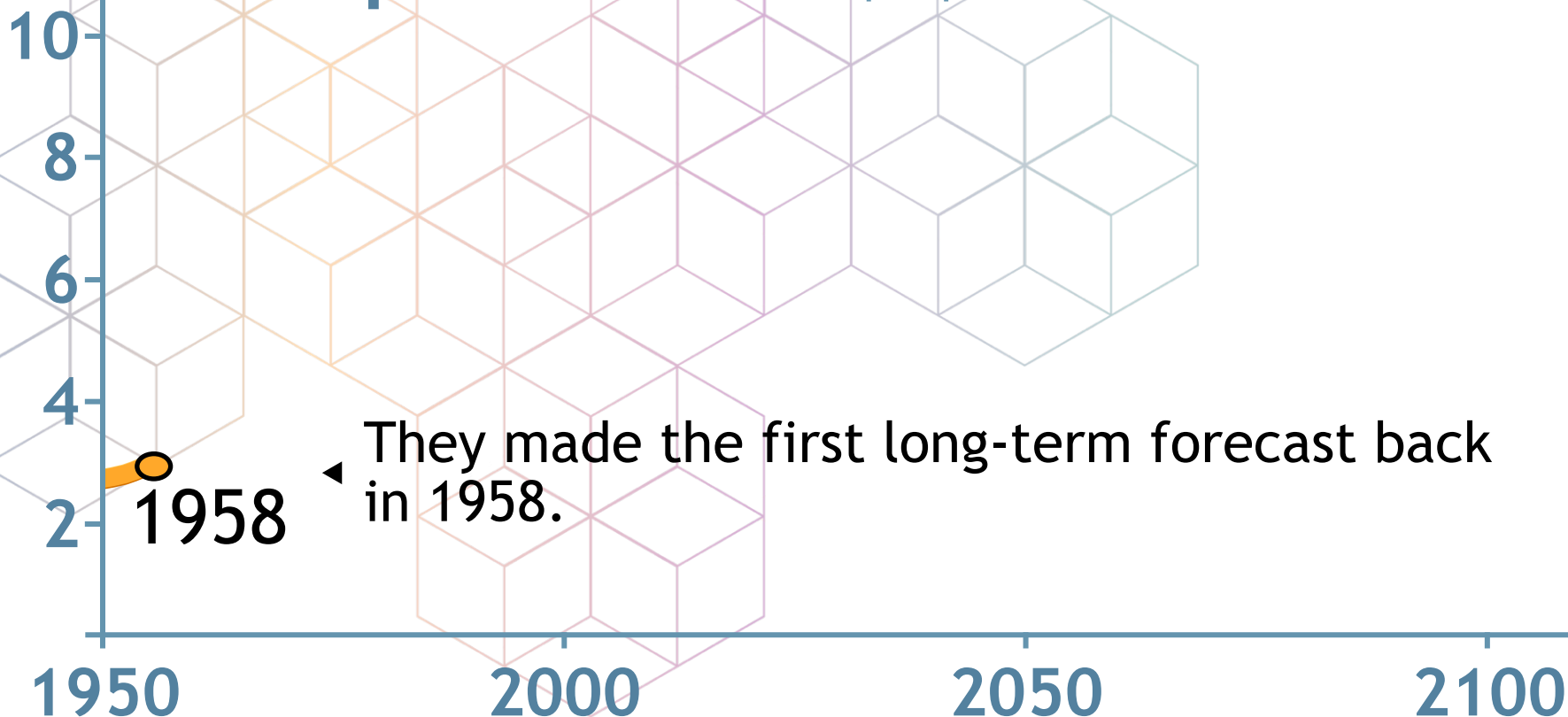
World Population Billions of people



Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

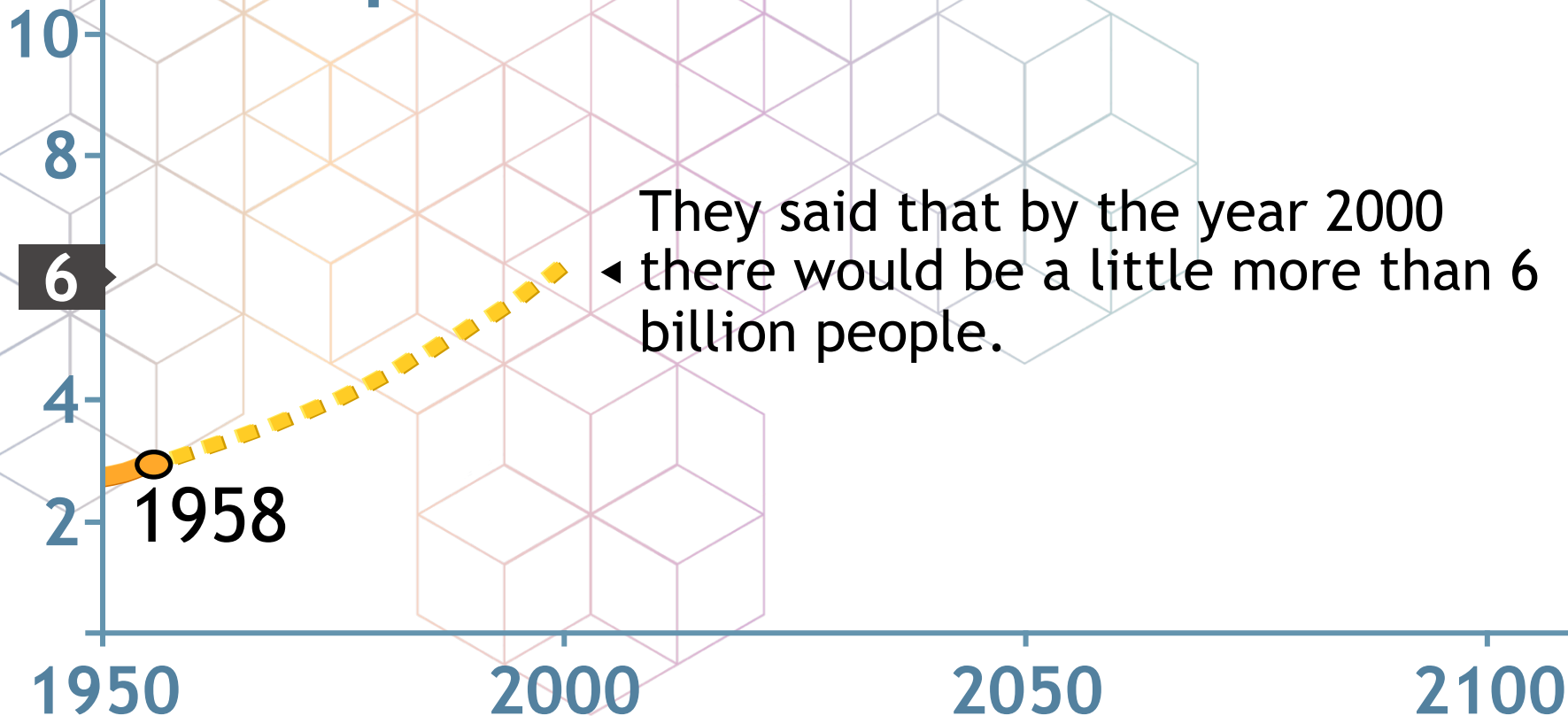
World Population

Billions of people



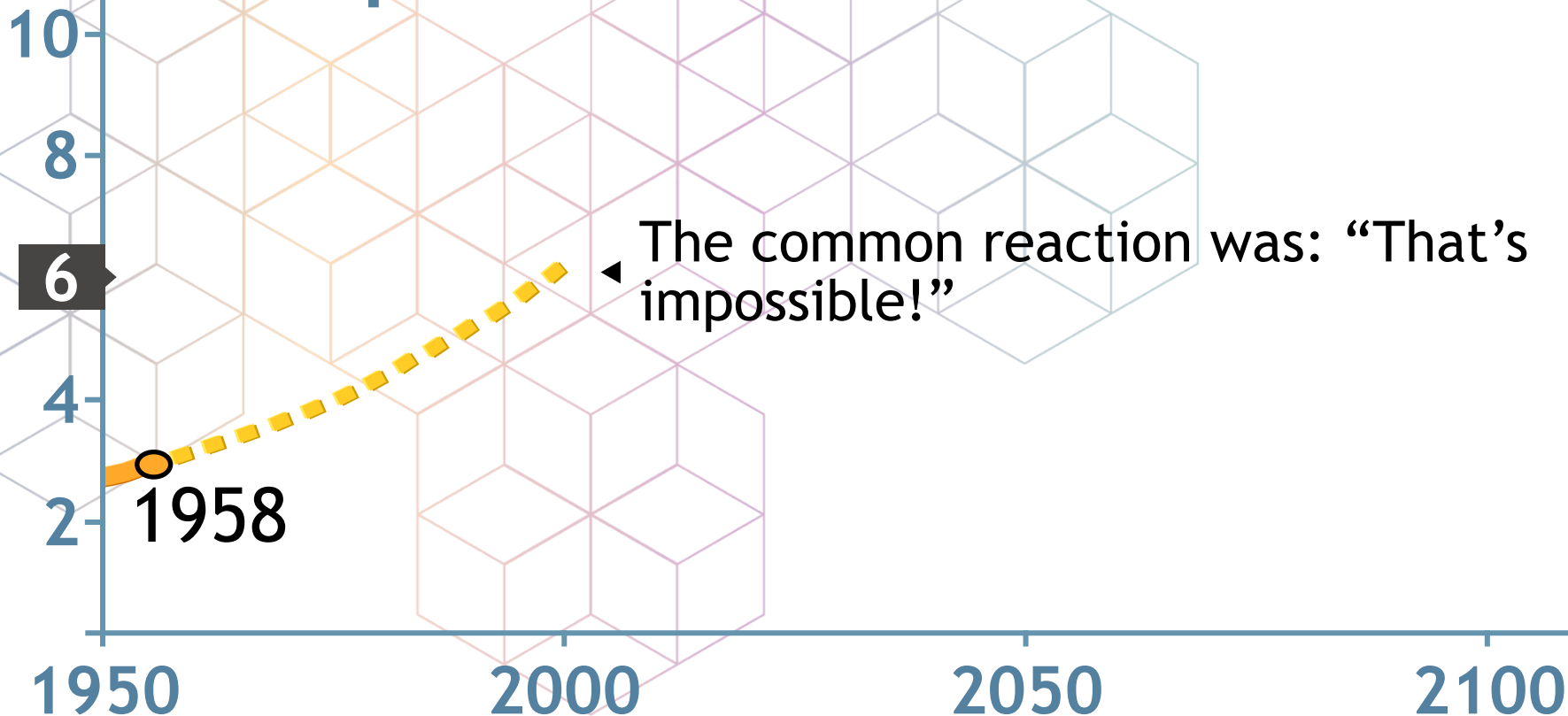
Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

World Population Billion people



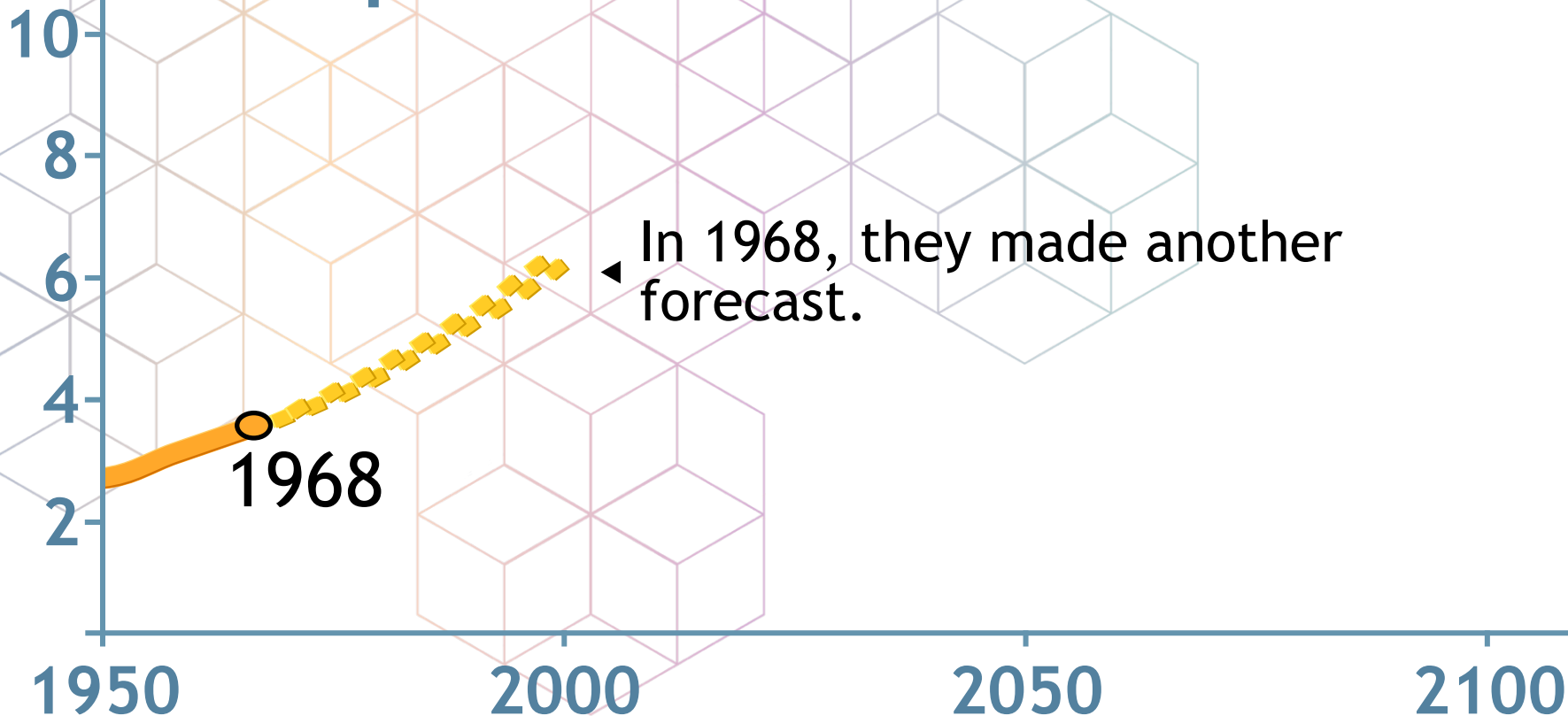
Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

World Population Billion people



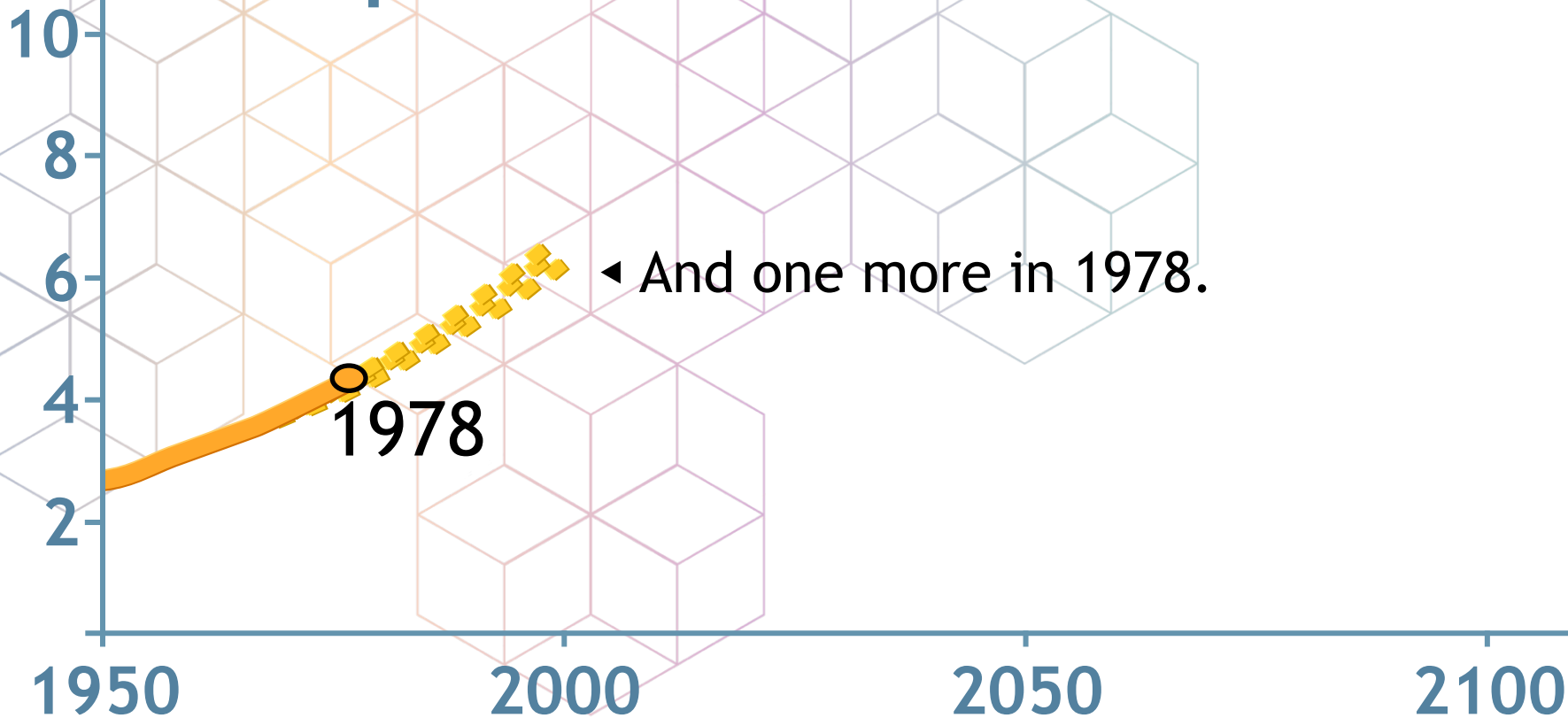
Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

World Population Billions of people



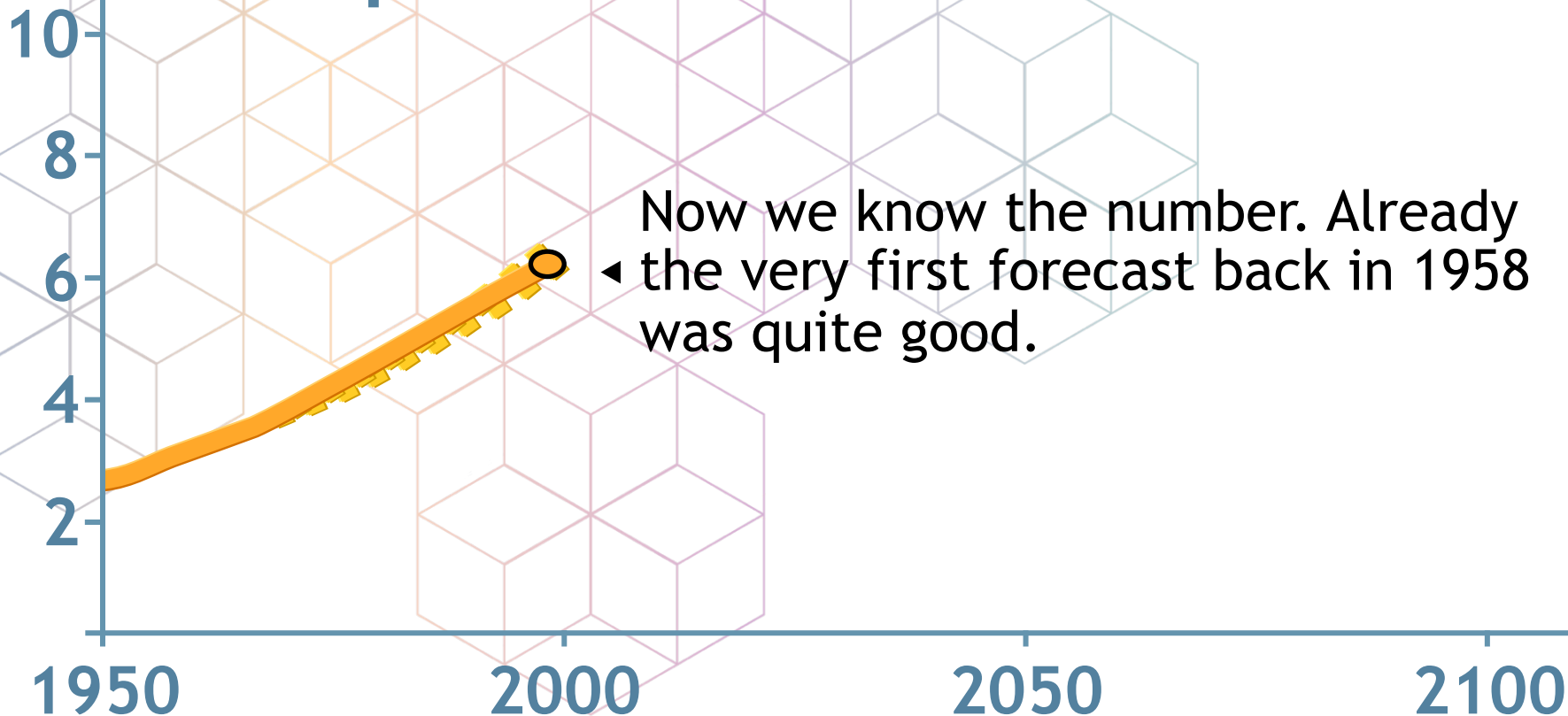
Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

World Population Billion people



Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

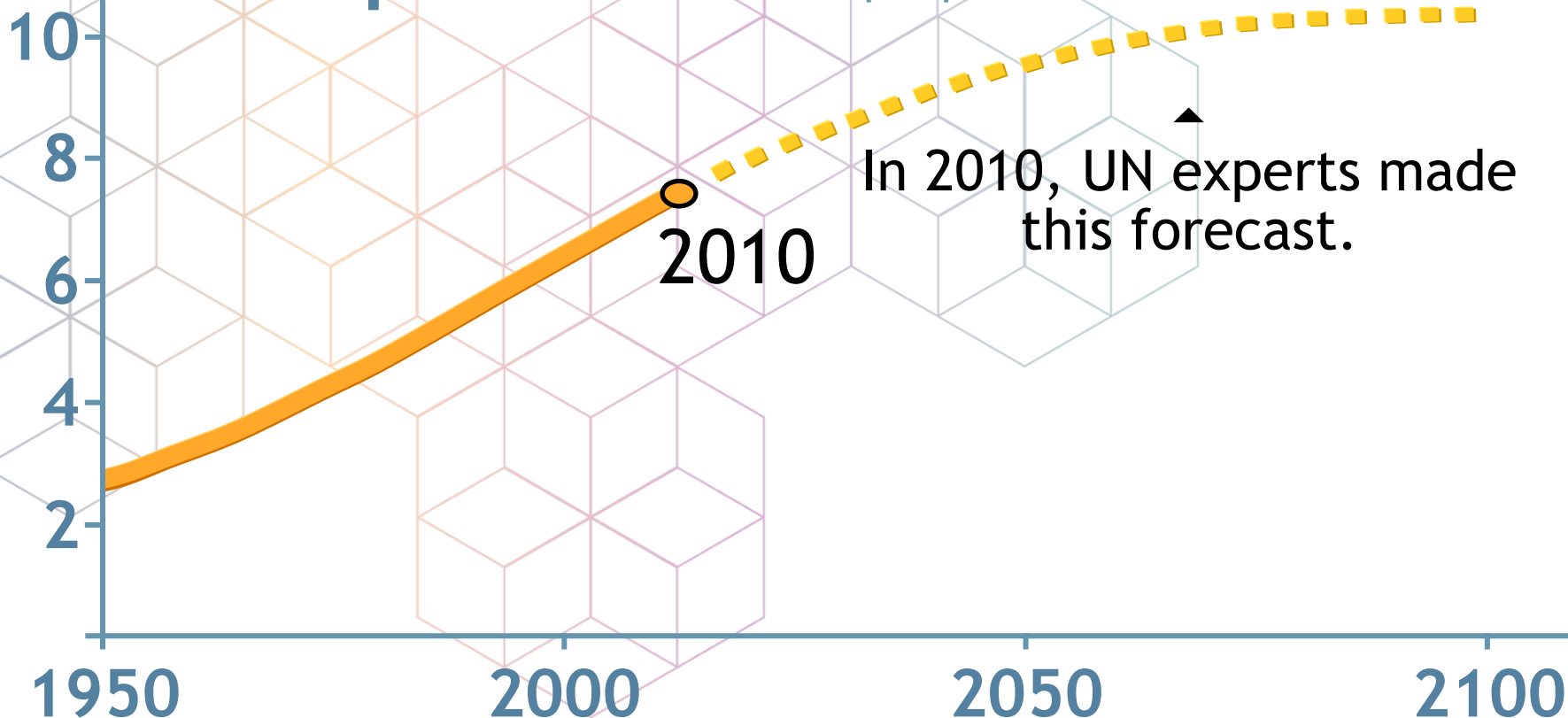
World Population Billion people



Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

World Population

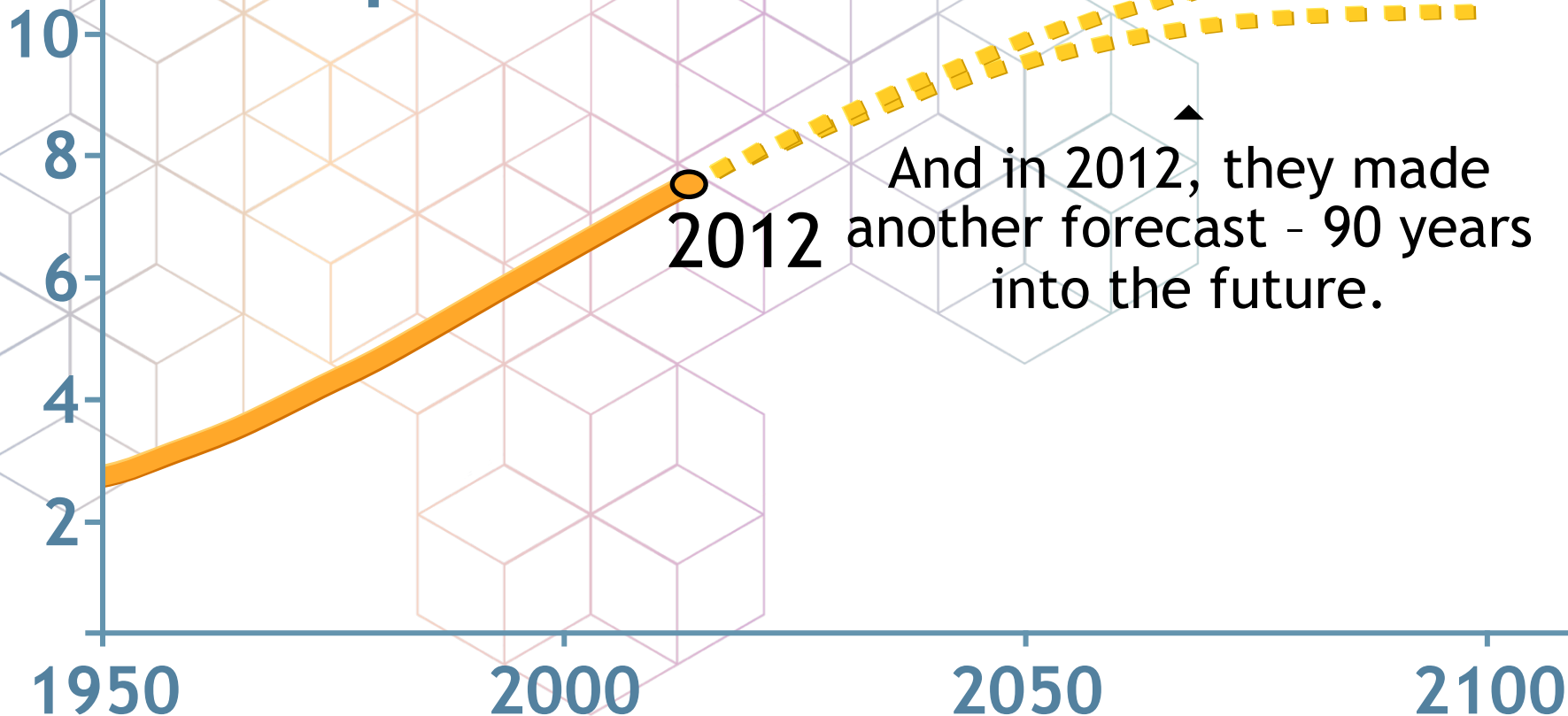
Billion people



In 2010, UN experts made this forecast.

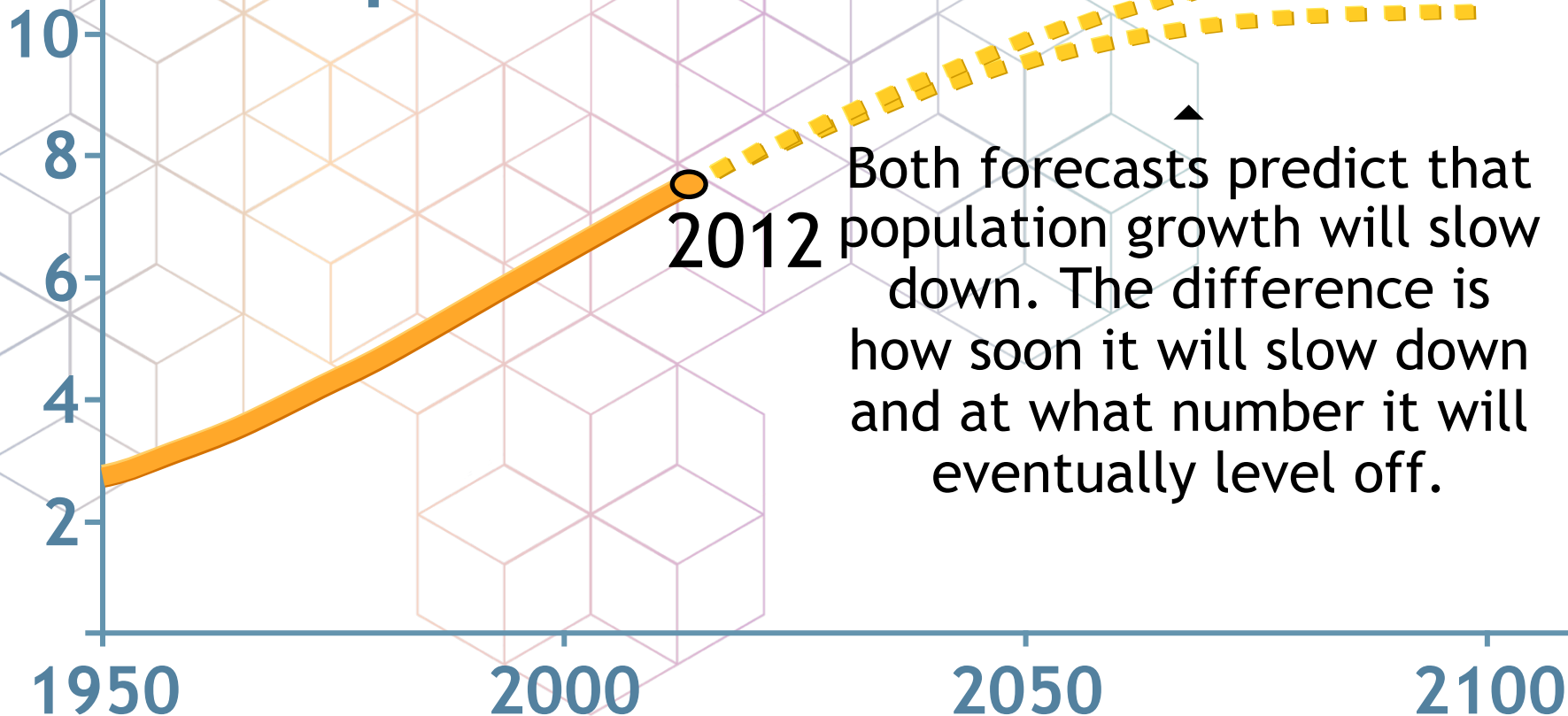
Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

World Population



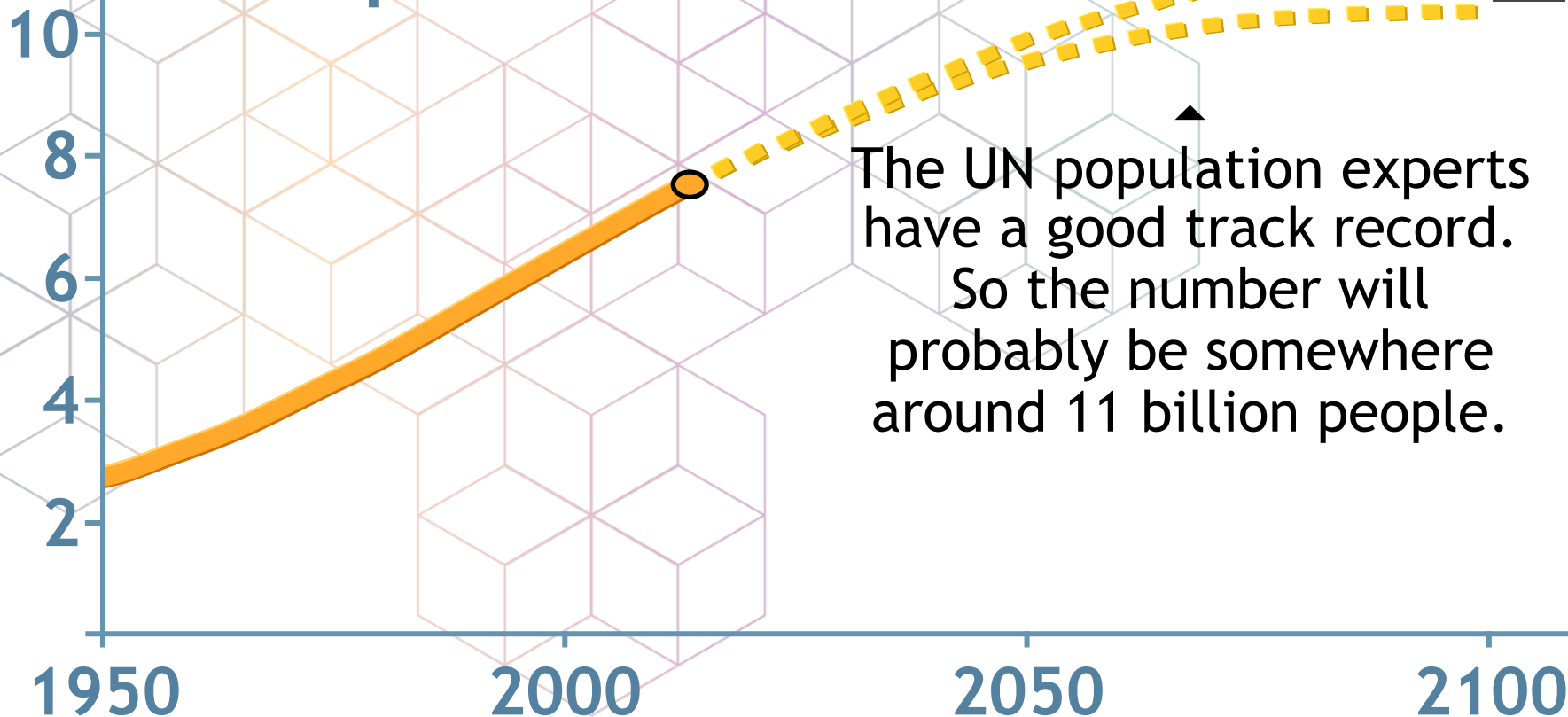
Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

World Population

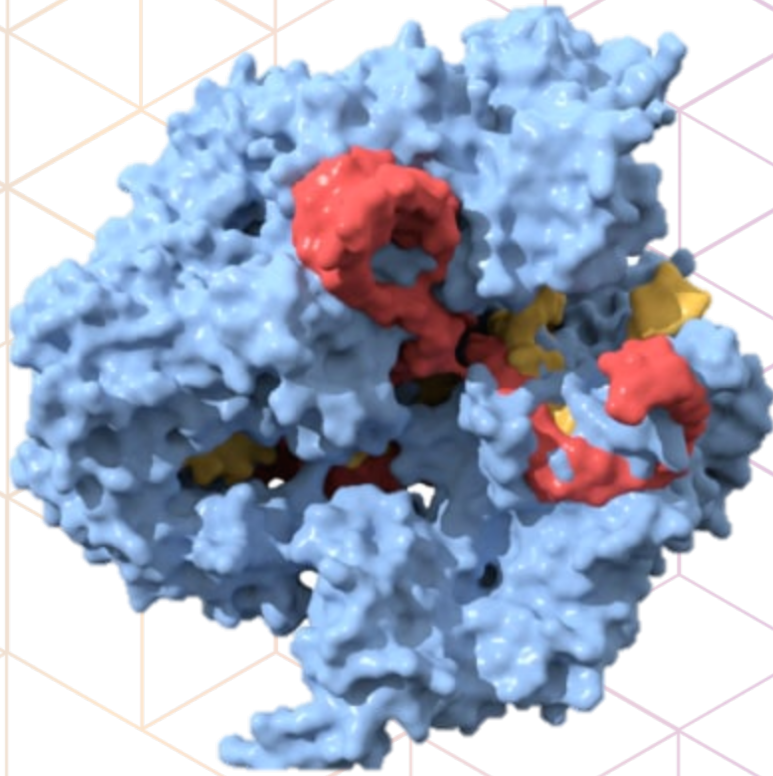


Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.

World Population



Sources: Nico Keilman "Data quality and accuracy of United Nations population projections, 1950-95"; UN World Pop. Prosp. 2010 & 2012.



CRISPR/Cas9

SCIENCE Breakthrough of the Year:

2008: Cellular reprogramming

2009: *Ardipithecus ramidus*

2010: The first quantum machine

2011: HIV treatment as prevention (HPTN 052)

2012: Discovery of the Higgs boson

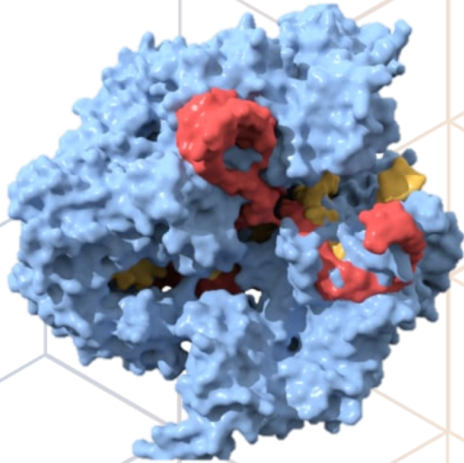
2013: Cancer immunotherapy

2014: Rosetta comet mission

2015: CRISPR genome-editing method

2016: Ripples in spacetime: gravitational waves

2017: Cosmic convergence: Neutron star merger



nature

International journal of science



Altmetric: 1840 Citations: 207

[More detail >>](#)

Article

Naturally occurring p16^{Ink4a}-positive cells shorten healthy lifespan

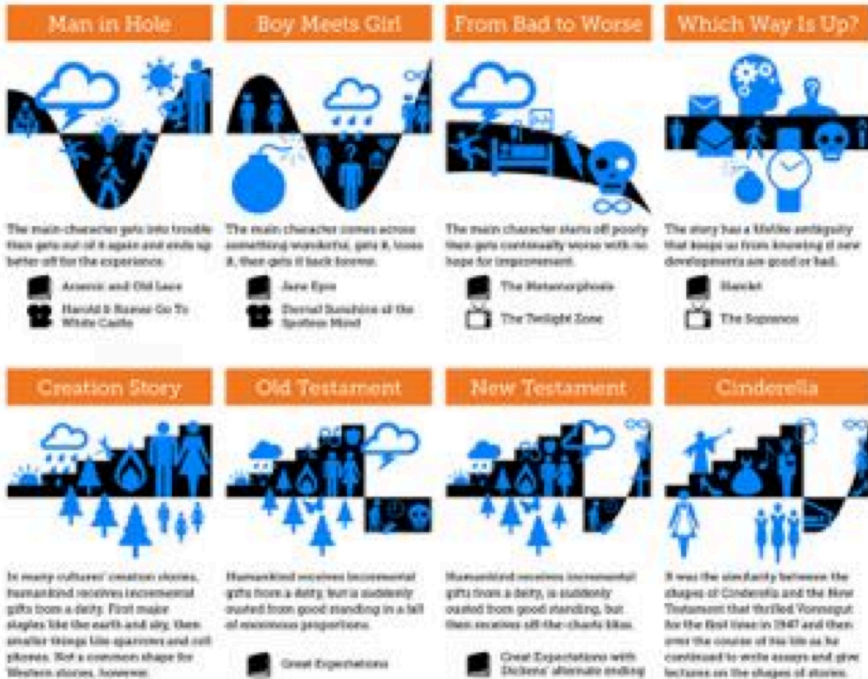
Darren J. Baker , Bennett G. Childs, Matej Durik, [Melinde E. Wijers](#), Cynthia J. Sieben, Jian Zhong, Rachel A. Saltness, Karthik B. Jeganathan, Grace Casaclang Verzosa, Abdulmohammad Pezeshki, Khashayarsha Khazaie, Jordan D. Miller & Jan M. van Deursen 

What are possible disruptions to these narratives?

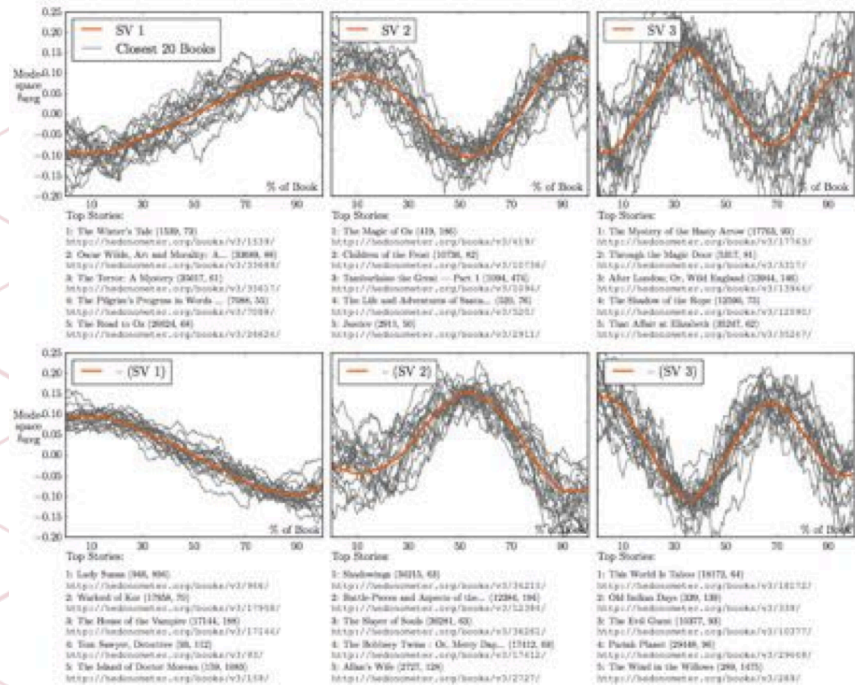
(5 mins)

Storytelling (intermission)

Plots & Narratives



Source: Maya Eilam, 2014(?)



Source: Reagan et al, 2016

Plots & Narratives

Basic plots...

- Overcoming the monster (e.g., *Beowulf*)
- Rags to riches (e.g., *Cinderella*)
- The quest (e.g., *King Solomon's Mines*)
- Voyage and return (e.g., *The Time Machine*)
- Comedy (e.g., *A Midsummer Night's Dream*)
- Tragedy (e.g., *Anna Karenina*)
- Rebirth (e.g., *Beauty and the Beast*)

Source: Christopher Booker, 2006, *The Seven Basic Plots*

Plots & Narratives



Source: Candy, 2017

What are FUTURE disruptions?

(10 mins)

Windtunneling!

Put your scenario to the test!

Kill your Baby!

(5 mins)



What are disruptive FUTURES narratives? (5 mins)

Example of metaphorical narratives:

A Private Sector Company:
Current Decision Makers

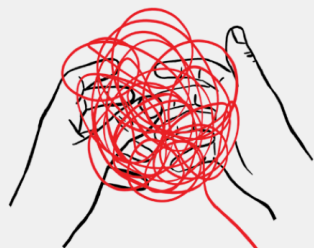


An Academia Collaboration
Current Physics Outreach

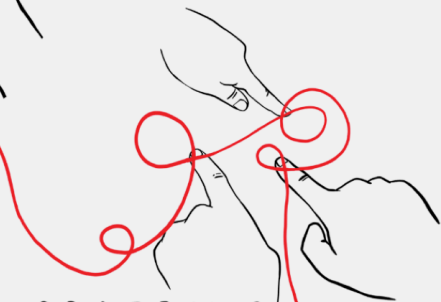


What are disruptive FUTURES narratives? (5 mins)

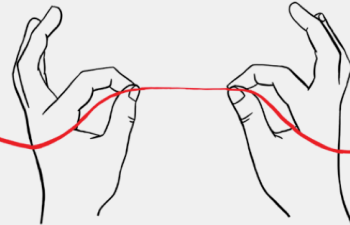
THE SOIF FOUR STAGE LEARNING JOURNEY



SCOPING
understand the
context and people,
and set the question



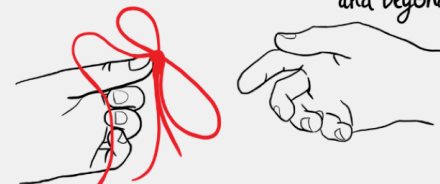
ORDERING
create contrasting,
coherent futures using
drivers of change



IMPLICATIONS
work through the
consequences of
the futures

**INTEGRATING
FUTURES**

embed insights from your
work into your organisation
and beyond



medical innovation competition with
selected CERN technologies



Medtech:Hack

April 6th – 9th 2018

CERN, Geneva, Switzerland

in partnership with:



#HFFC17:

360 Video: <https://youtu.be/BqToYLzTWAK>

Teaser Video: <https://youtu.be/VC8hL49hLxo>

Interviews: <https://youtu.be/raLIW5kmTlo>



#HFFC18

Humanitarian Foresight & Futures Co-creation

Mid-Late April 2018, CERN, IdeaSquare



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