

**Megatrend
Global Demographic Change -
Tackling Business & Societal
Challenges in 2030 and
beyond**

Dr. med. Hans Groth, MBA
University of St. Gallen, September 24, 2019
Room 22-201
12.00-14.00

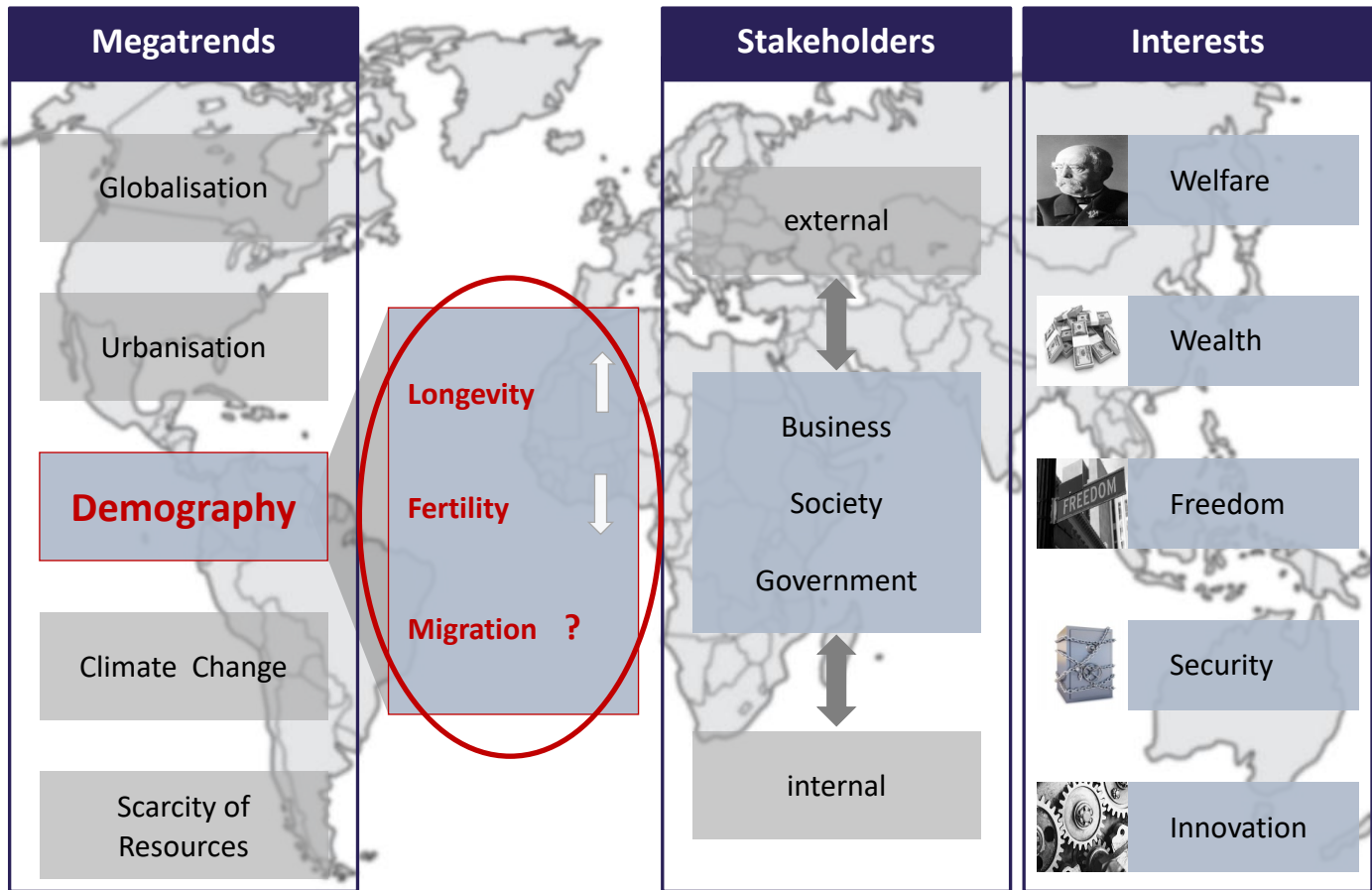


The WDA Forum

- Founded in 2002, based in St. Gallen/Switzerland
- Well established global partner network with more than 100 interdisciplinary fellows – specific working groups for priority themes
- Bi-annual World Ageing & Generations Congress at the University of St. Gallen – an unique event with up to 100 speakers from 40 countries and 500 participants
- Organizer of dedicated conferences, symposia and workshops
- Teaching and research at the University of St. Gallen (scientific papers/books and tailored Master Thesis)



Demography: Megatrend in the 21st century



■ Demography: Why does it matter?

“Politics is geography and demography - or the application of both”

(Jean-Claude Juncker, September 2016)

“No other force is likely to shape the future of national economic health, public finance and policy making as the irreversible forces of demographic ageing”

(Hans Groth, September 2015)

Demography: As old as mankind

One thing is sure - the earth is now more cultivated and developed than ever before. There is more farming with pure force, swamps are drying up, and cities are springing up on unprecedented scale...

We've become a burden to our planet. Resources are becoming scarce, and soon nature will no longer be able to satisfy our needs. The time will ultimately come when pest, hunger, floods and war will diminish the excessive numbers of our human species...



Septimius Tertullianus, 200 B.C.

Our World in 2018

7.5 bn

Today 6.3 billion people live in less developed countries, 1.2 billion people live in developed countries. Each year the world grows by 80 mio. people

250 m

3.4% of the global population live outside their countries of birth. This percentage has remained stable over the last 15 years.

2.4

The total fertility rate has decreased all across the globe. It ranges from 0.9 children per woman in South Korea to 7.2 in Niger.

55%

The percentage of the world's population living in urban areas is increasing.

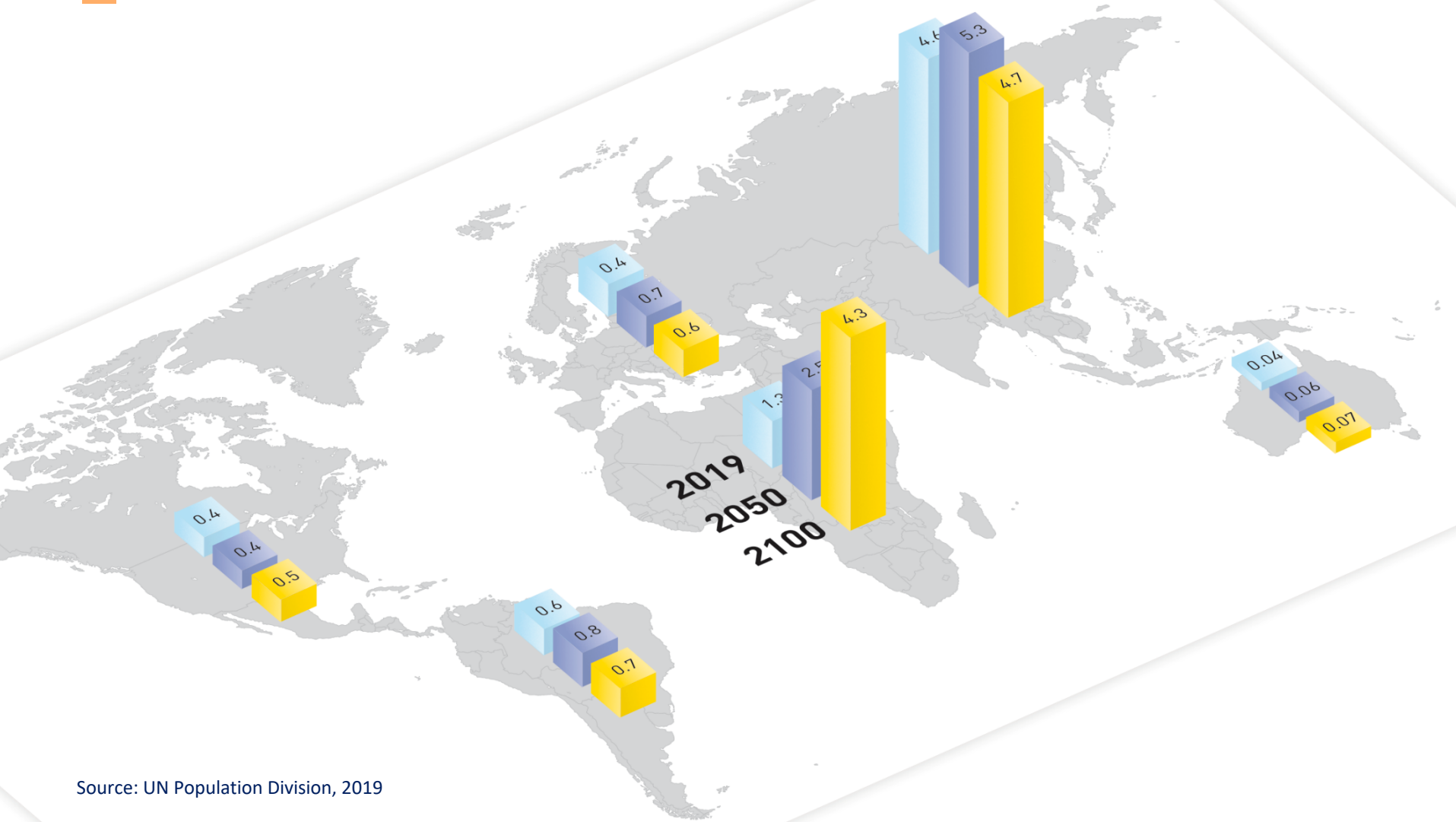
30/1000

The global infant mortality rate has declined since 1970 from 80 infant deaths per 1000 live births to 30 deaths in 2018.

72 yrs

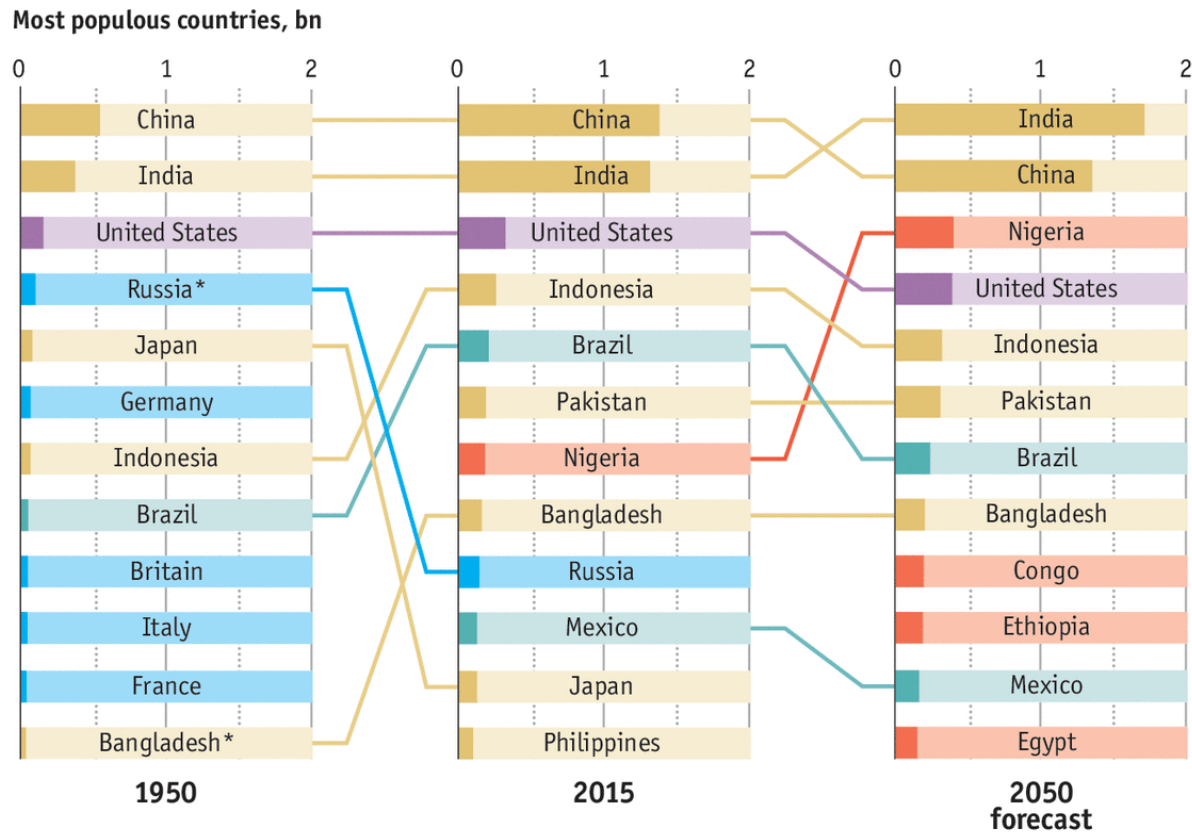
Life expectancy at birth is higher than ever before. 68 – 72 years in less developed countries and 76 – 82 years in developed countries.

Our next world



Source: UN Population Division, 2019

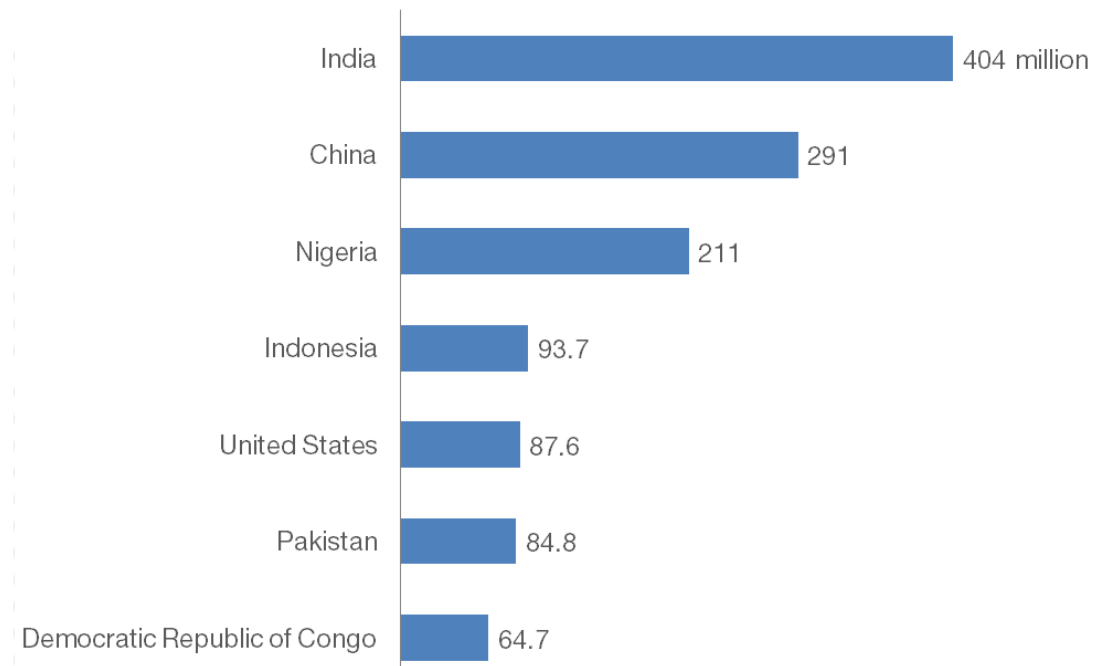
The population ranking of nations is changing



Source: The Economist, 2018

Population growth: Nations contributing the most

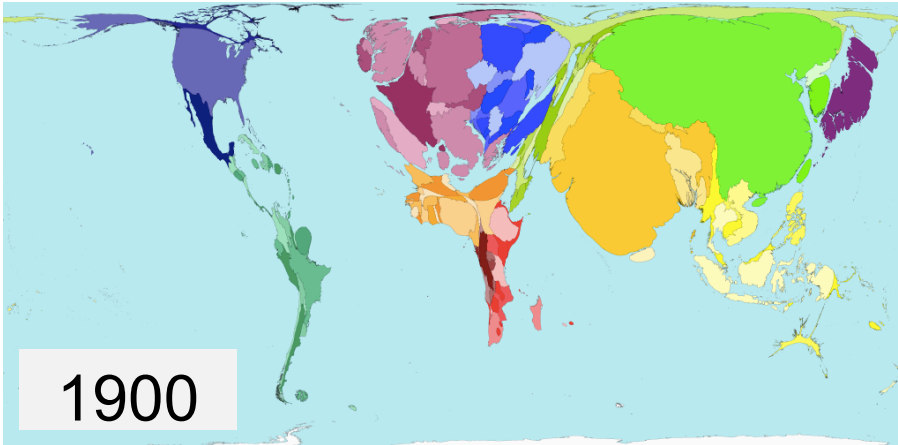
The global population increase between 2014 and 2050 is forecast to be 2.5 billion



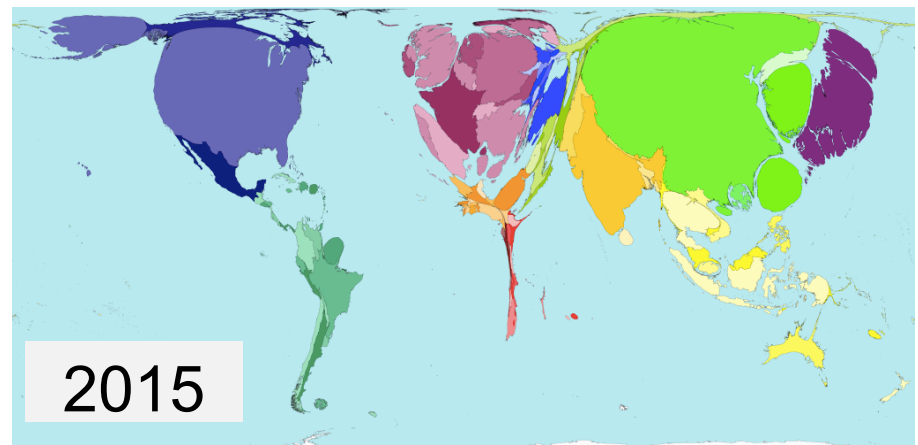
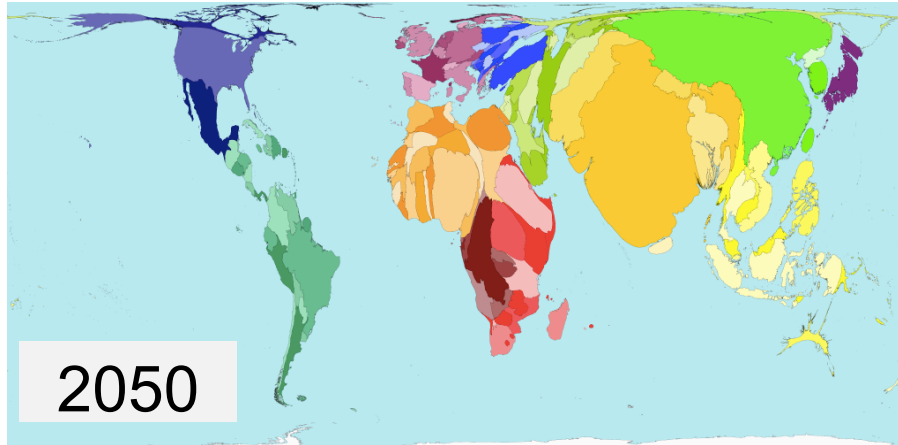
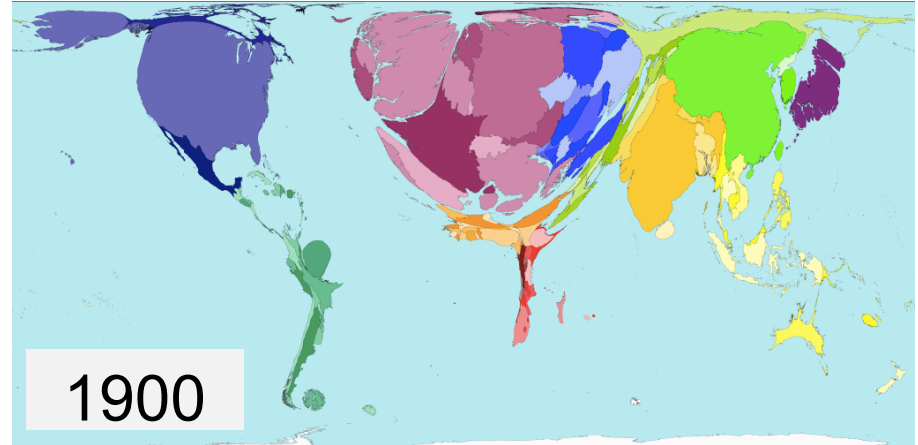
Source: World urbanization Prospects 2014

Growing inequalities on our planet

Where do people live?



Where do people live in prosperity?



Source: worldmapper.org

Agenda

1 History of population growth & ageing

2 “Our next world”

3 The demography of Switzerland

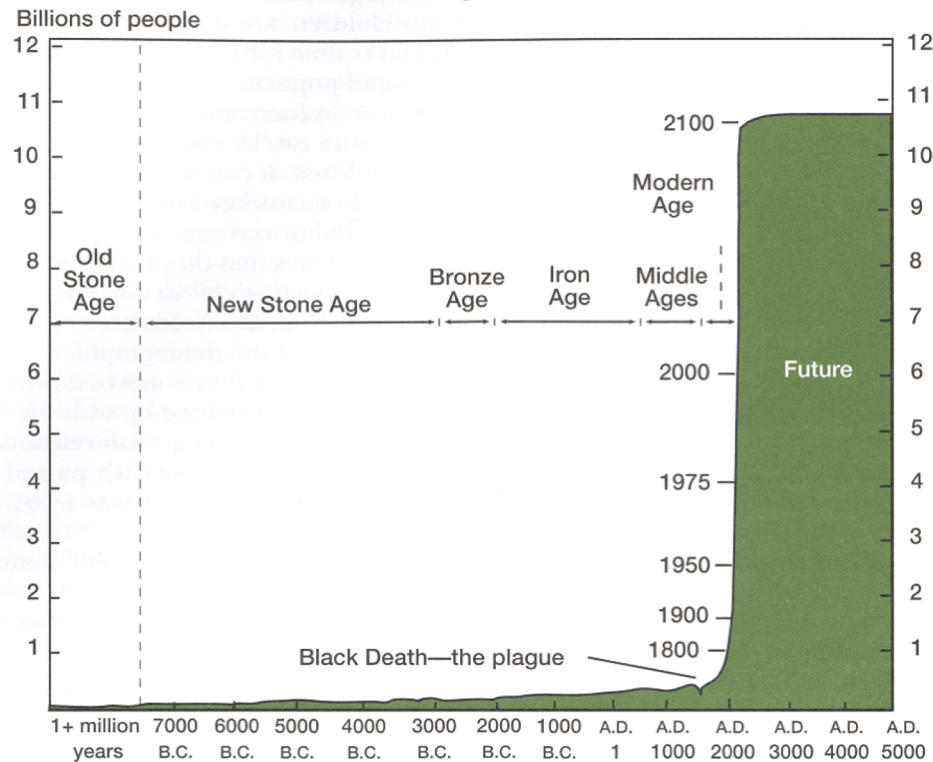
4 Your 100 year life

5 What is your benefit to attend this class?

6 How to tackle your project assignment?

7 12 project themes to choose from

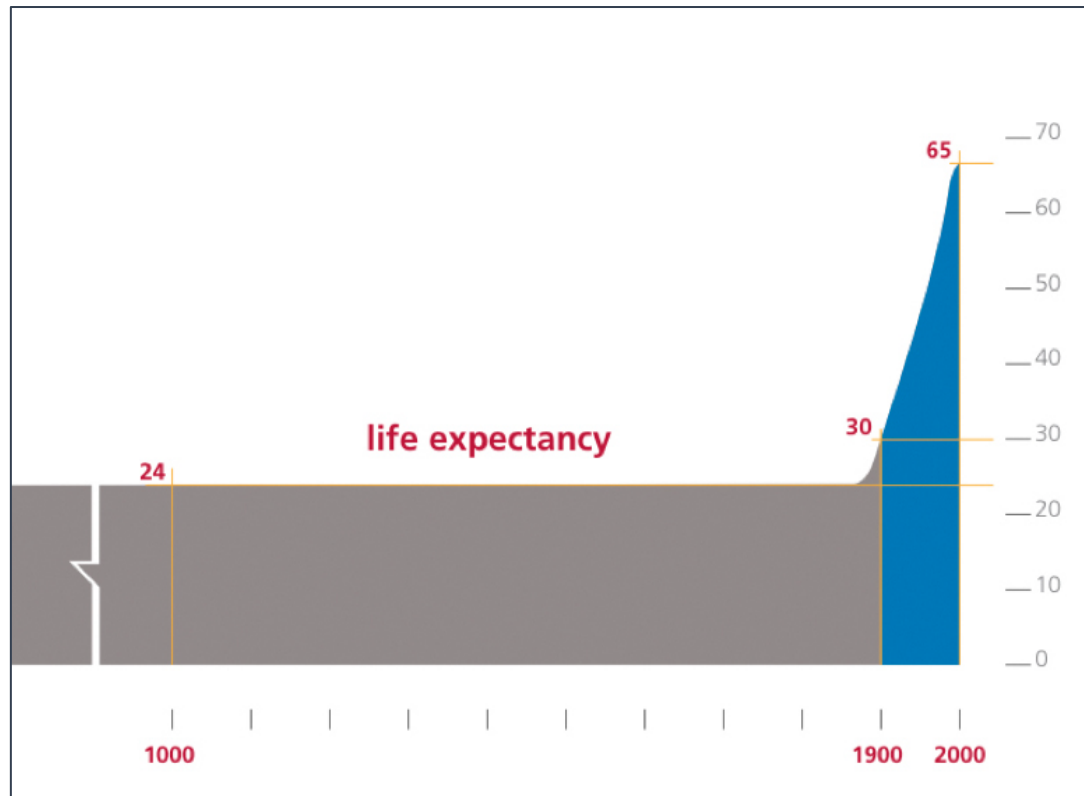
The history of humankind



For thousands of years the world population remained well below 300 million inhabitants. Within the past 200 years the population grew at an enormous speed to over 7 billion.

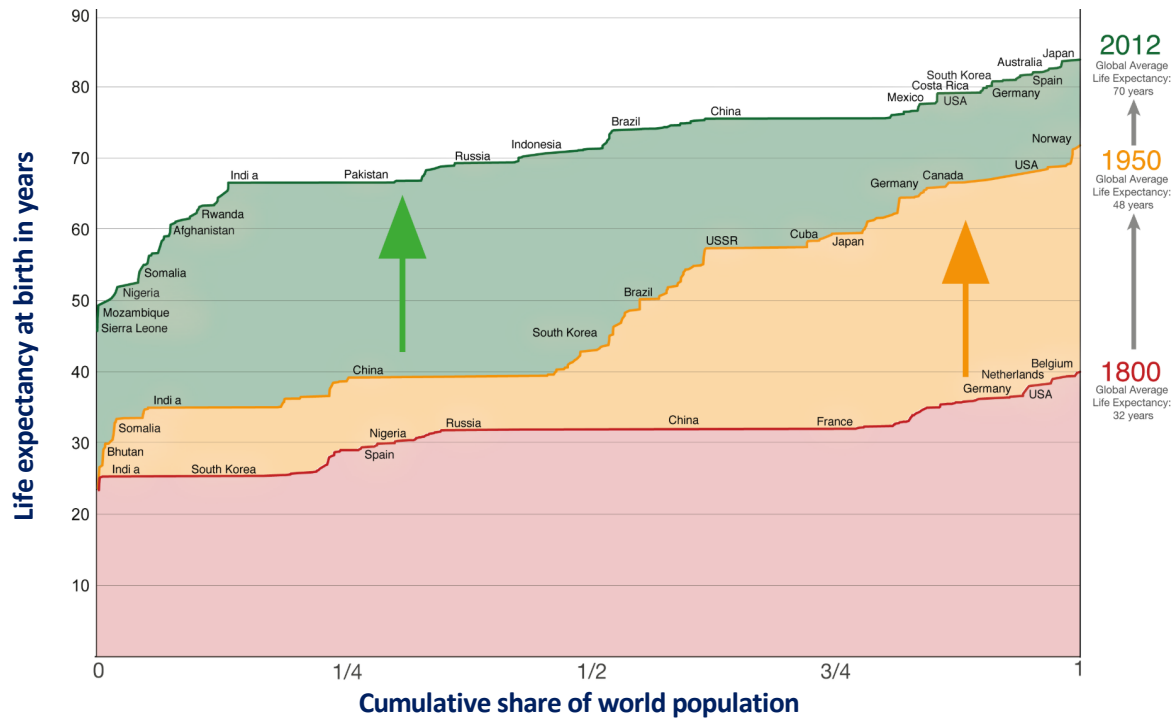
Source: Population Reference Bureau; and United Nations, World Population Projections to 2100 (1998)

The history of humankind



Life expectancy at birth has remained relatively stable for more than 1000 years. However, for the past 200 years we saw an unprecedented life span extension.

Life expectancy since 1800



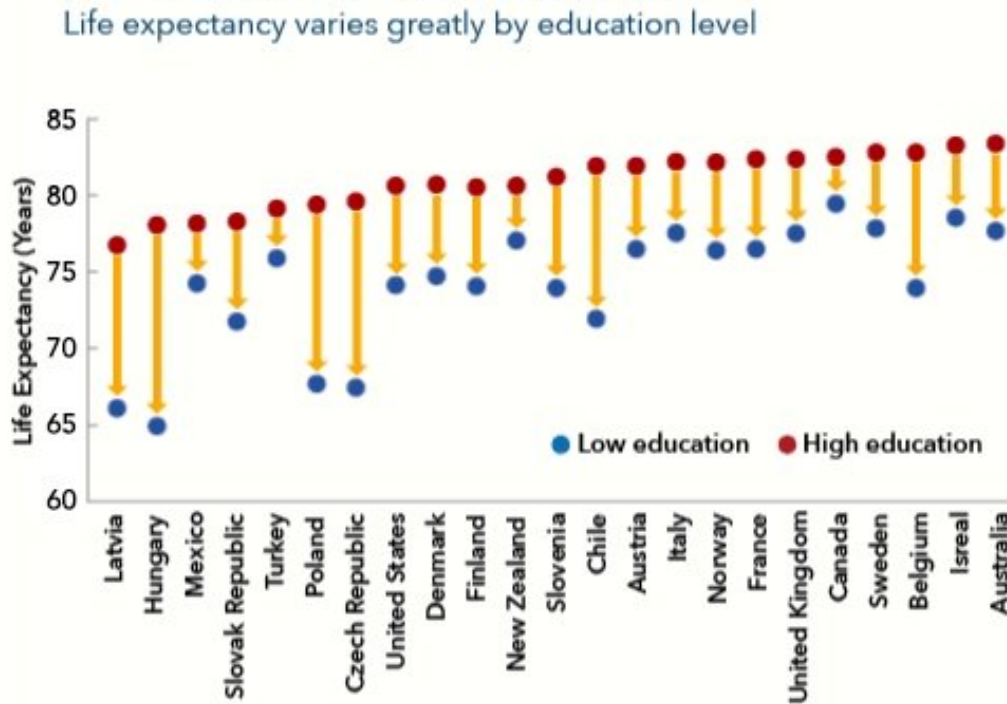
Better Sanitation

Public Health & Health Care Access

Economic Trends

Source: Roser, 2017a

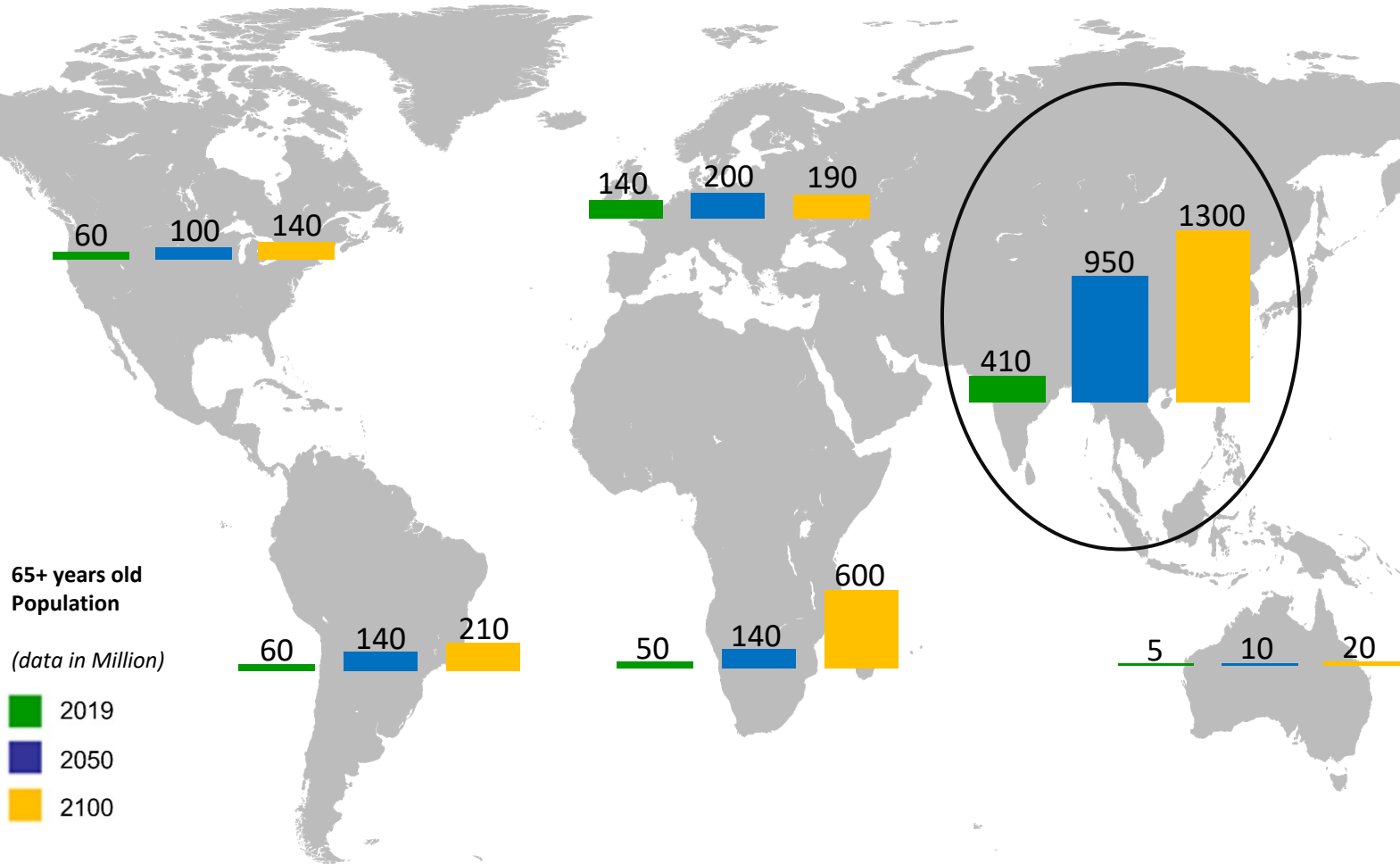
Inequality of longevity: The impact of education



Sources: IMF staff estimates and Murin and others, 2017

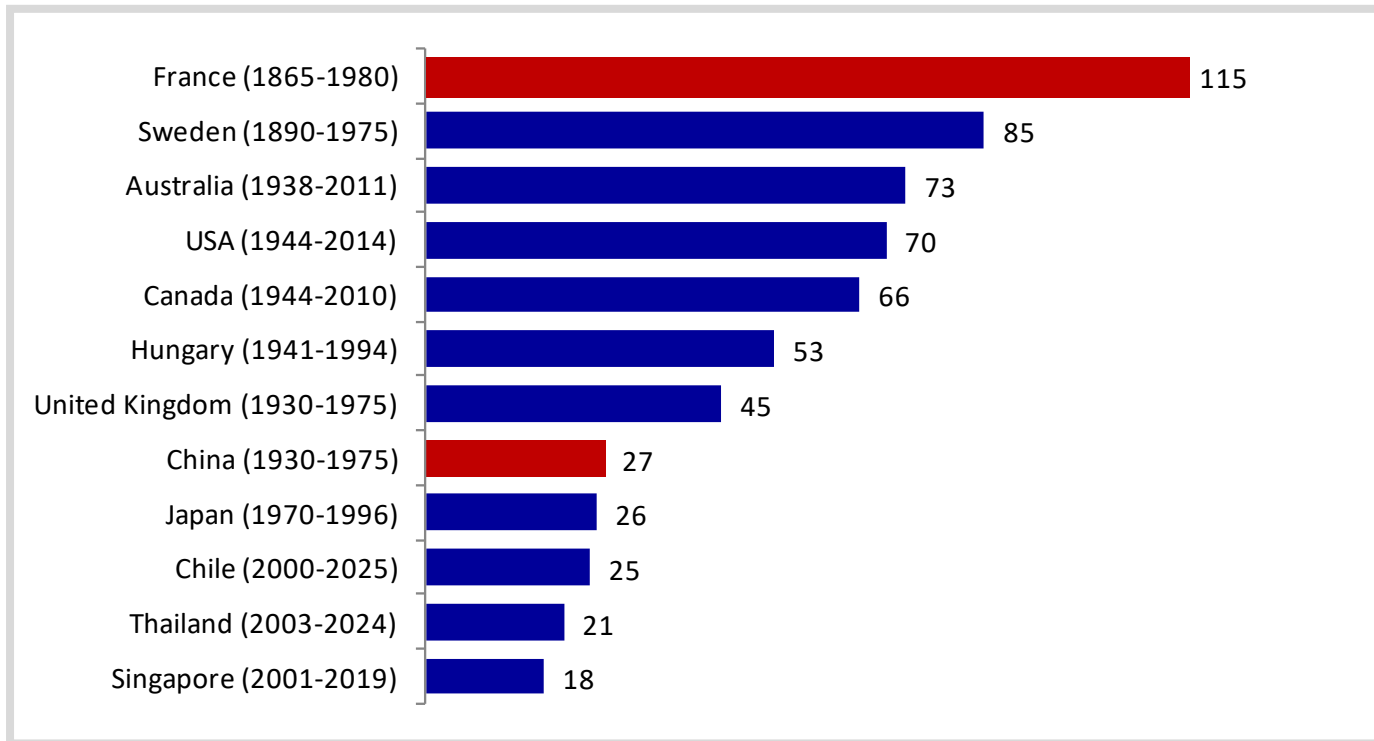
Note: Figure shows life expectancy of men at age 25 for those with high and low levels of education.

Longevity happens everywhere



Source: UN Population Division „World Population Prospects, 2019 Revision

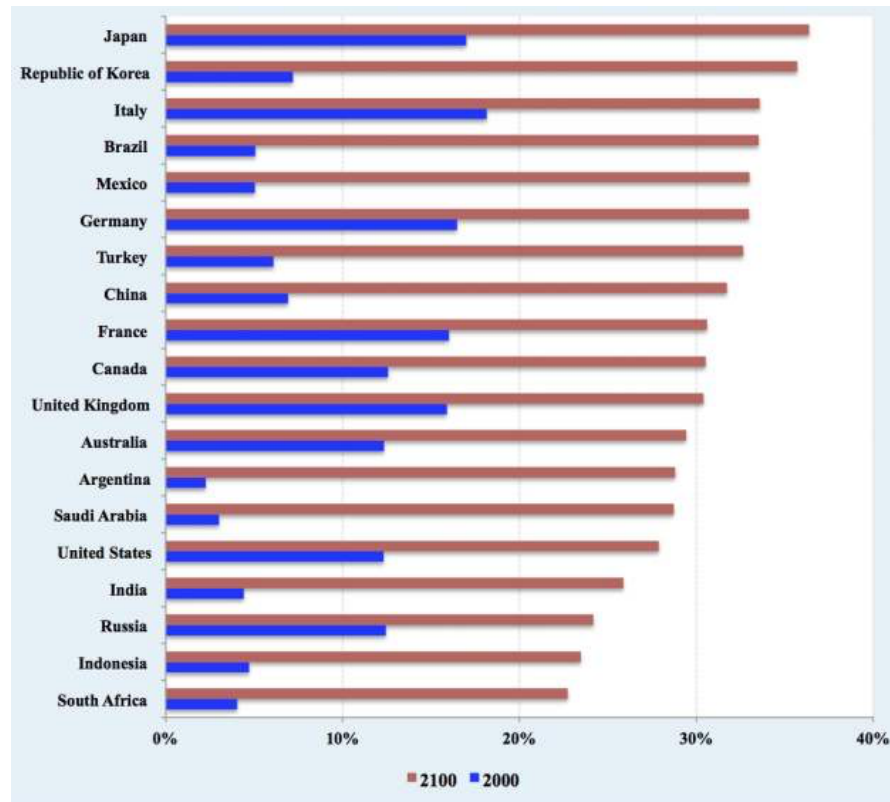
Different dynamics of longevity



Number of years needed to increase the 65+ population from 7% to 14%
It took China only 27 years for what it took in France 115 years!

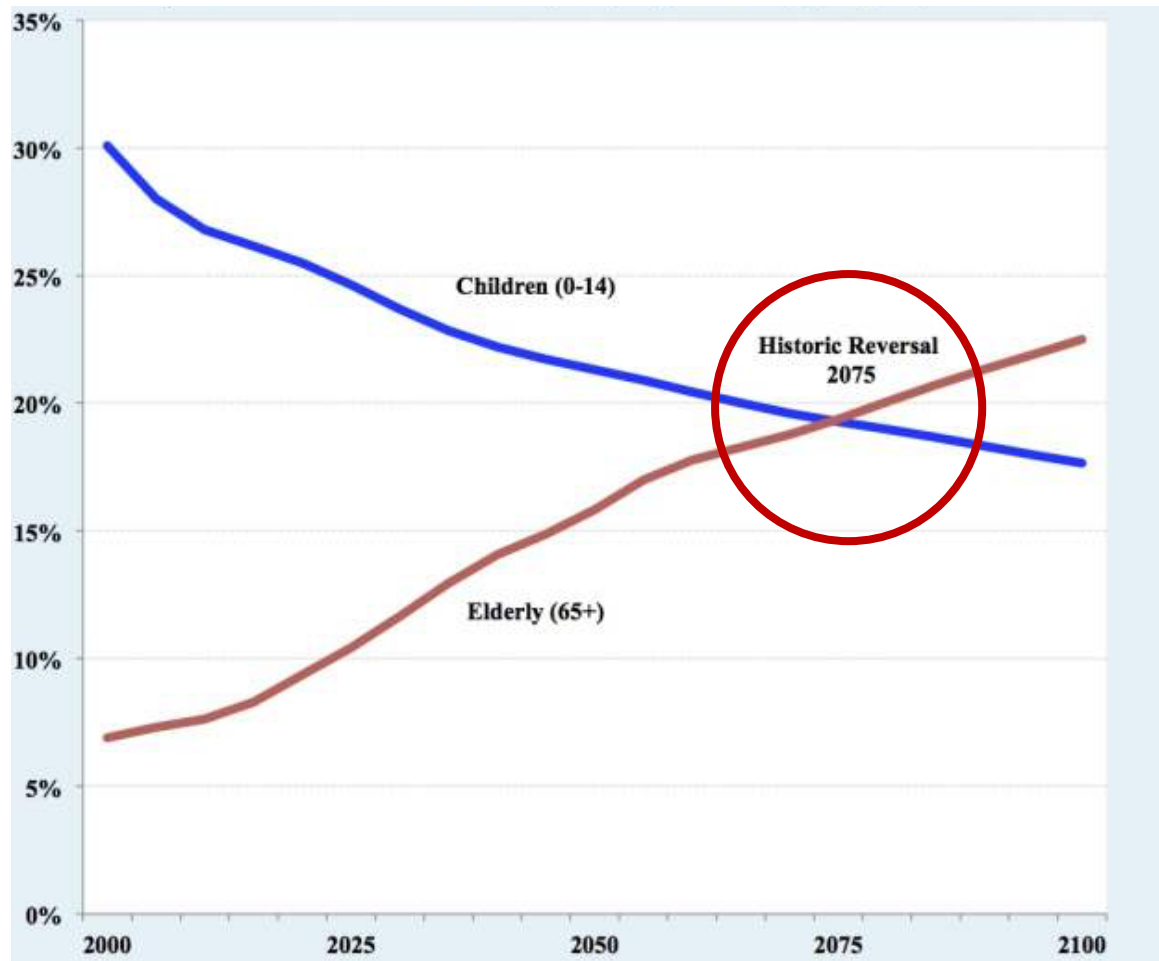
Source: Own graphs based on UN, World Population Prospects 2010 (2010)

65+ populations in G20 countries: 2000 vs. 2100



Source: United Nations Population Division

Longevity creates “different” societies

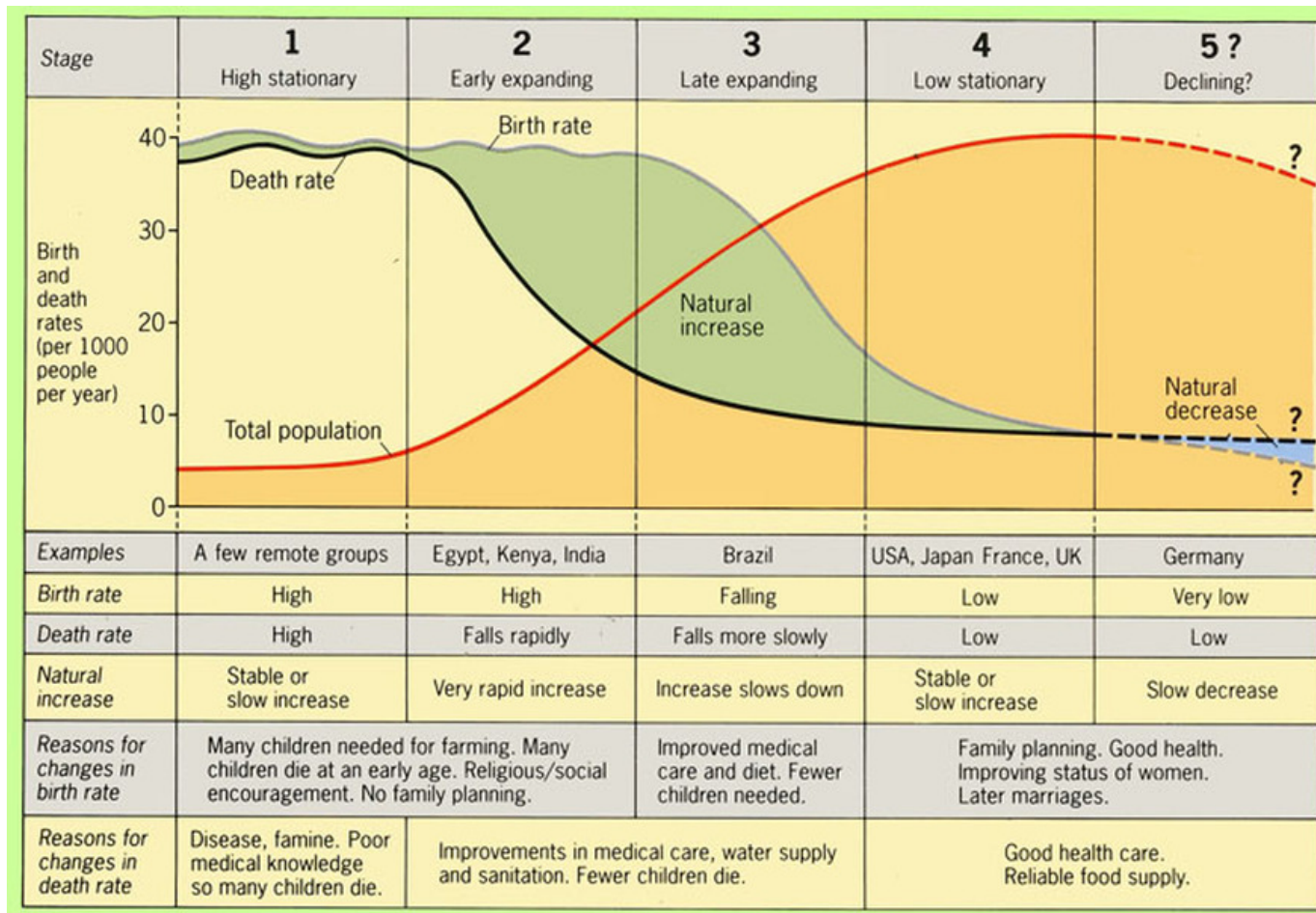


Source: United Nations Population Division

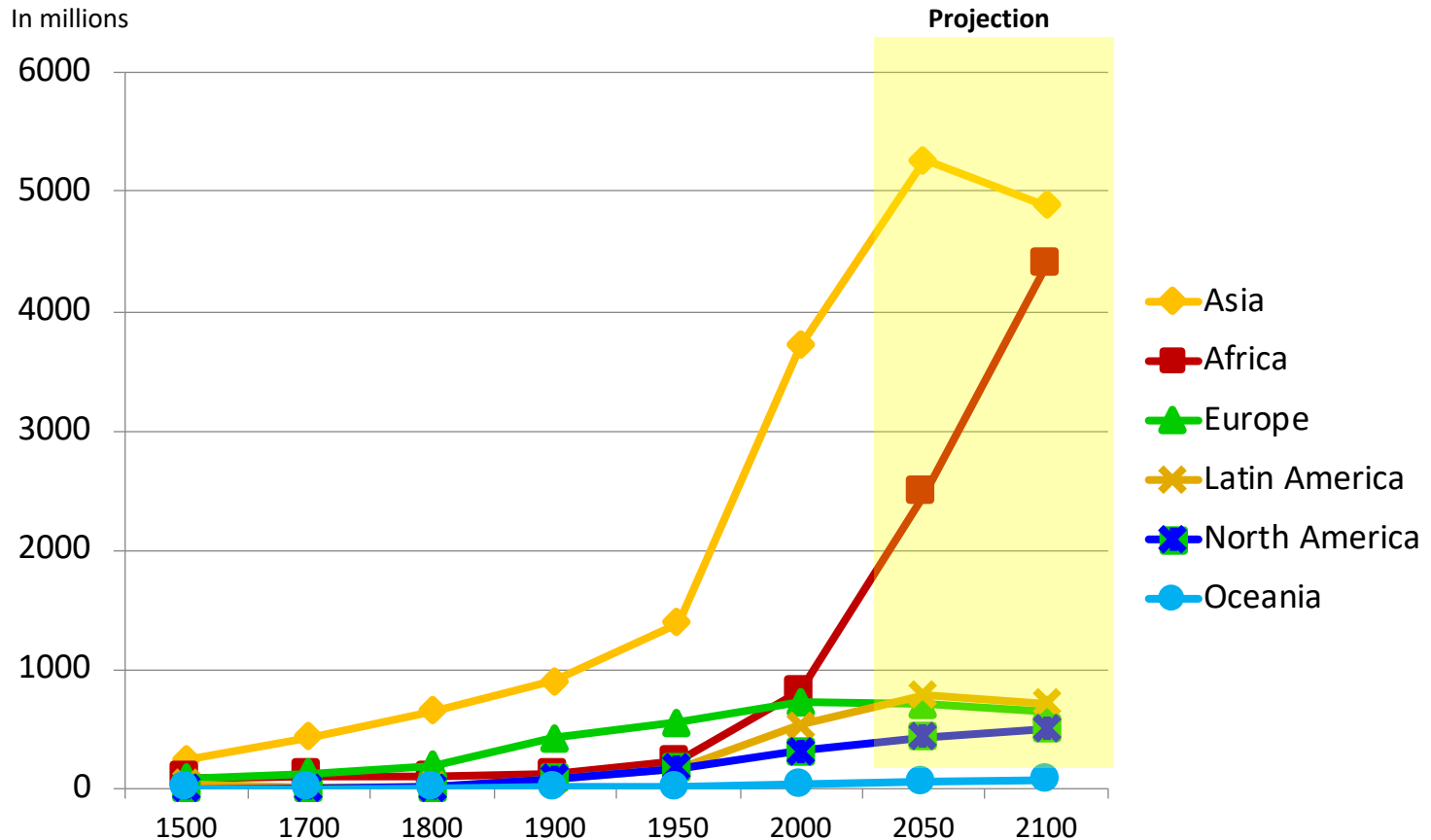
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- 2** “Our next world”
- 3** The demography of Switzerland
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The evolution of humankind: 5 stages



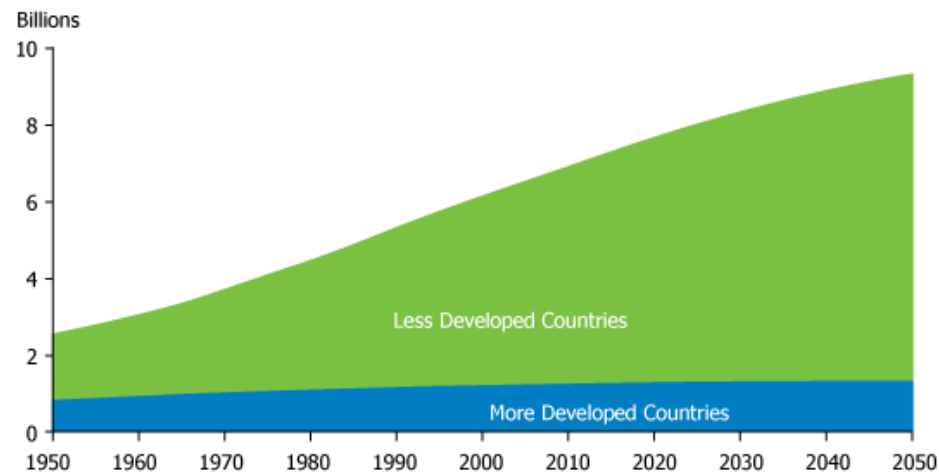
Population growth by region (1500-2100)



Source: Biraben (2003)

“Our next world” - Different qualities, different quantities!

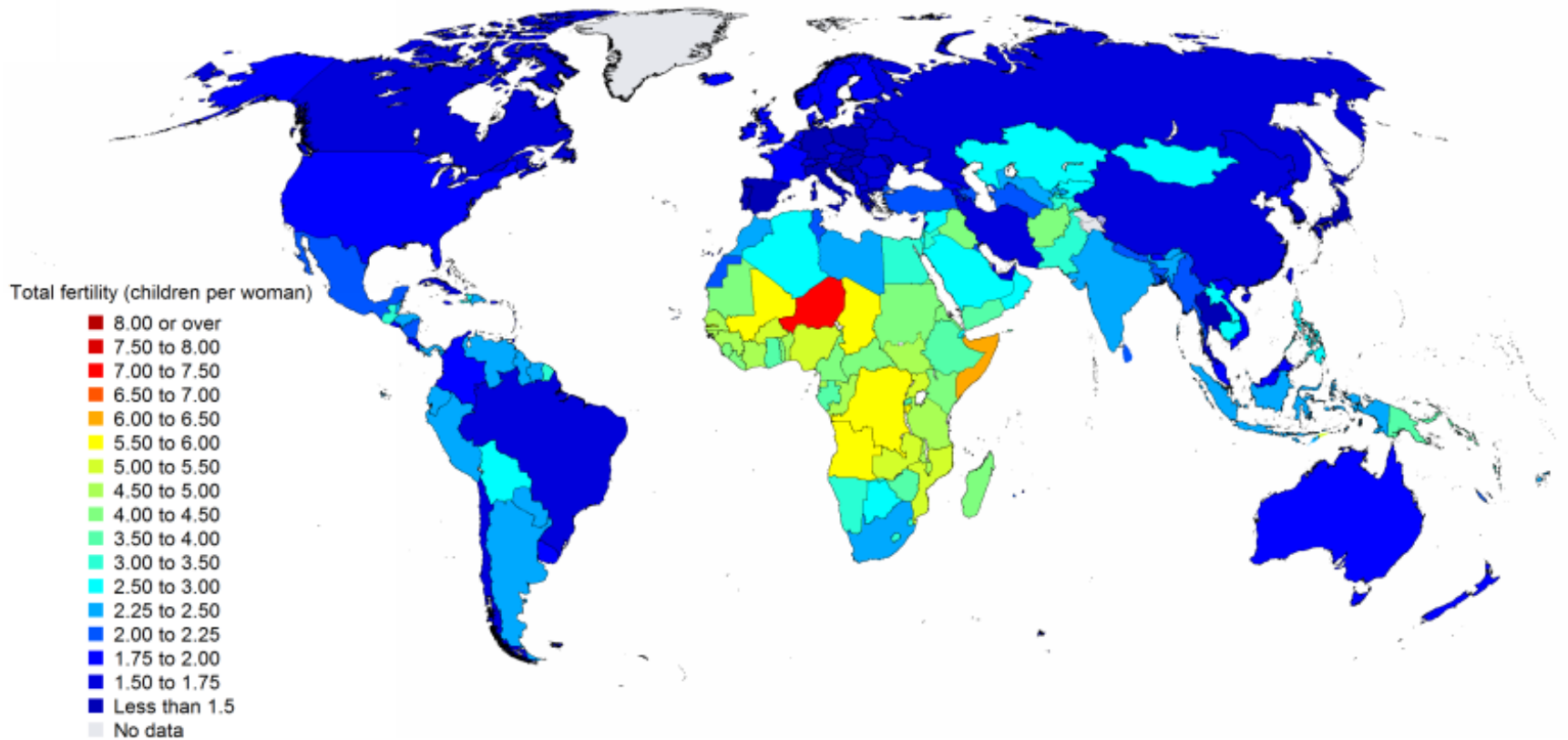
Developed countries will have to find new models with declining workforces.
Developing countries have to create opportunities to harvest the demographic dividend.



The developed world will have to figure out how to manage and prosper with not having enough children to become tomorrow’s workers and breadwinners

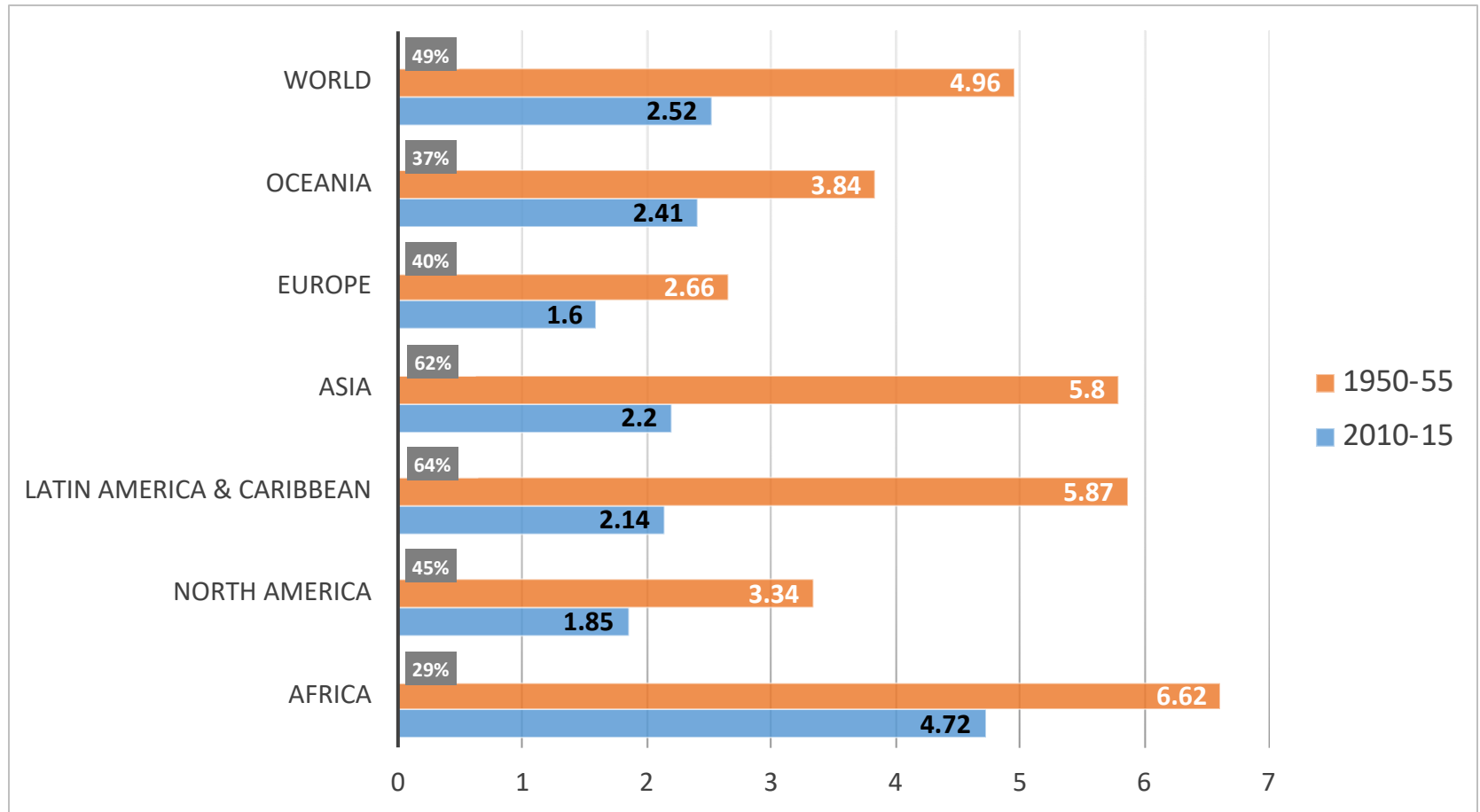
Developing countries will have to create societies that offer employment and opportunities to their young before ageing starts to manifest in their societies

Fertility across the globe in 2015



Source: UNPD, World Population Prospects: The 2015 Revision

Fertility decrease across the globe



Source: UN Population Division

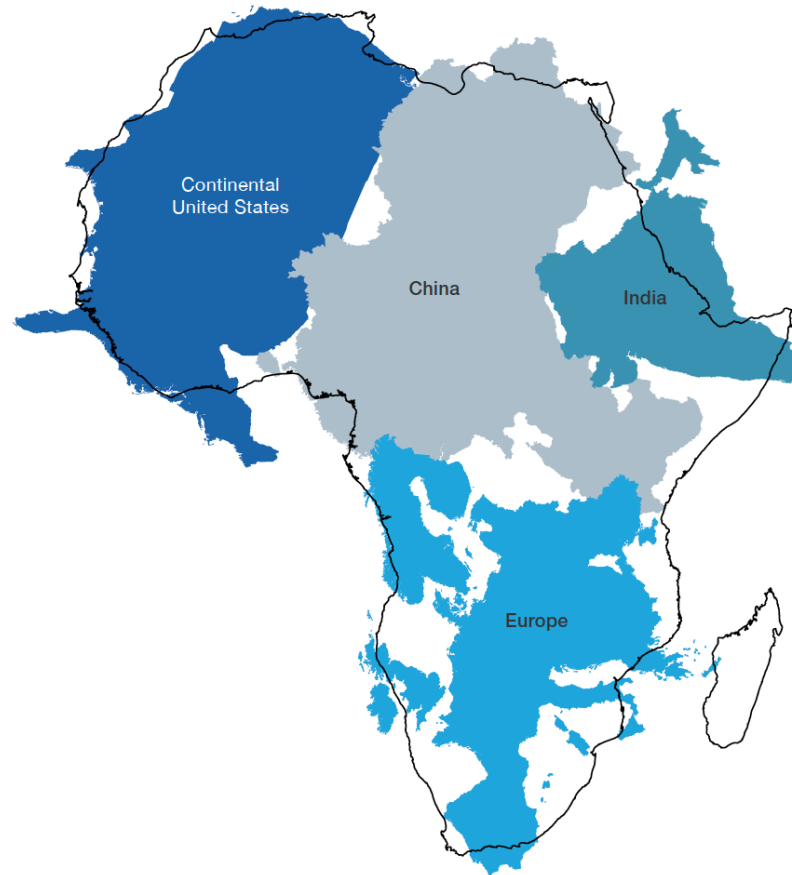
UN world population prospects: The methodology

“To project the populations, various assumptions were made regarding future trends in fertility, mortality and international migration. Because the future is uncertain, 8 different projection variants were produced.”

- A) **Fertility Assumptions:** Convergence towards low fertility
- B) **Mortality Assumptions:** Increasing life expectancy
- C) **Migration Assumptions:** Projected levels of net migration were generally kept constant until 2045-2050, after 2050, it is assumed that net migration would gradually decline and reach 50 per cent of the projected level of 2045-2050 by 2095-2100.

Source: UN Population Division (2015). World Population Prospects: The 2015 Revision, Methodology of the United Nations Population Estimates and Projections, Working Paper No. SA/P/WP.242.

Africa – its size is huge!



Source: McKinsey, 2017

Africa – its population dynamics are unprecedented!

By the End of the Century, 40% of People Will Be African

World population forecast with Africa's percentage share

World's Population

1950  2.5 billion

2015  7.3 billion

2050  9.5 billion

2100  11 billion

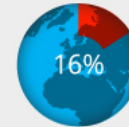
Africa's
Population

Accounts for

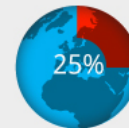
230 million



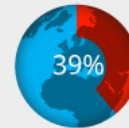
1.2 billion



2.4 billion



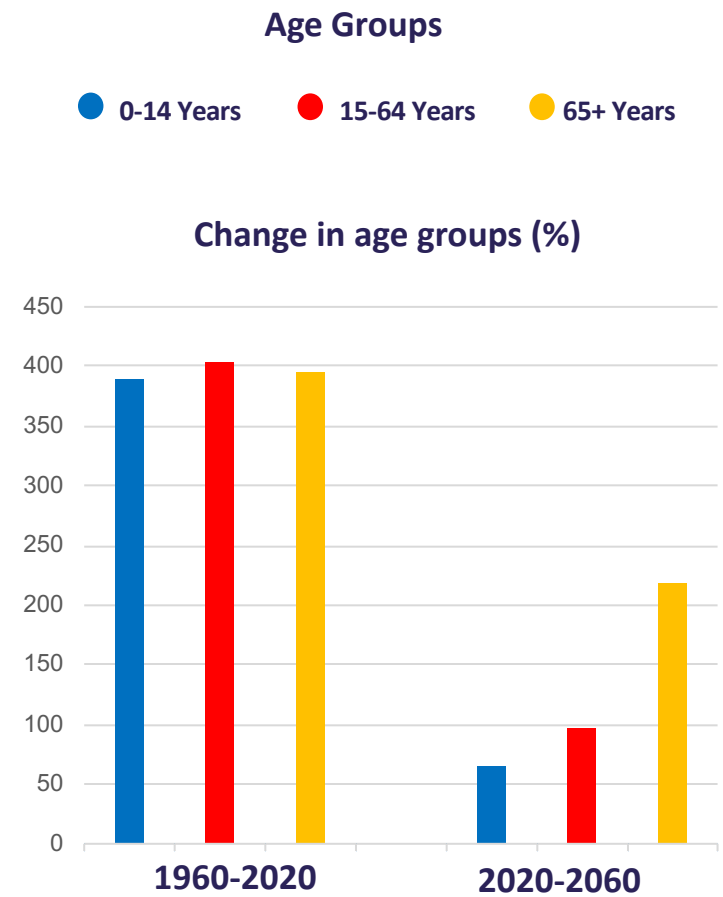
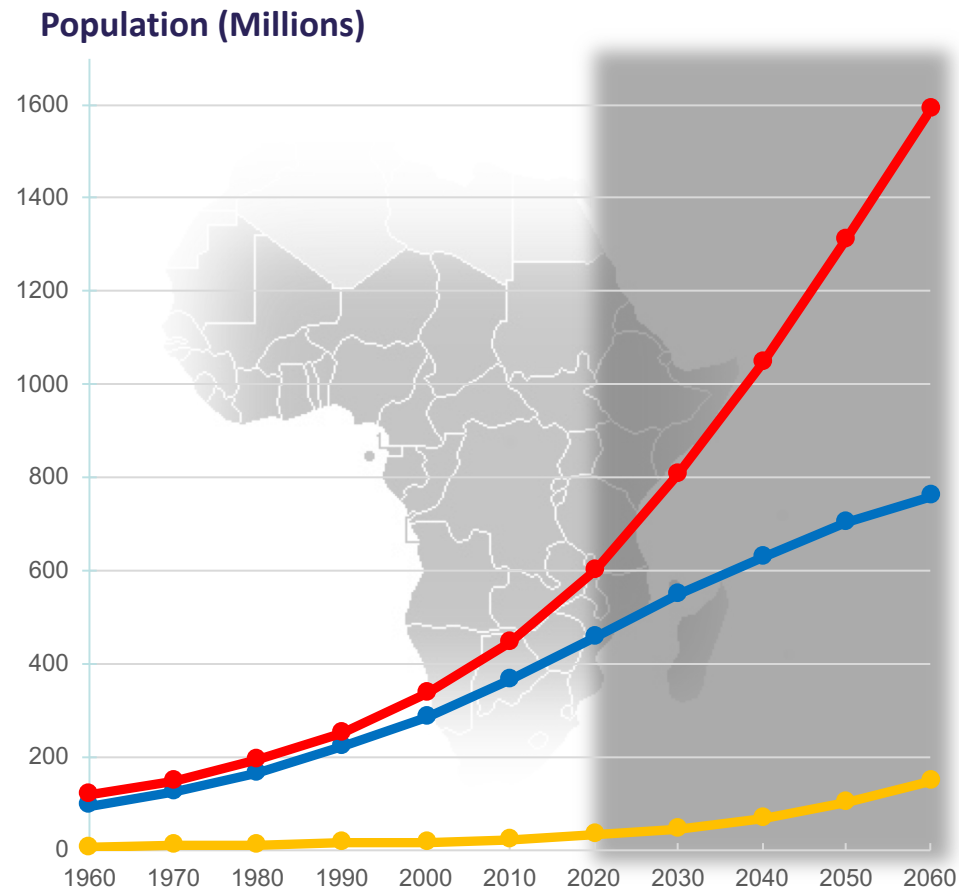
4.2 billion



Source: UNICEF

Mashable 

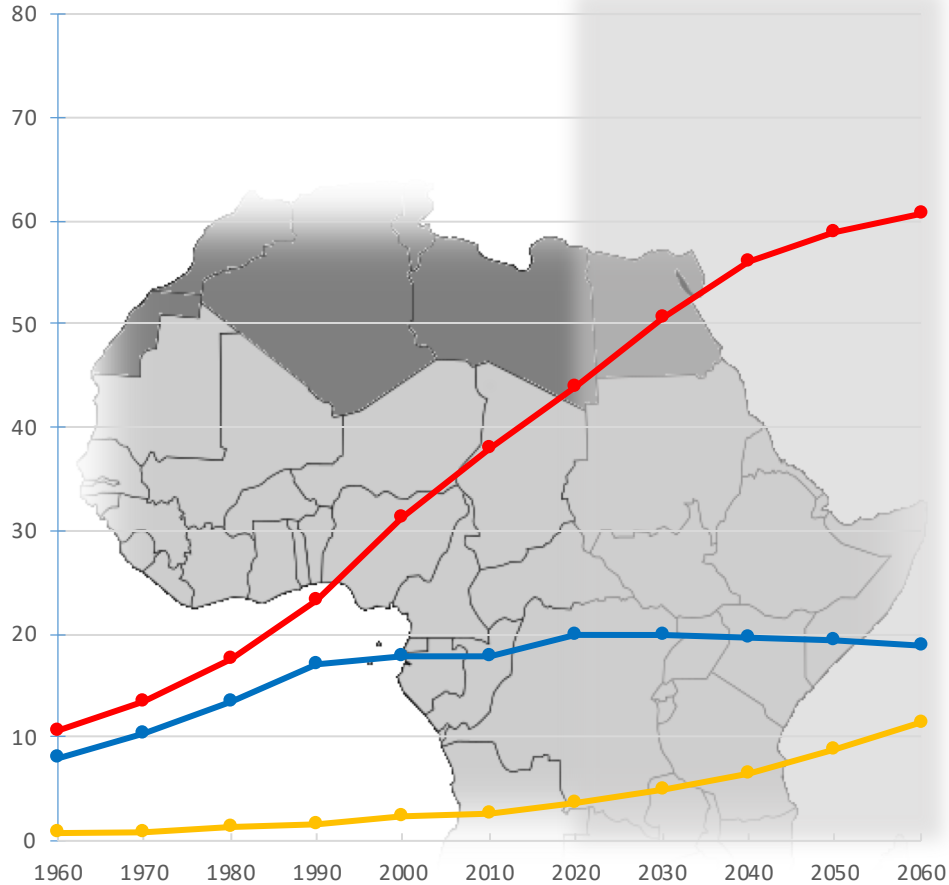
Subsaharan Africa



Source: UN Population Division, World Population Prospects, 2019 Revision

North Africa

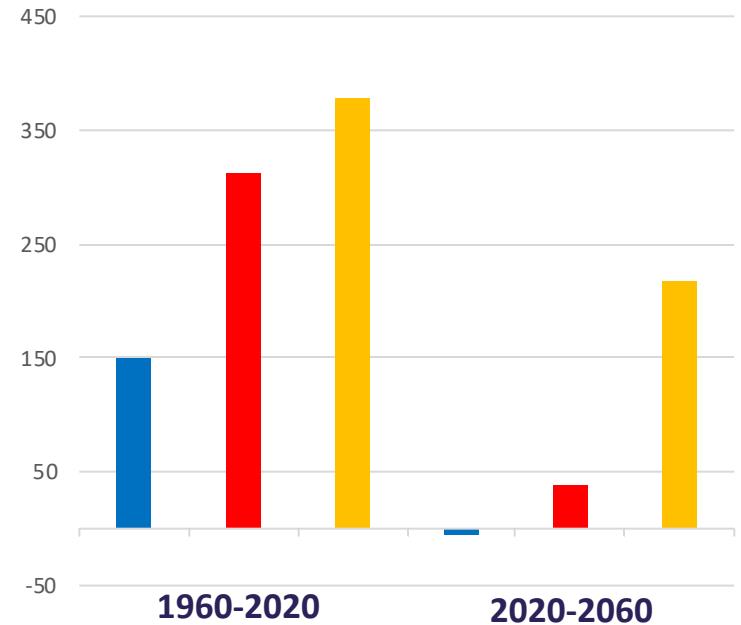
Population (Millions)



Age Groups

- 0-14 Years
- 15-64 Years
- 65+ Years

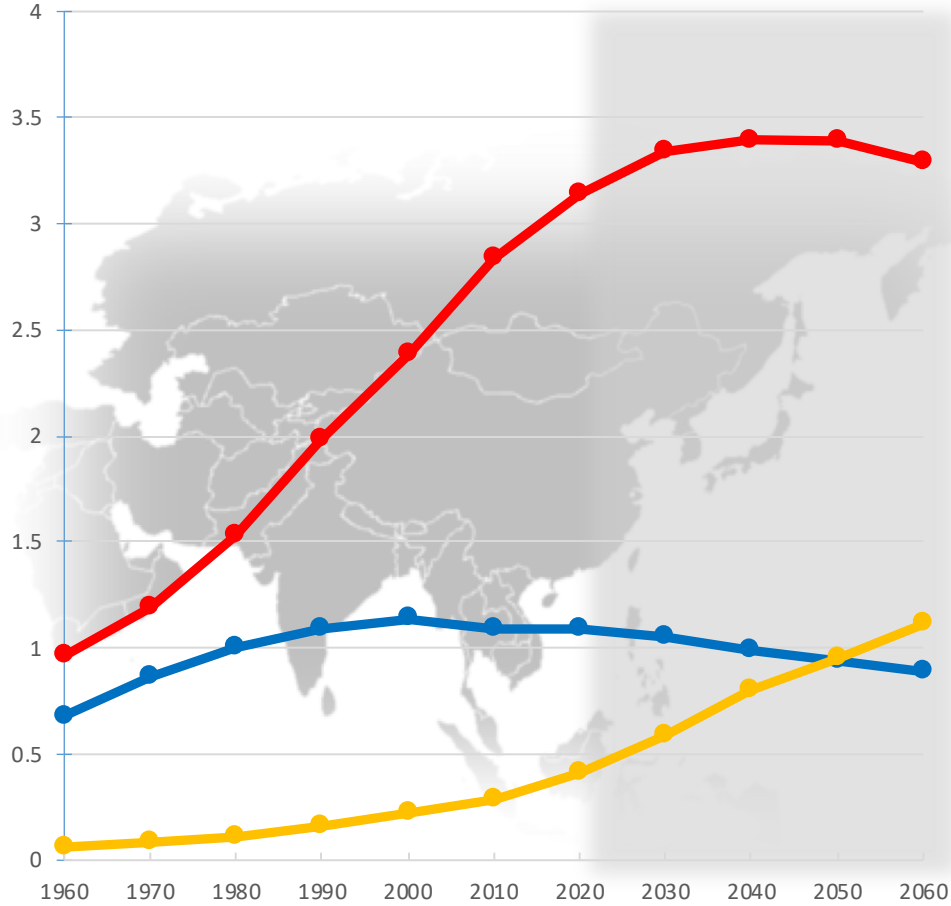
Change in age groups (%)



Source: UN Population Division, World Population Prospects, 2019 Revision

Asia

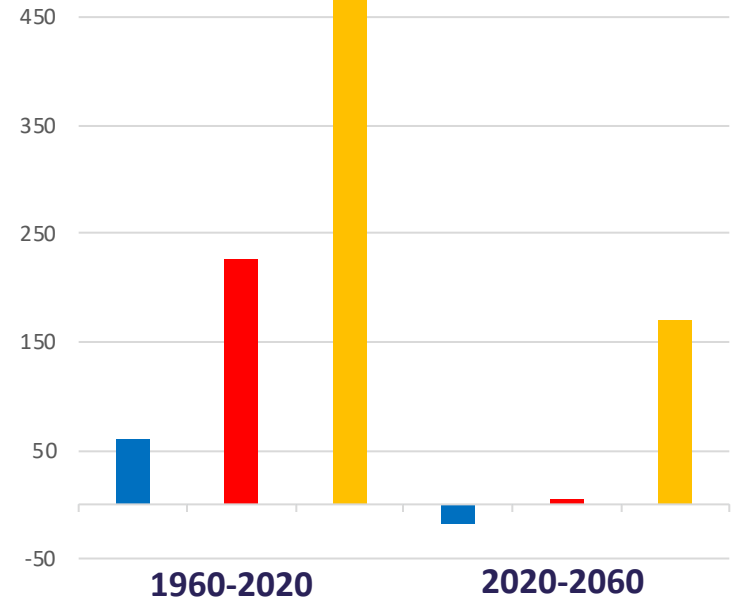
Population (Millions)



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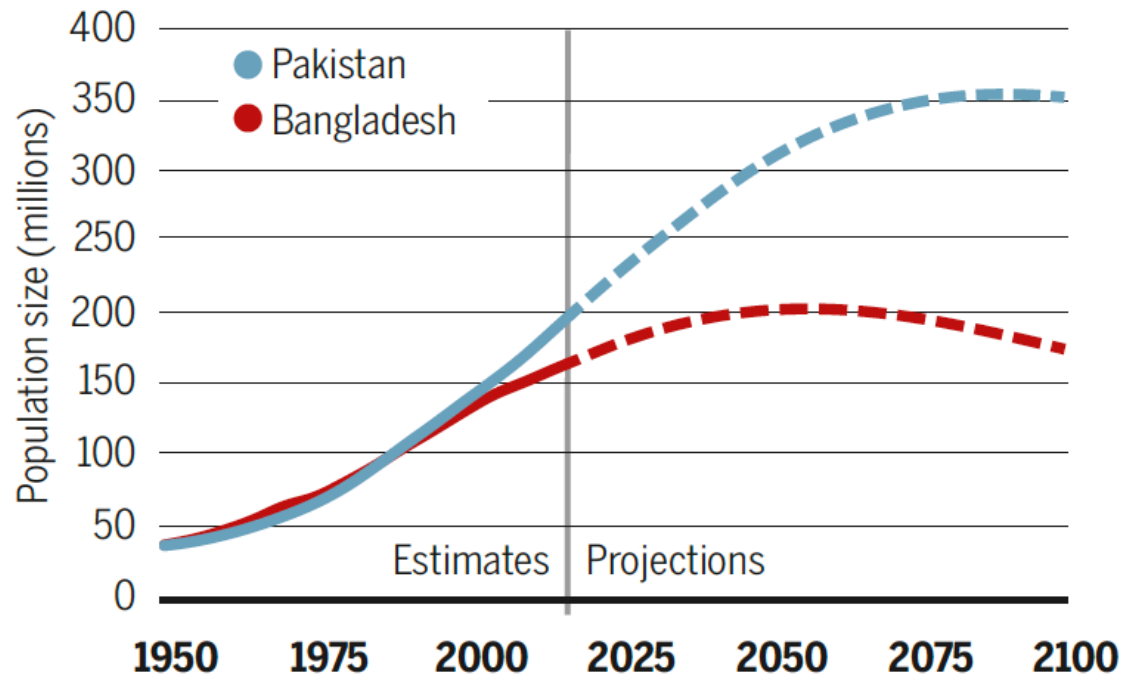
Source: UN Population Division, World Population Prospects, 2019 Revision

Asia vs Sub Saharan Africa: Different Dynamics

	ASIA		SSA	
	1950	2015	1950	2015
Number of Countries		50		48
Population in millions	1'400	4'340	180	1'000
Total Fertility Rate	5.8	2.2	6.6	5.1
Deaths per 1000 population	22.8	7	27.8	10.6
< 5 Mortality per 1000 births	238	39	307	99
GDP per Capita (1960, 2015)	(EAP)* 147	(EAP) 9337	119	1570
Countries below replacement	0	23	0	1**

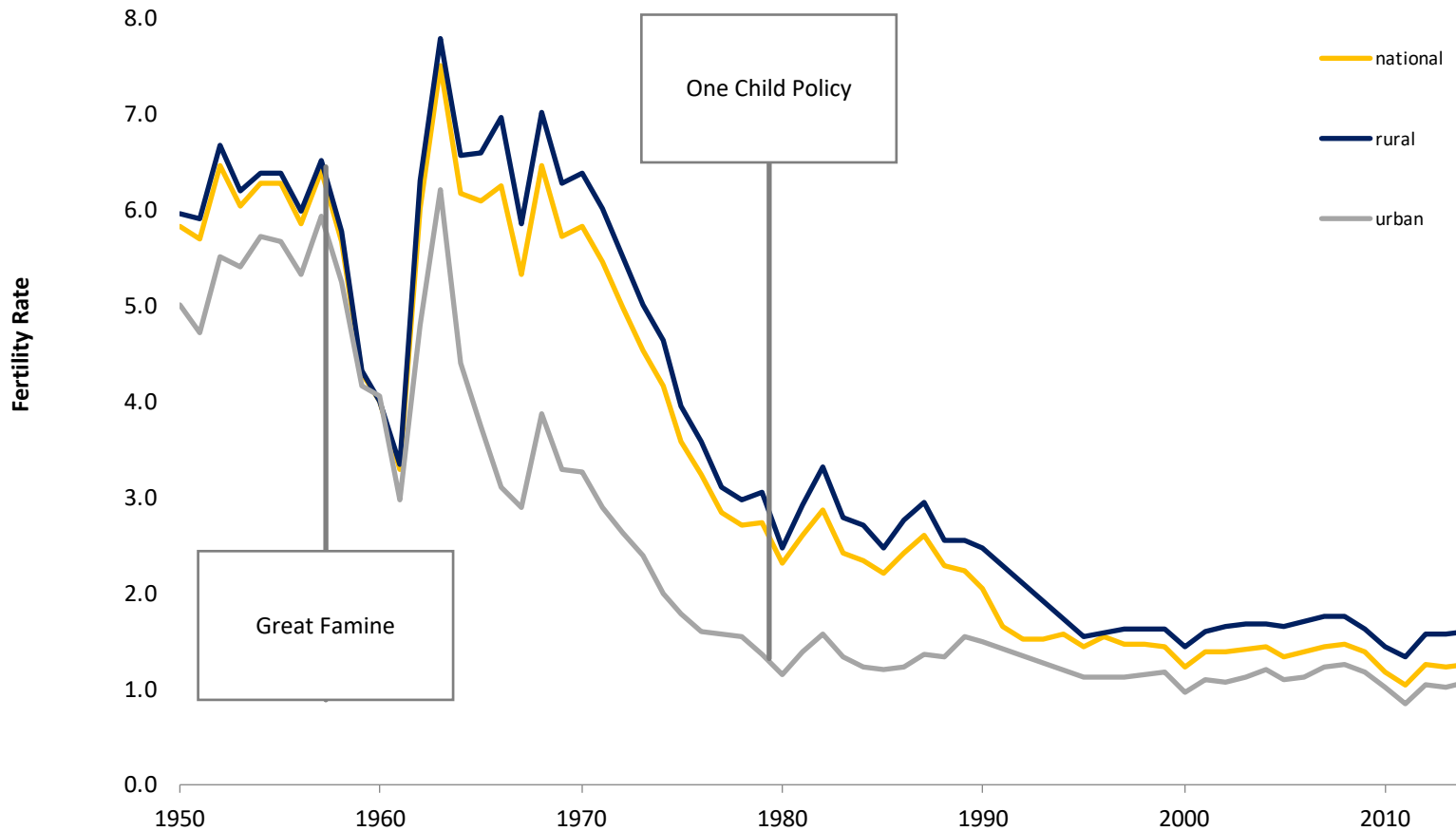
* East Asia & Pacific ** Mauritius

Population dynamics in Bangladesh and Pakistan

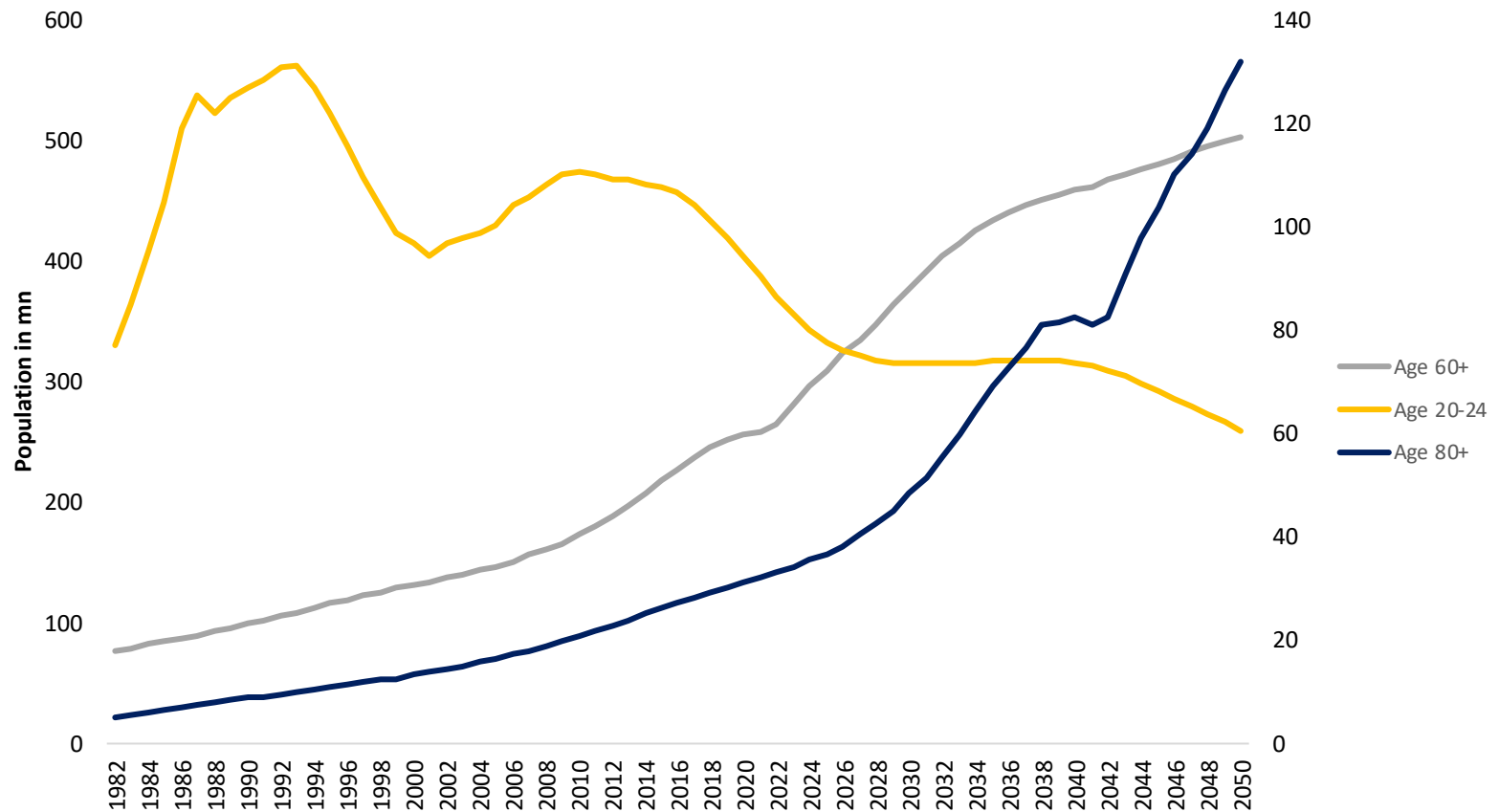


Source: Global warming policy: Is population left out in the cold? (J. Bongaarts and B.C. O'Neill, Science 361 (6403), August 2018)

Fertility decline in China 1950 - 2015

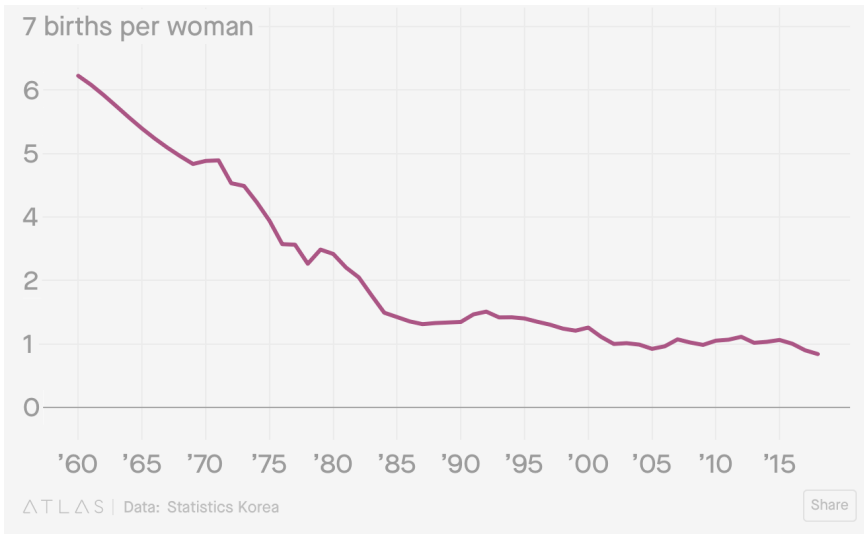


Chinese Population by Age Group 1982 - 2050

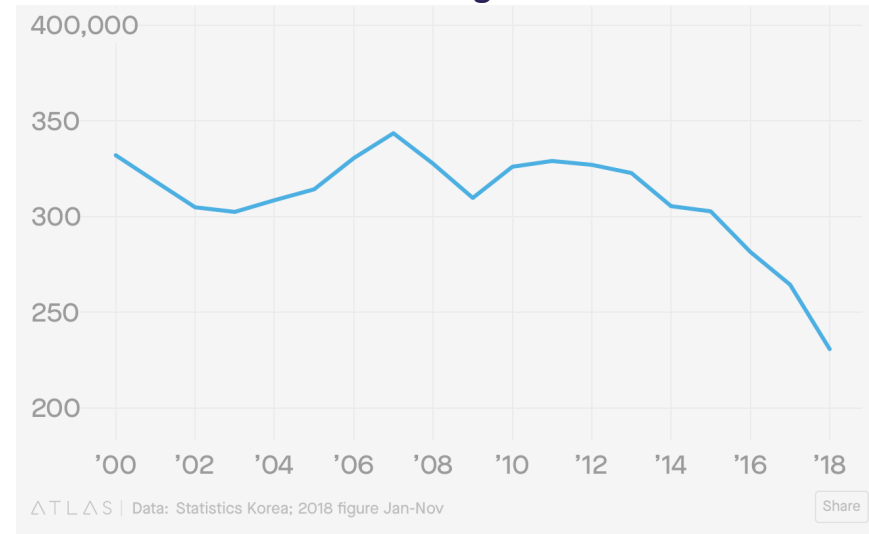


Fertility decline and number of marriages in South Korea

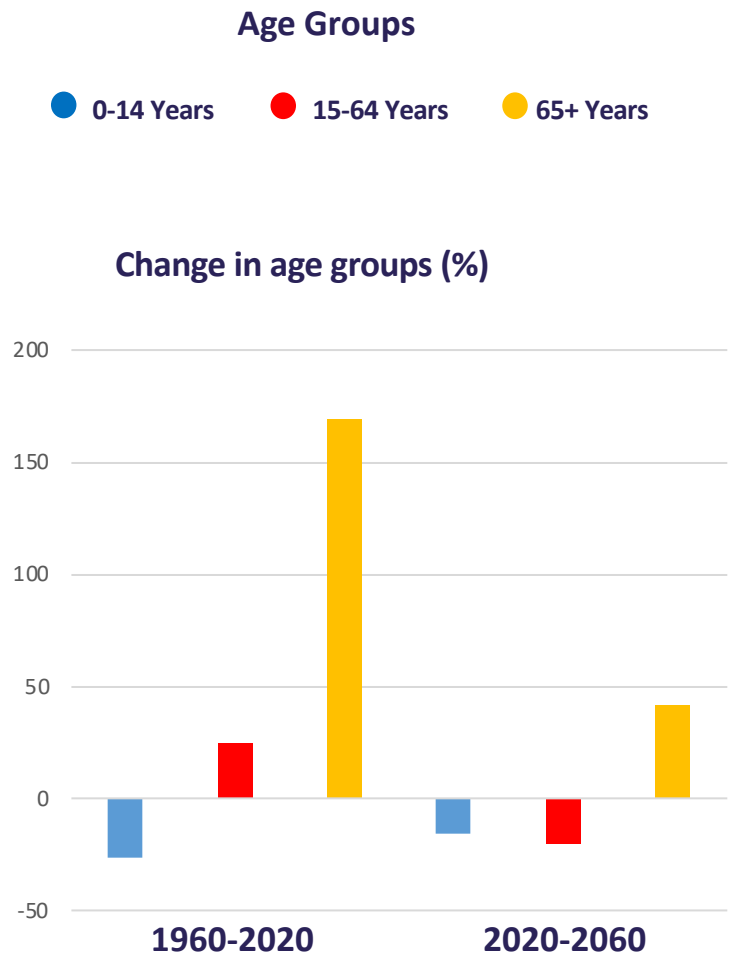
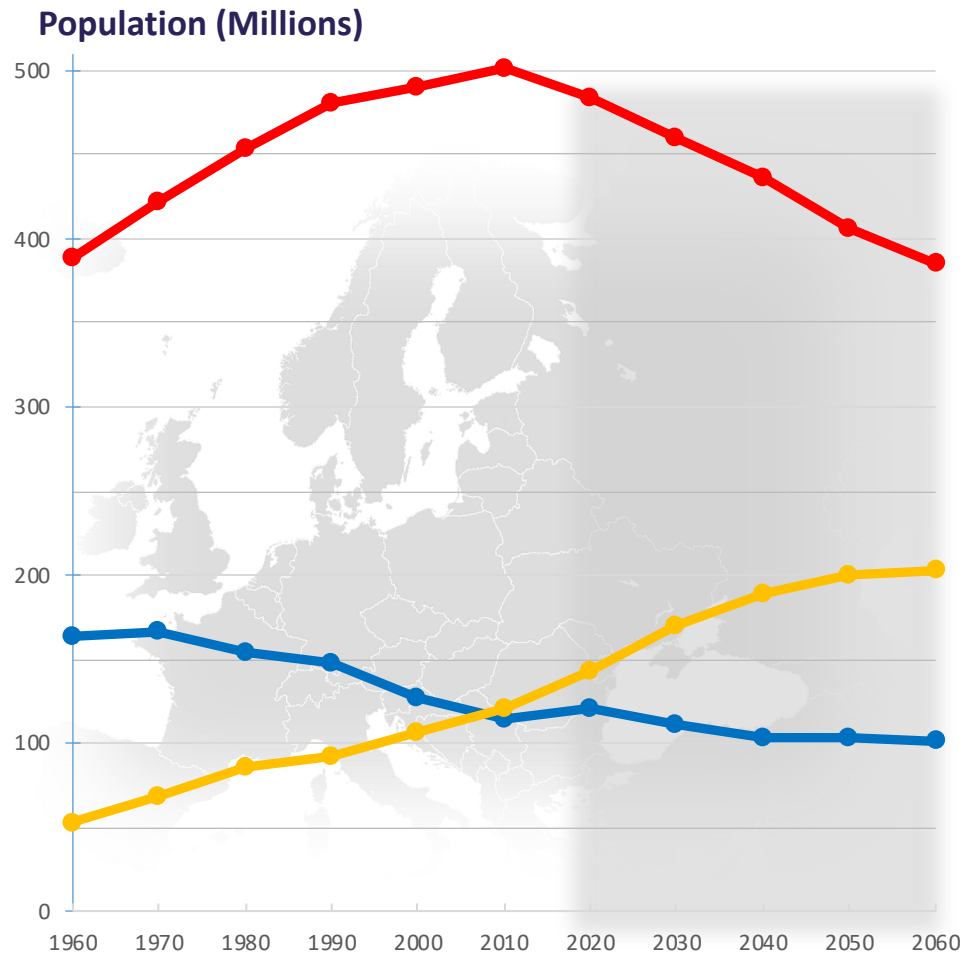
Birth rate



Marriages

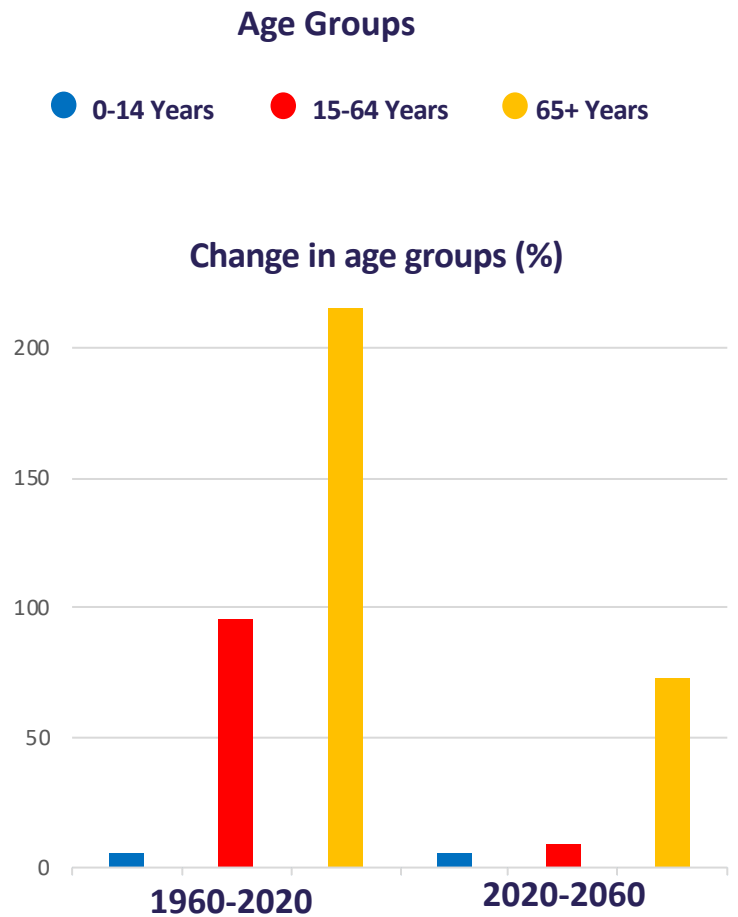
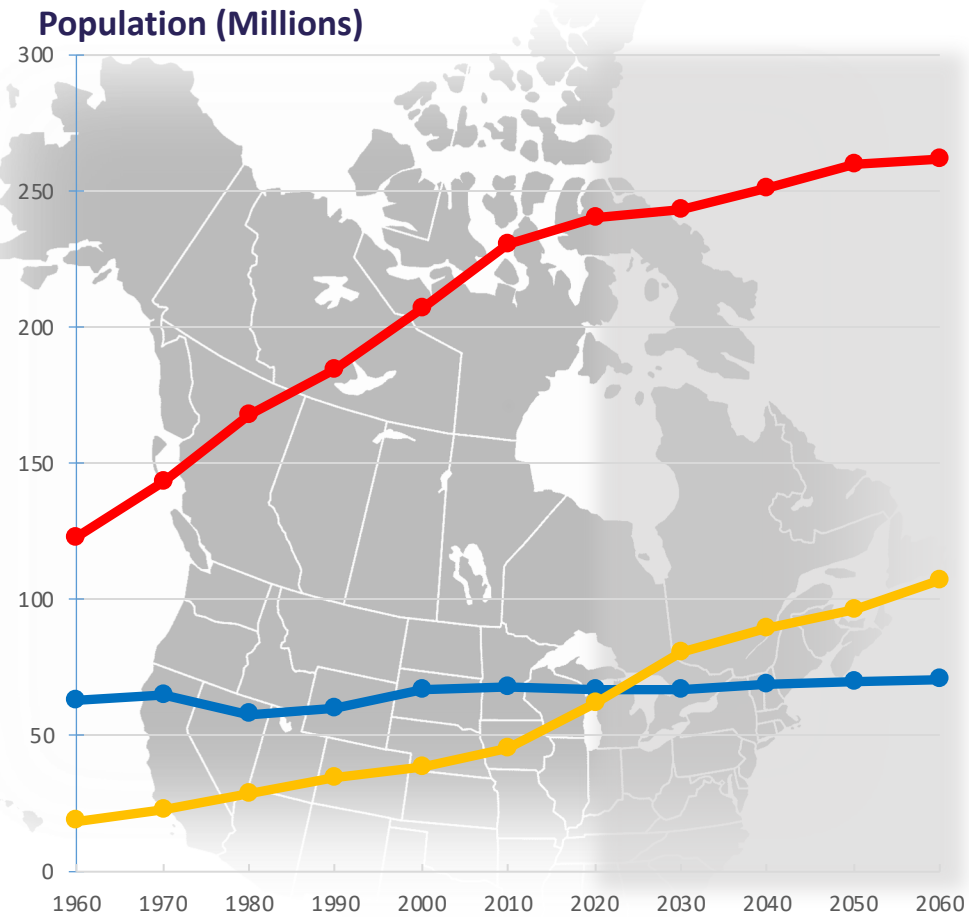


Europe



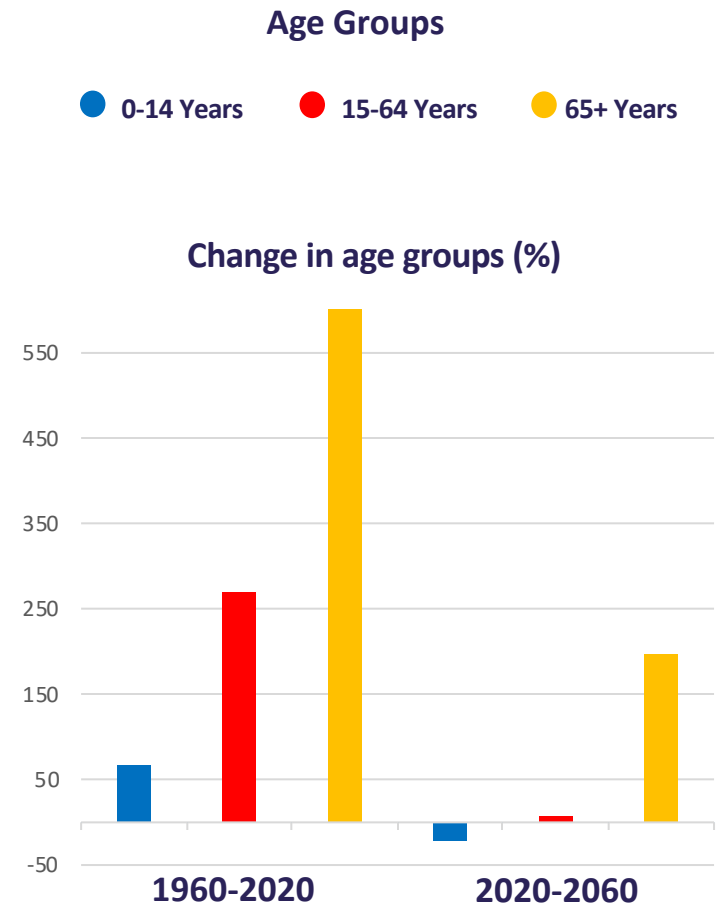
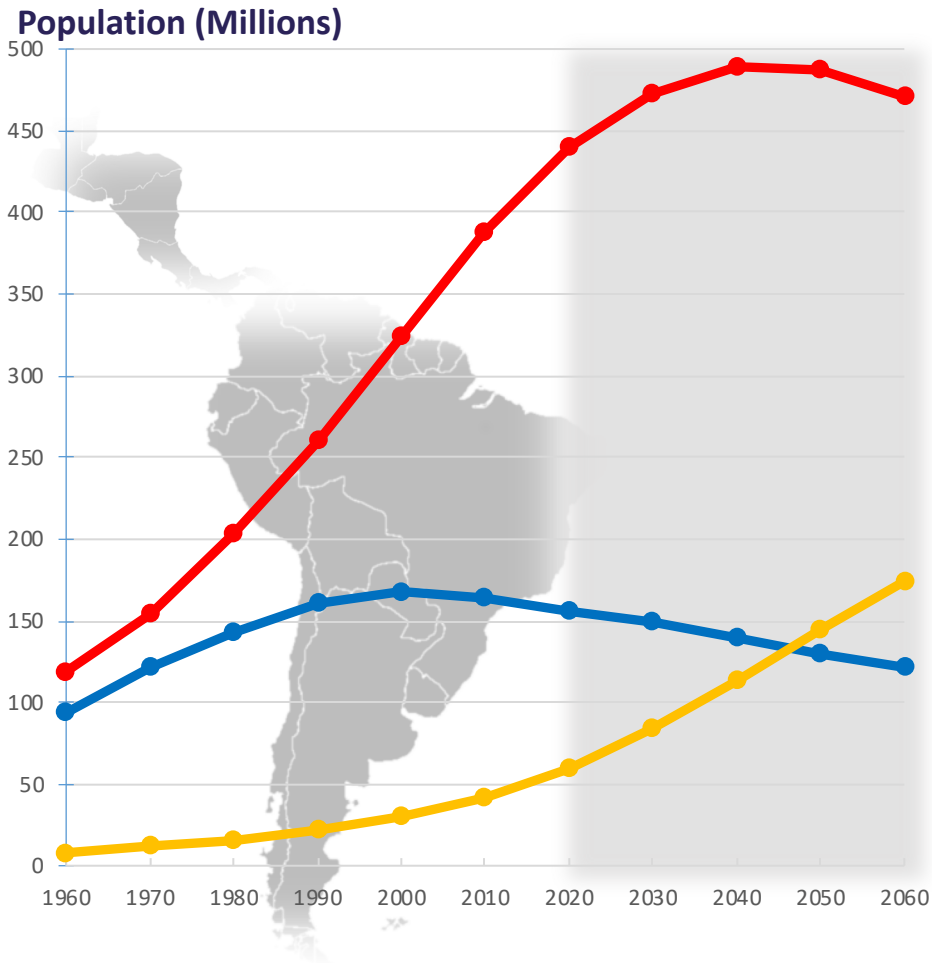
Source: UN Population Division, World Population Prospects, 2019 Revision

North America



Source: UN Population Division, World Population Prospects, 2019 Revision

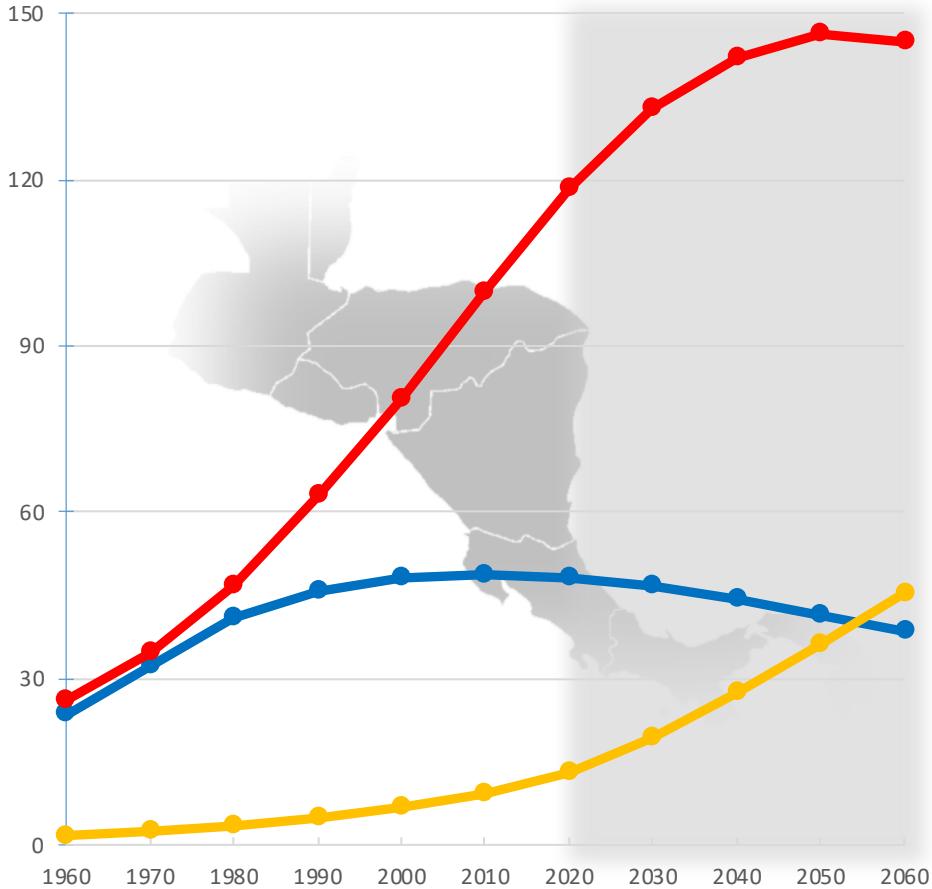
Latin America



Source: UN Population Division, World Population Prospects, 2019 Revision

Central America

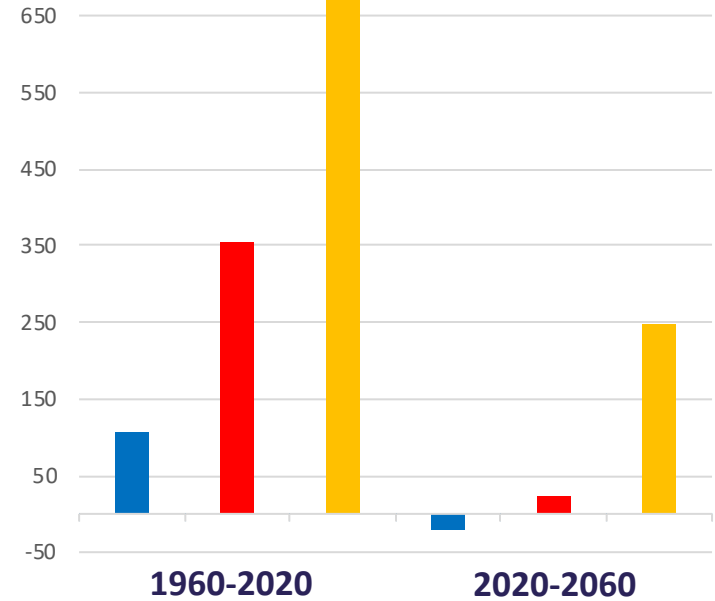
Population (Millions)



Age Groups

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- 65+ Years

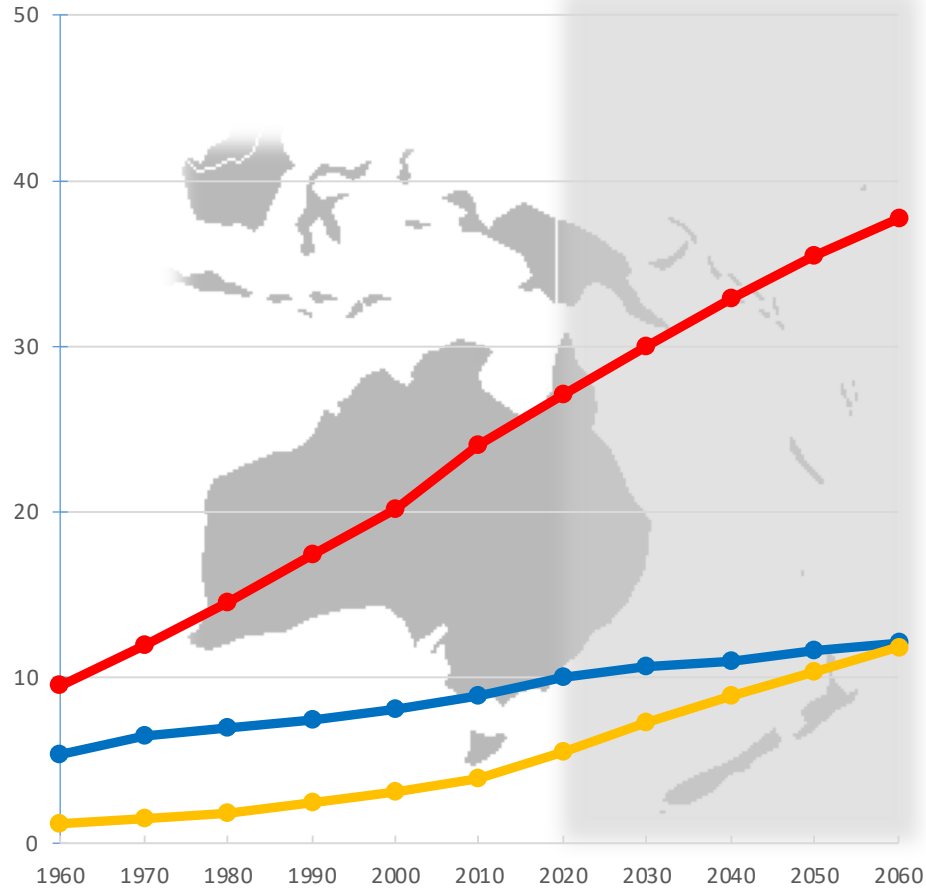
Change in age groups (%)



Source: UN Population Division, World Population Prospects, 2019 Revision

Oceania

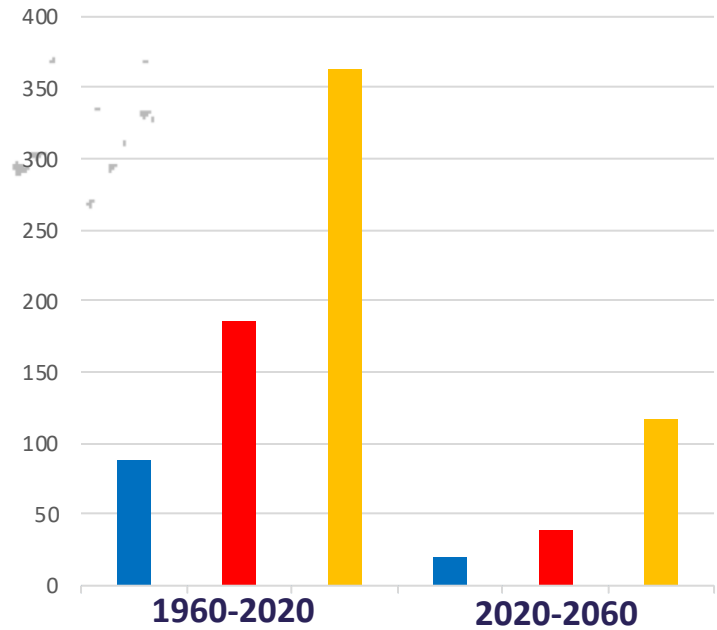
Population (Millions)



Age Groups

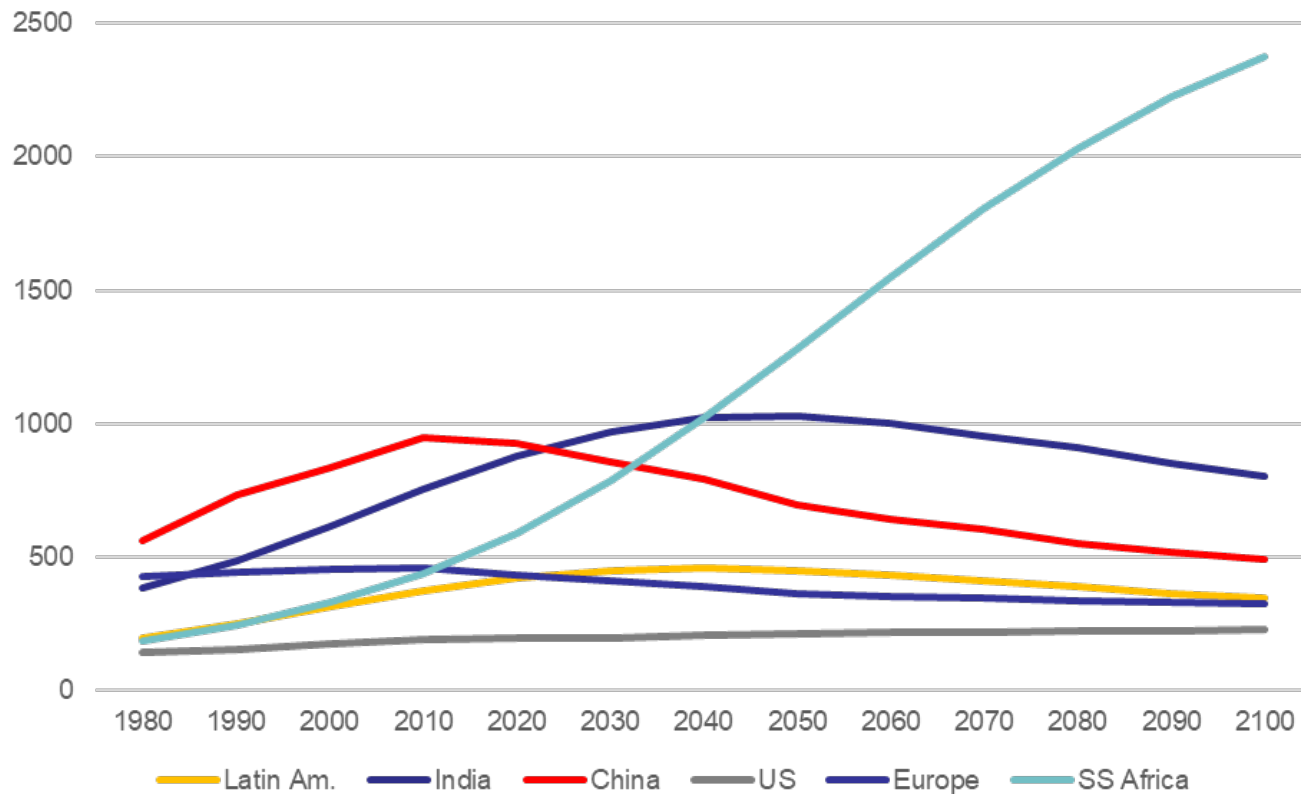
- 0-14 Years
- 15-64 Years
- 65+ Years

Change in age groups (%)



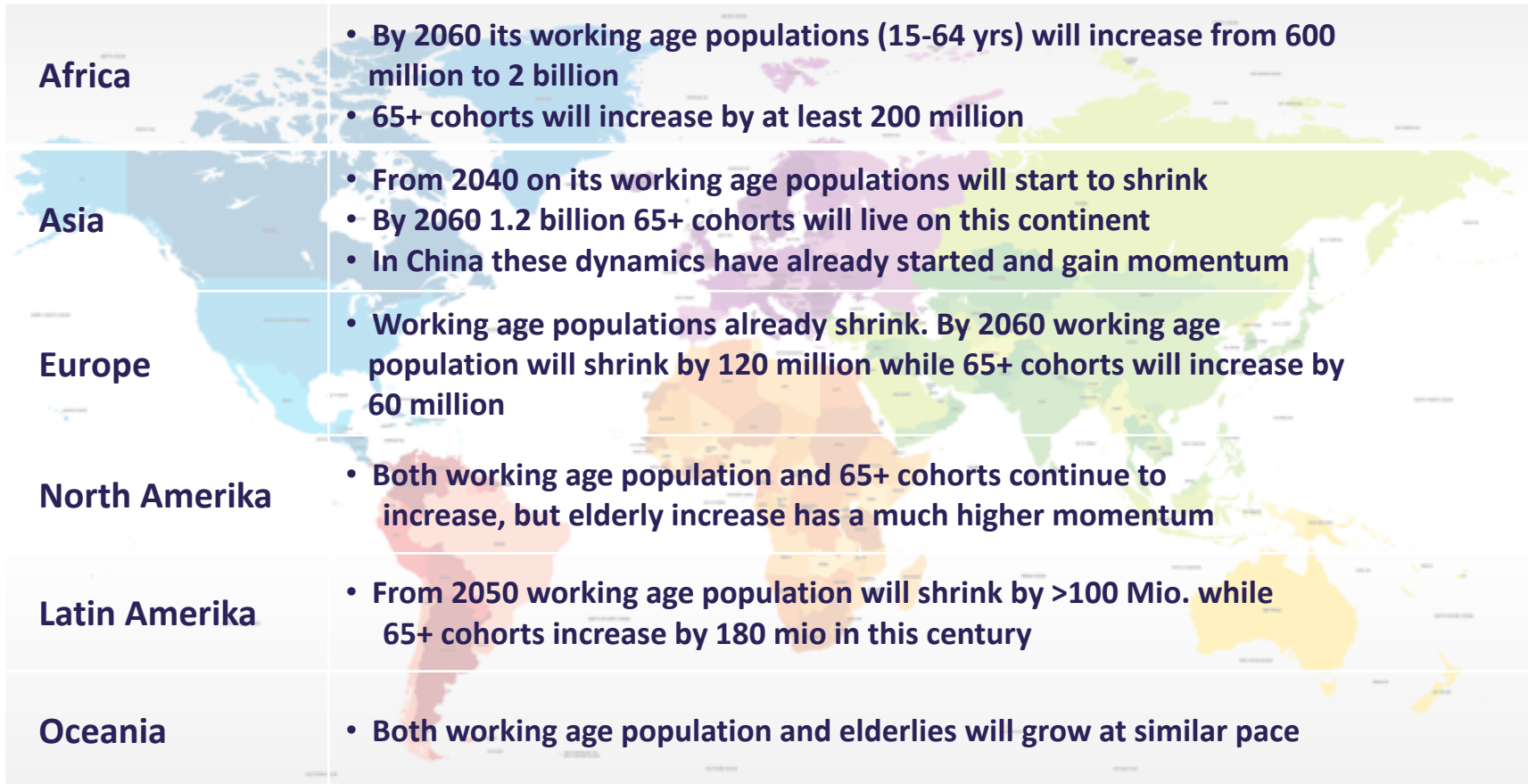
Source: UN Population Division, World Population Prospects, 2019 Revision

The future of labor markets



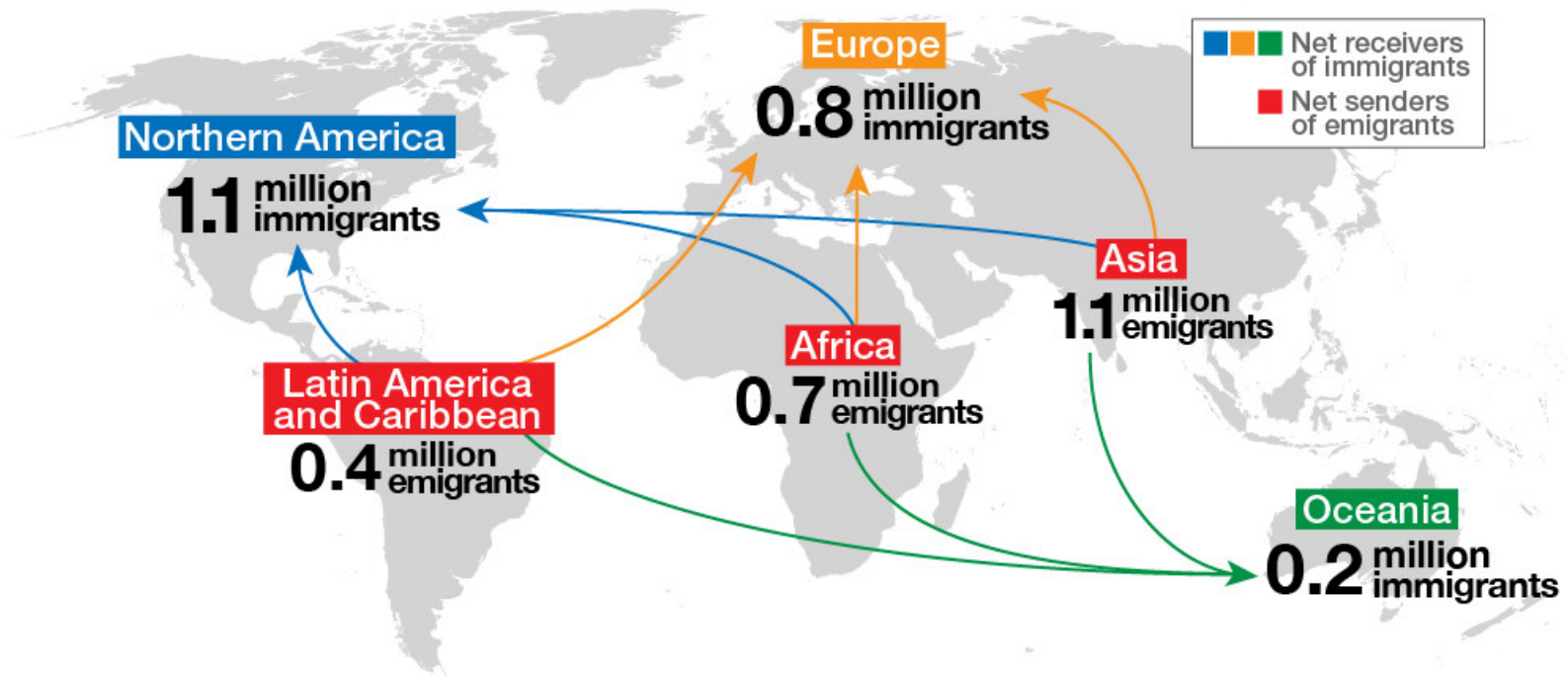
Source: Africa 2050: Demographic Truth and Consequences (Figure 4), Jack A. Goldstone, Schar School of Policy and Government, George Mason University (Growth of Labor Force (Population age 15-59) in millions, 1980-2100)

Our next world



Africa	<ul style="list-style-type: none">• By 2060 its working age populations (15-64 yrs) will increase from 600 million to 2 billion• 65+ cohorts will increase by at least 200 million
Asia	<ul style="list-style-type: none">• From 2040 on its working age populations will start to shrink• By 2060 1.2 billion 65+ cohorts will live on this continent• In China these dynamics have already started and gain momentum
Europe	<ul style="list-style-type: none">• Working age populations already shrink. By 2060 working age population will shrink by 120 million while 65+ cohorts will increase by 60 million
North Amerika	<ul style="list-style-type: none">• Both working age population and 65+ cohorts continue to increase, but elderly increase has a much higher momentum
Latin Amerika	<ul style="list-style-type: none">• From 2050 working age population will shrink by >100 Mio. while 65+ cohorts increase by 180 mio in this century
Oceania	<ul style="list-style-type: none">• Both working age population and elderlies will grow at similar pace

Global Migration



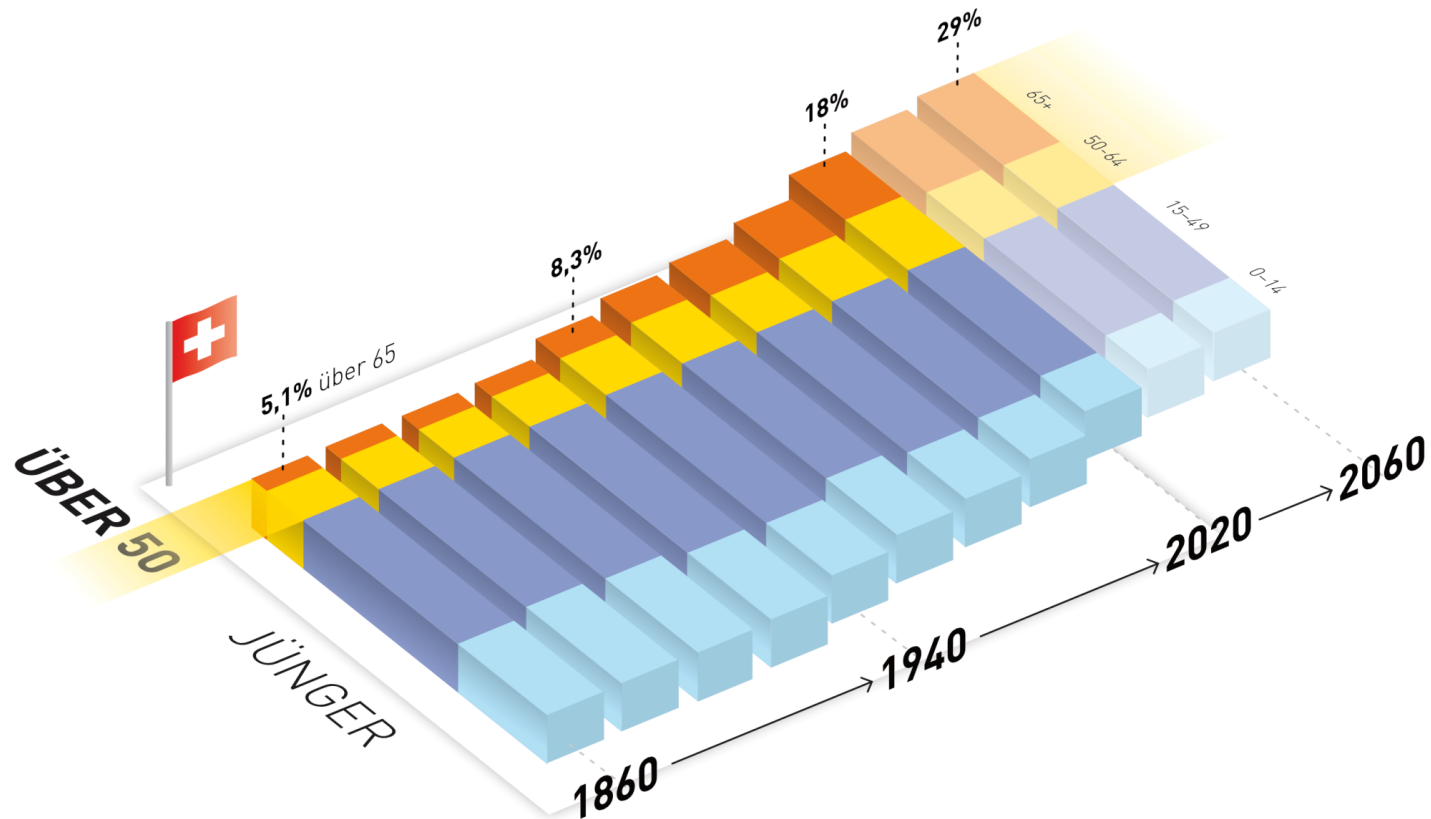
Zwischen 2010 und 2015 verzeichneten Nordamerika, Europa und Ozeanien einen Nettozufluss von über zwei Millionen Einwanderern pro Jahr. Die UNO glaubt, dass die internationale Migration eine positive Kraft für die wirtschaftliche und soziale Entwicklung der Welt ist.

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- 2 “Our next world”
- 3 **The demography of Switzerland**
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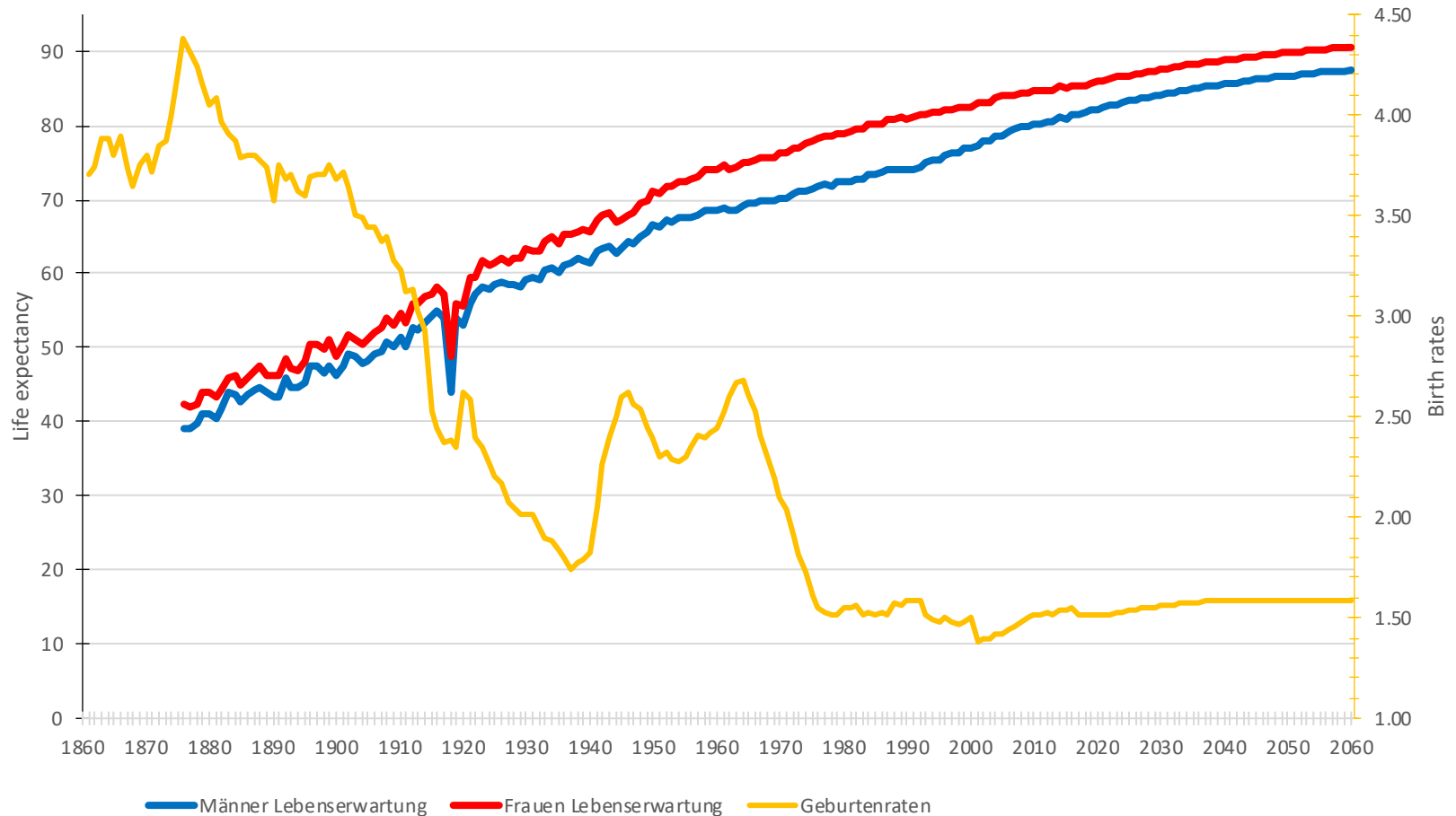
Age-Shift in Switzerland

200 years demographic change



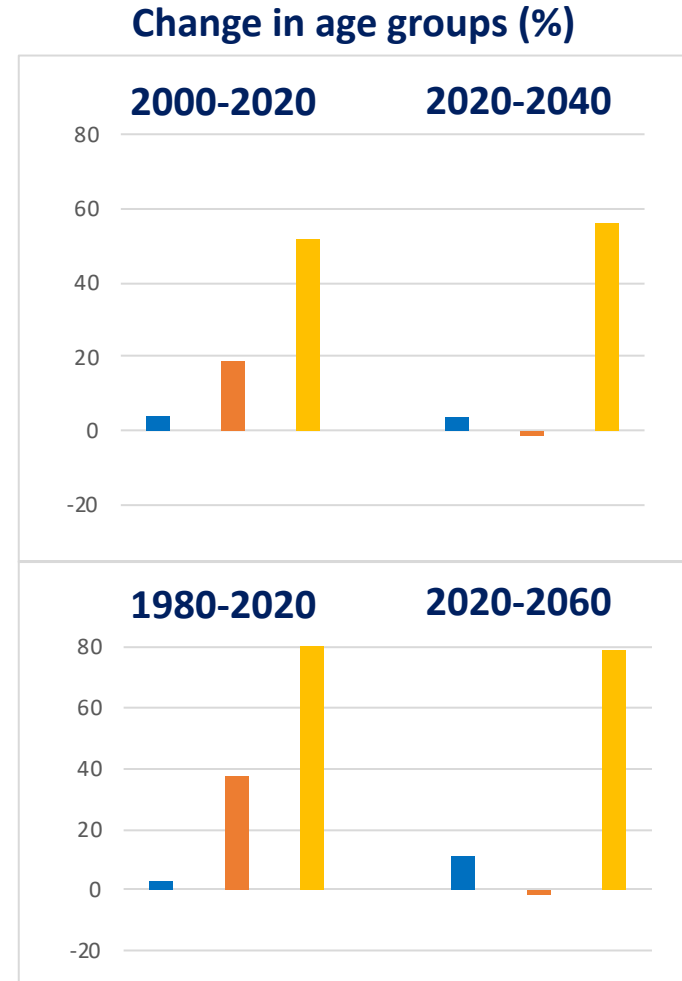
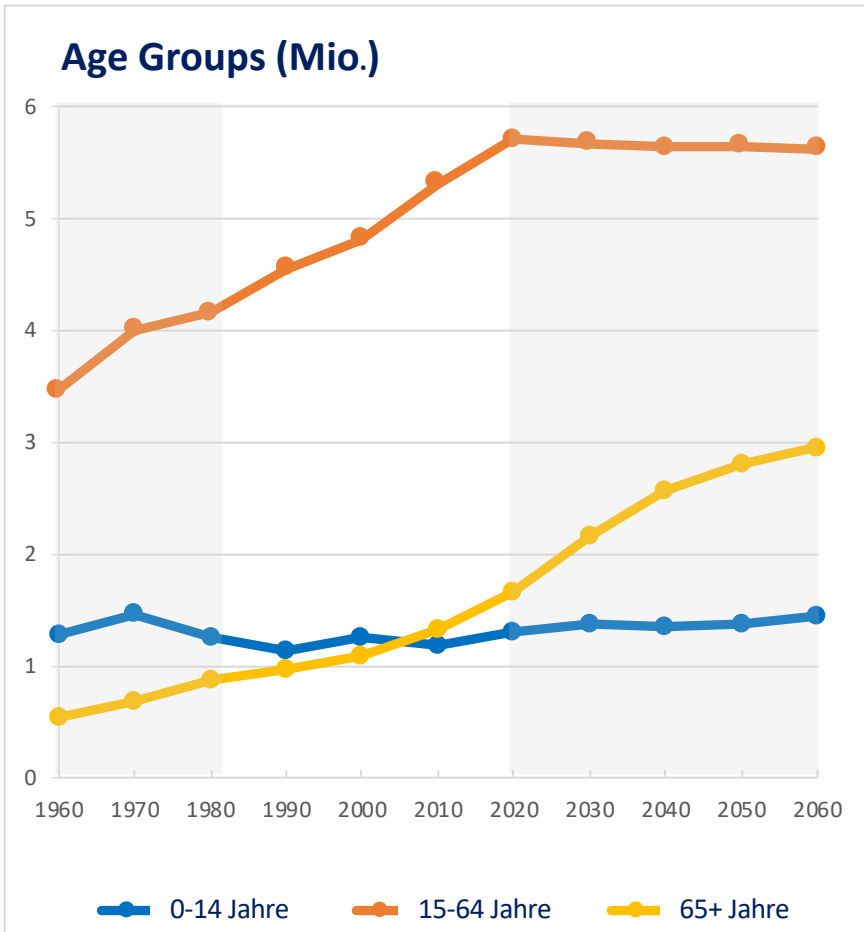
Source: Bundesamt für Statistik, 2019

Life Expectancy/Fertility in Switzerland



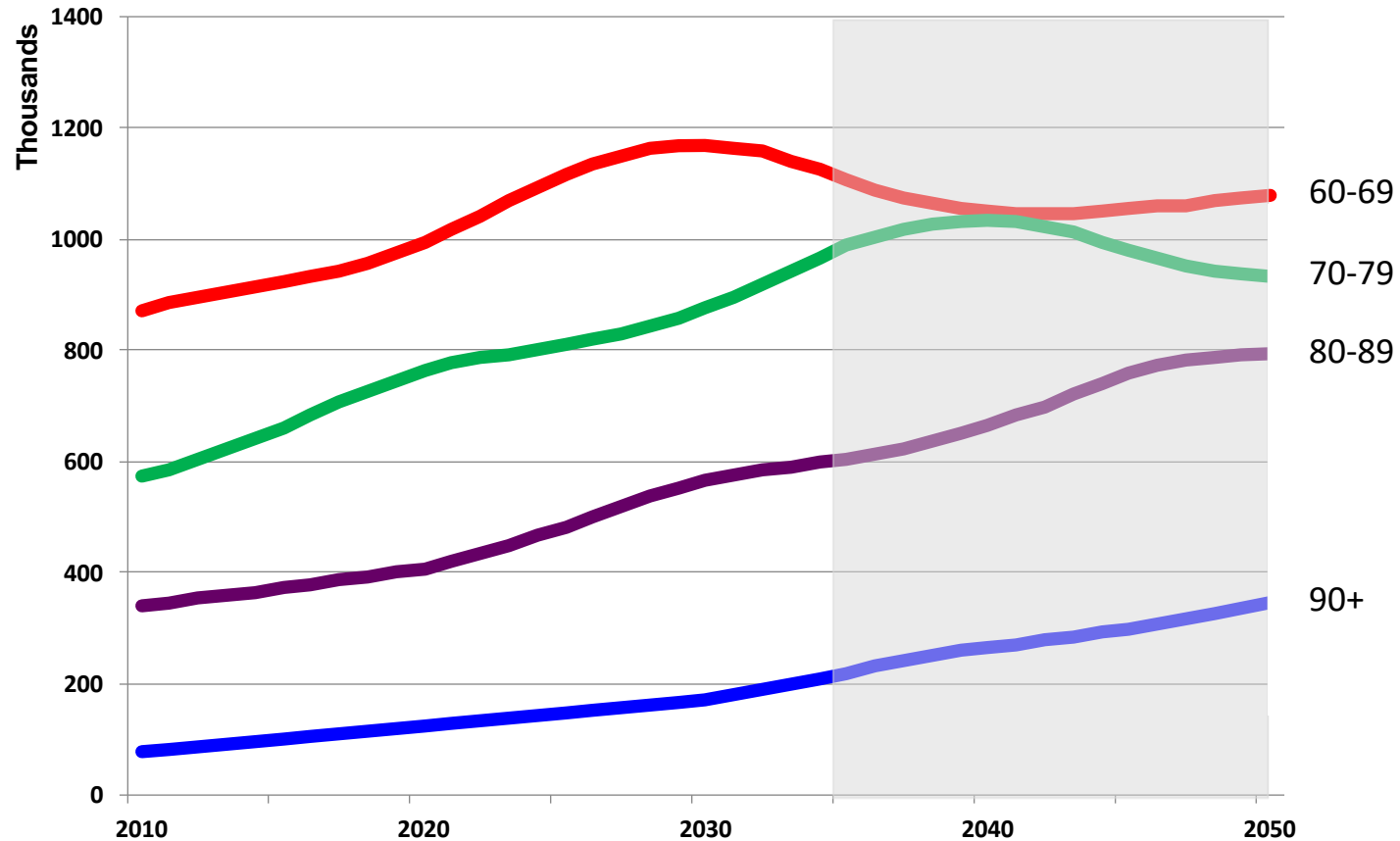
Source: Bundesamt für Statistik, 2019

Switzerland



Source: UN Population Division, World Population Prospects, 2019 Revision

Growing 60+ cohorts in Switzerland



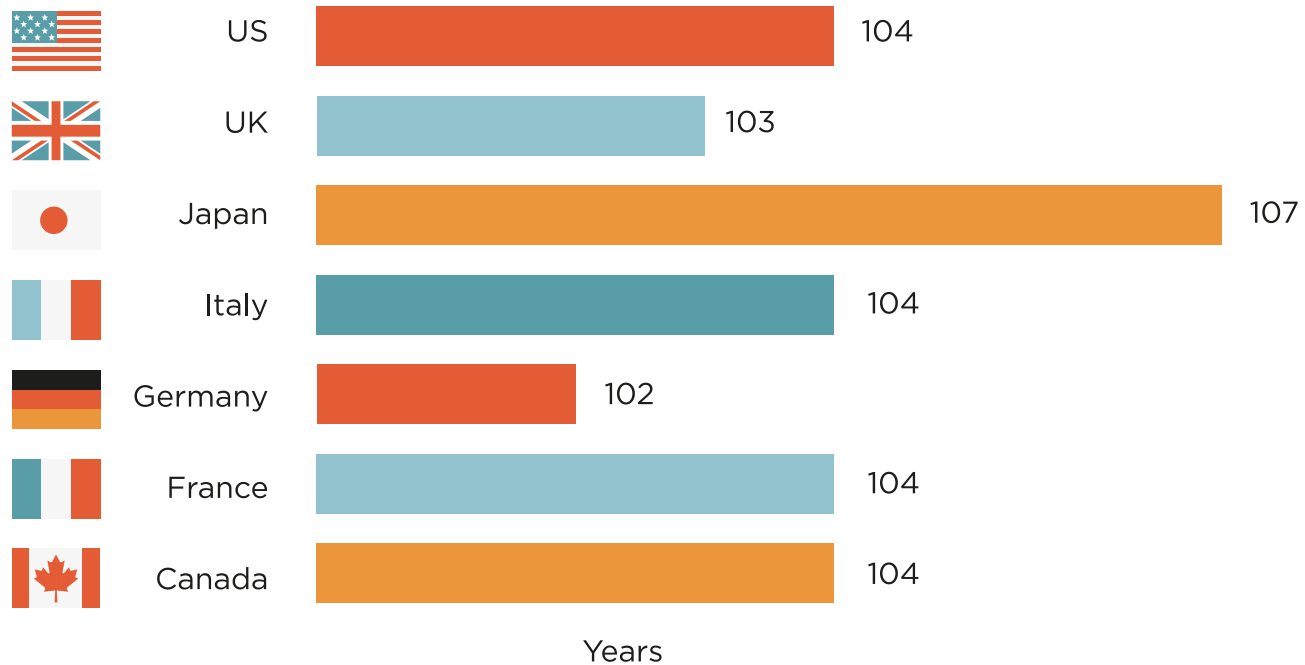
Source: BFS, 2010

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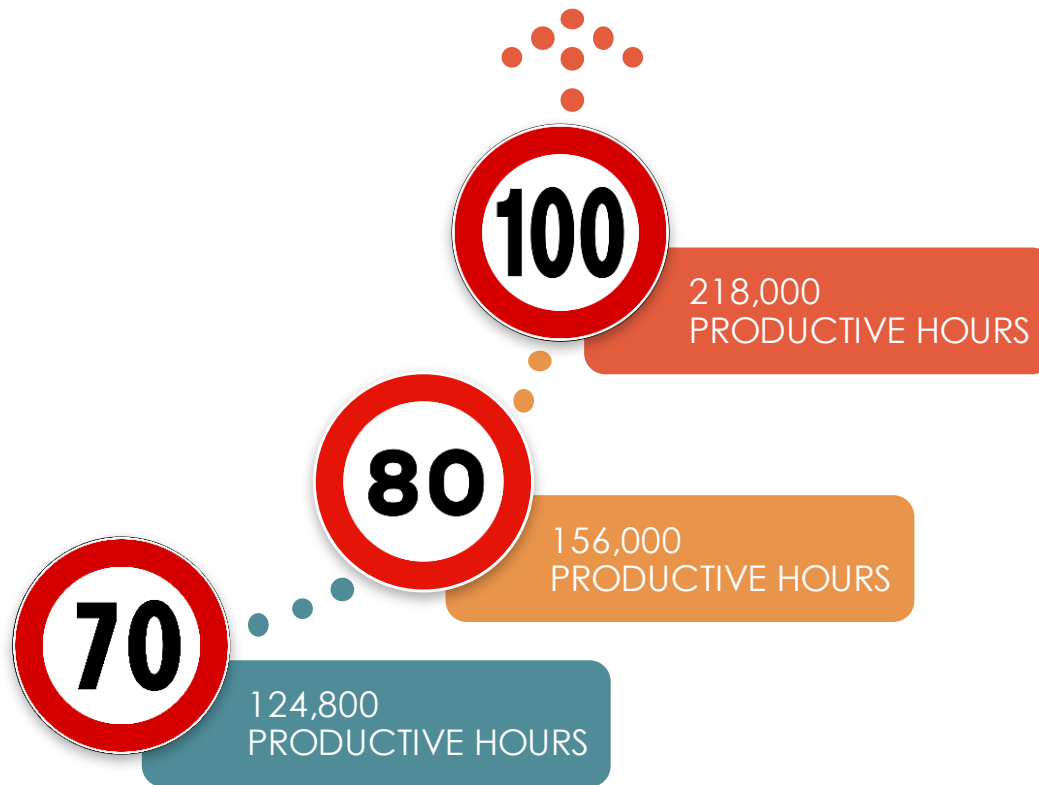
A 100 year life becomes reality !

Oldest age at which 50% of babies born in 2007
are expected to live:



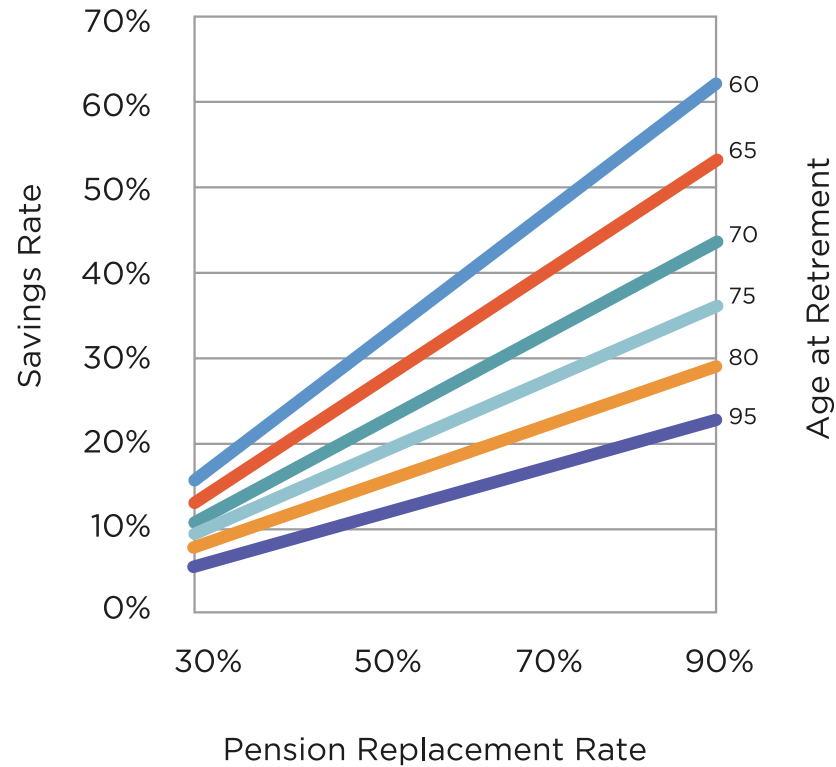
Source: Human Mortality Database, University of California, Berkeley and Max Planck Institute for Demographic Research, Germany

What are you going to do with your 100 year life?



Source: The 100 Year Life

Savings and retirement age for a 100-year-life



Source: Office for National Statistics, 2014

Changing assets



TANGIBLE

SAVINGS

PROPERTY

PENSION



INTANGIBLE

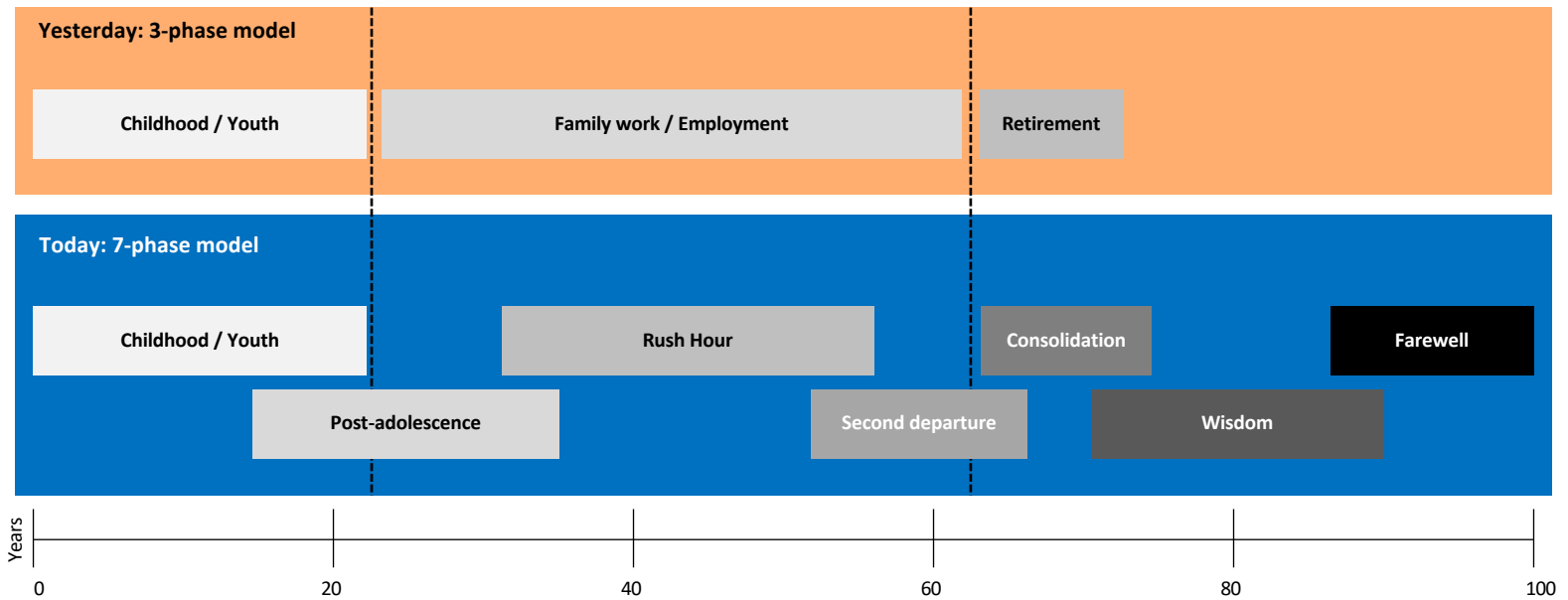
PRODUCTIVITY

VITALITY

TRANSFORMATION

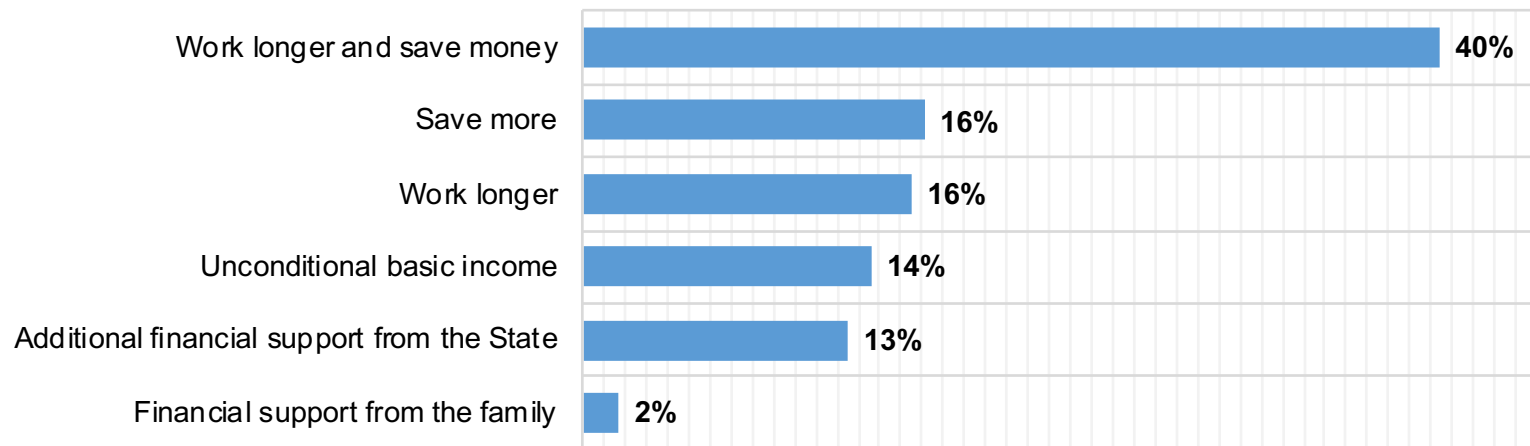
Source: The 100 Year Life

New stages of life



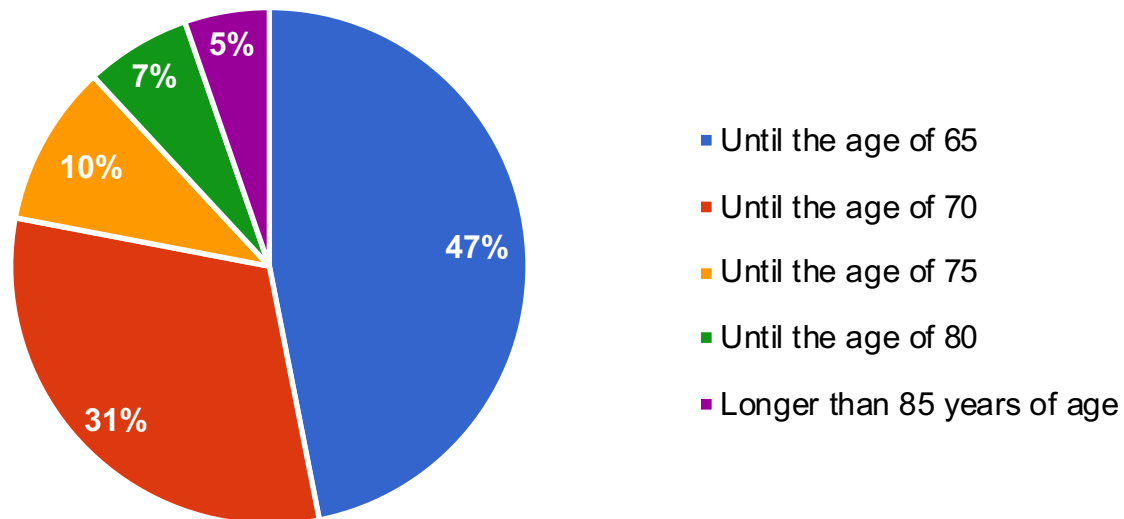
Source: Horx, 2015; Gatterer et al., 2016

Longevity: Ideas for financing



Source: Online survey, 225 persons of Generation X in Switzerland, WDA Forum (2018)

Longevity: Length of working life



Source: Online survey, 225 persons of Generation X in Switzerland, WDA Forum (2018)

Longevity: Requirements for educational institutions

- Most respondents can imagine doing something completely different in their lives. This requires institutions and services that make it possible.
- Only 5% are satisfied with the current education system. An adaptation to the individual curriculum vitae of today is required.
- Self-employed people do not want to reinvent themselves completely, but increasingly want offers that promote competences.

Source: Online-Umfrage, 225 Personen der Generation X in der Schweiz, WDA Forum (2018)

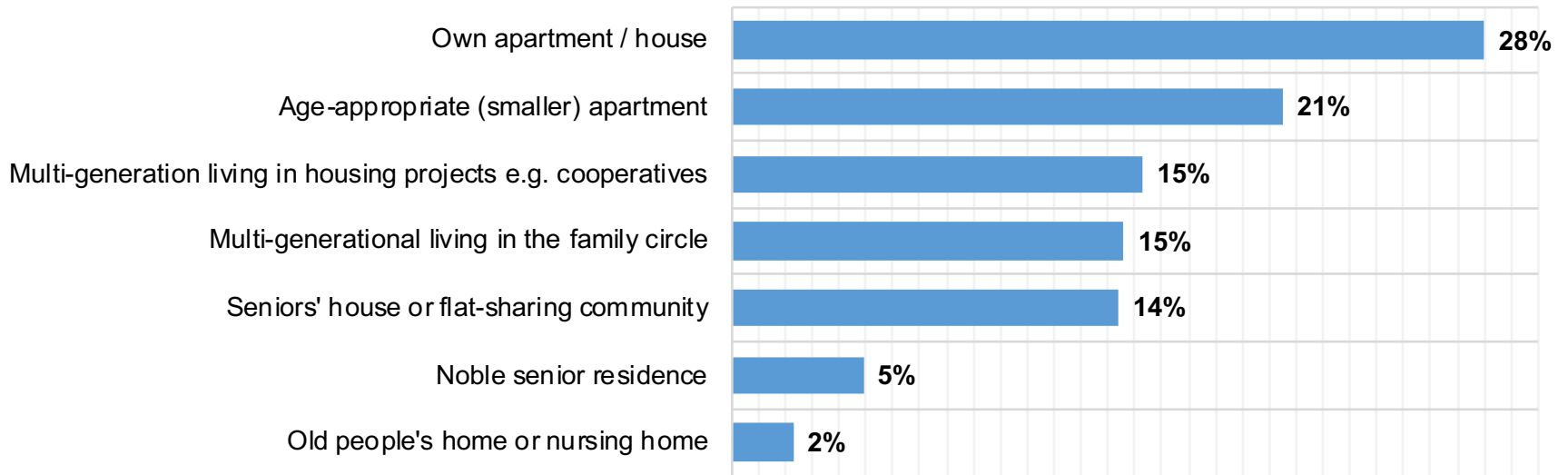


Longevity: Trends in healthcare

- A general trend towards health awareness can be observed.
- The more attention is paid to a healthy lifestyle, the more likely it is that there will be a desire for advice on a healthy lifestyle for each stage of life.
- There is great potential in preventive measures through nutrition, exercise, social networking and e-health.

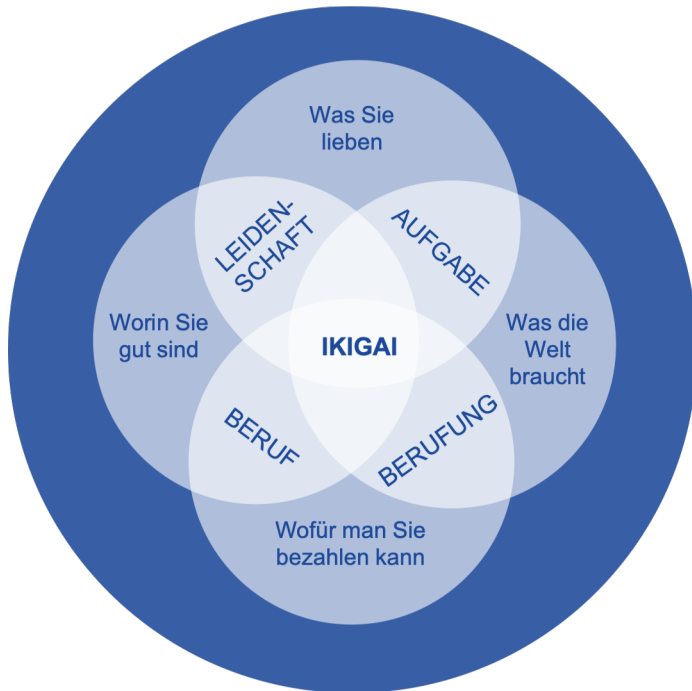
Source: Online-Umfrage, 225 Personen der Generation X in der Schweiz, WDA Forum (2018)

Longevity: Desired forms of living



Source: Online survey, 225 persons of Generation X in Switzerland, WDA Forum (2018)

Factors for a happy life



- Relationships and general contact maintenance
- A task that fulfills you
- Healthy nutrition & physical exercise
- To reconcile the satisfaction of basic needs with the environment by means of personal competences.
- Education and the ability to care for oneself
- Mutual help
- Resilience

■ What about your 100 year Life?



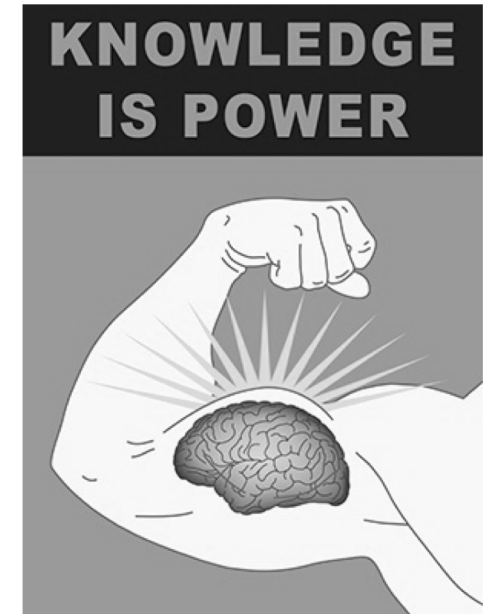
Source: The 100 Year Life

Agenda

- 1 History of population growth & ageing
- 2 “Our next world”
- 3 The demography of Switzerland
- 4 Your 100 year life
- 5 What is your benefit to attend this class?**
- 6 How to tackle your project assignment?
- 7 12 project themes to choose from

What is your benefit to attend this class?

- A global outlook until 2030 and beyond in terms of demography, economy, society, ecology and health by region.
- Potential impact on business, society and the power of nations.
- Basic understanding about which industries/products/services will disappear, succeed or emerge.
- Leap forward in creative thinking to develop “Sustainable 2030 business models” for existing and new industries as well as infrastructure, governance and society.



Demography is a topic that will be on the agenda of every future business planning process. Therefore it is imperative for future business leaders.

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How should you tackle your project assignment?

Which might be the right framework to choose?

- Porter's Five Forces?
- Blue Ocean Strategy?
- **PESTEL Analysis?**
- **Adolf Guyer-Zeller Approach?***
- **Gene Kranz Approach? * ***

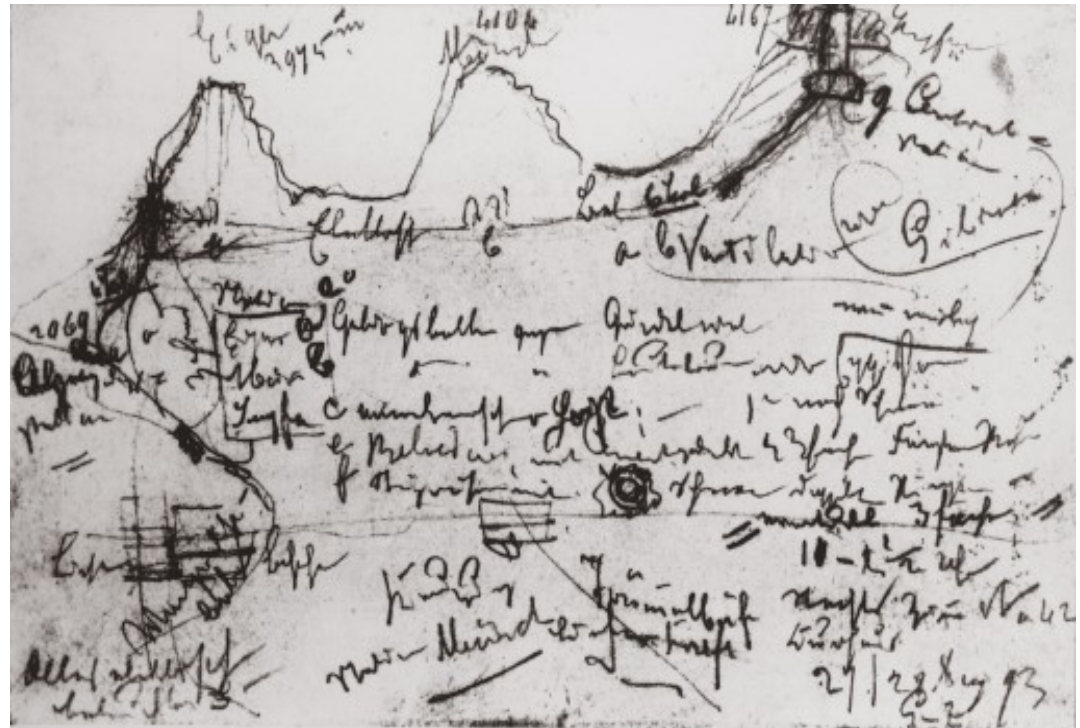
* Adolf Guyer-Zeller built the "Jungfrau Bahn" (1894 – 1899) with confidence, self-esteem and innovative spirit.

* * Gene Kranz, Apollo 13 (1970) Flight Director, Houston/USA

How should you tackle your project assignment? Adolf Guyer-Zeller's Approach

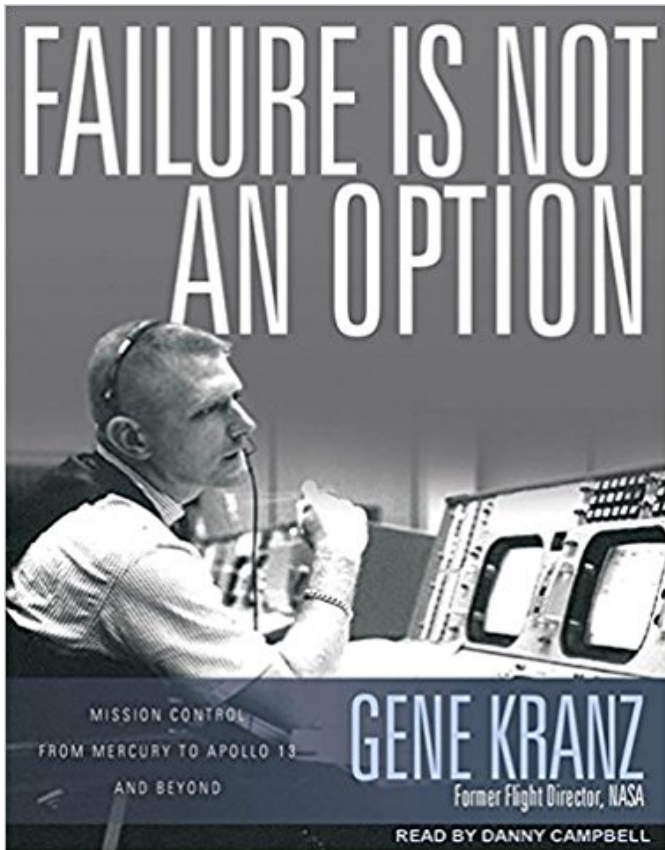


Adolf Guyer-Zeller (1839-1899)



Taschenbuchblatt Herrn Guyer-Zellers

How should you tackle your project assignment? Gene Kranz's Approach



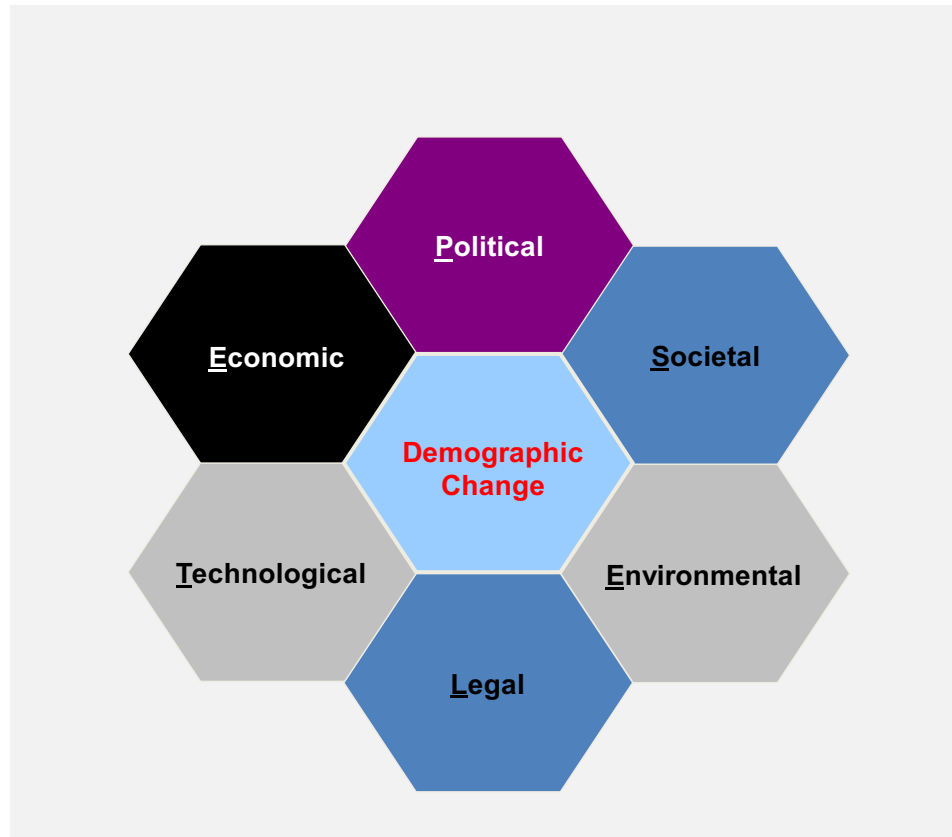
Gene Kranz, the Apollo 13 Flight Director once said:

- “When bad things happened, we just calmly laid out all the options, and failure was not one of them!”
- “We never panicked, and we never gave up on finding a solution!”

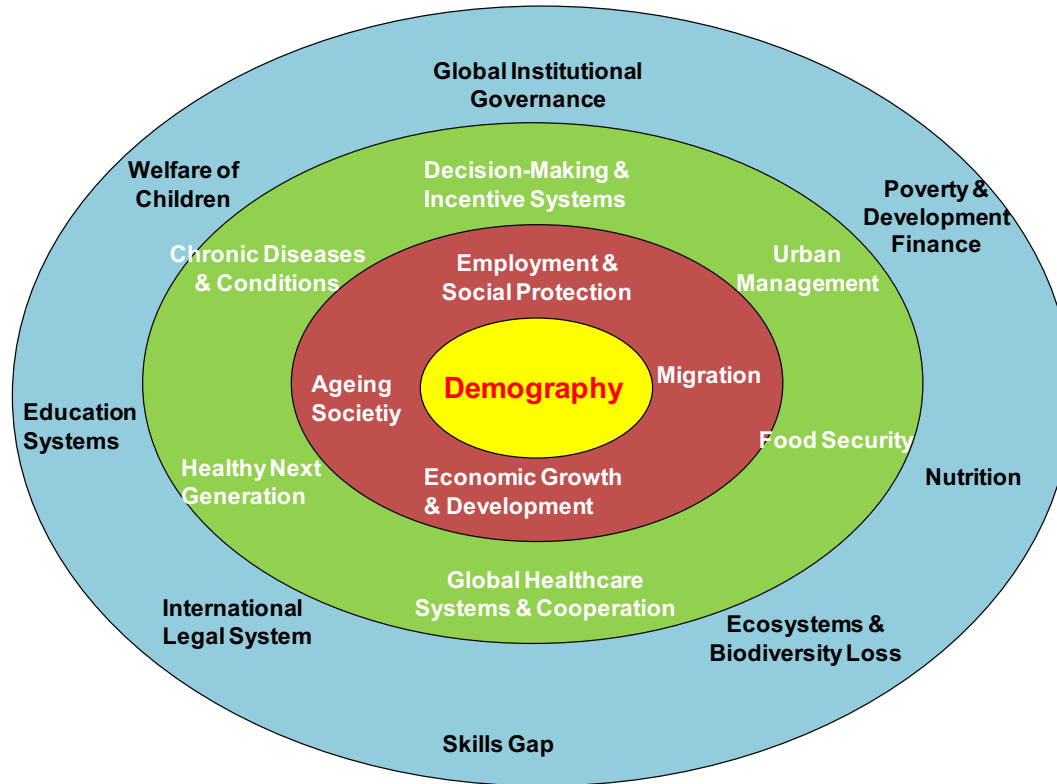
“Failure is Not an option!”

How should you tackle your project assignment?

PESTEL Analysis



How should you tackle your project assignment? Think in interdependencies!



How should you tackle your project assignment?

2019 group assignments – 12 unique project themes

- » 2-3 students to choose one topic
- » 45-minute group presentation to the entire group with subsequent 45-minute interactive discussion supported by e.g. SLIDO (www.slido.com)
- » Executive summary of each student
 - » 4 pages plus 1-3 slides/table
 - » Format: Word
 - » Font type: Arial
 - » Font size: 11
 - » Line spacing: 1.5



You have received a template for writing

Grading

- » 60% group presentation
- » 40% individual executive summary



How should you tackle your project assignment? Evaluation of your presentation

Structure and Content (60%)

- » Introduction / Motivation
- » Optimal weighting
- » Time management
- » Logical structure
- » Well-designed slides
- » Conclusions & recommendations
- » Main research topics and corresponding literature

Verbal and non-verbal aspects (40%)

- » Clear and understandable language (English)
- » Rhetorical aspects
- » Supporting media (SLIDO!)
- » Answering of questions

How should you tackle your project assignment? Evaluation of your executive summary

Academic and formal aspects (40%)

- » Layout, grammar, style
- » Citations
- » Literature
- » 100% compliance with the editing guidance provided (14 pages plus executive summary, format: Word, font type: Arial, font size: 11, line spacing: 1.5)

Content, message, conclusion..... (60%)



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■ Topics 2019 (1/4)

Country & regional case studies all across the globe

1. How sustainable are development strategies in Africa? Compare the approach of China, Europe, the US and the 2021-2024 strategy of Switzerland.
2. Canada: Critically review how this country manages migration. What are the lessons for other countries?
3. The alarmingly low fertility of South Korea: What does it mean from the perspective of “political demography”? What are the regional implications?
4. Ongoing low fertility in Europe: What is the impact on society, business and governance in the coming 20 years? Are there sustainable incentives for higher fertility? How should it tackle migration? Can it turn longevity into an opportunity?
5. The dynamics of ageing: A comparison across Asia.

■ Topics 2019 (2/4)

Opportunities arising from demography for business & society

6. Our life courses: What will change? What will remain unchanged in the ongoing era of longevity?
7. Does digitalization/information technology/artificial intelligence contribute to make longevity a sustainable achievement?
8. Artificial intelligence (AI) to project demographic parameters: Apply the semantic technology software of InfoCodex AG (www.infocodex.com) to project fertility, migration and life expectancy in 2050 and 2100 for selected countries.

■ Topics 2019 (3/4)

Geopolitics & financial markets

9. What can strategic planners learn from “political demography”? Take the book published by Jack Goldstone as a reference.
10. Analyze and discuss the interaction of population dynamics (migration, fertility, longevity, gender balance etc.) on social cohesion and equality.
11. The macroeconomics of longevity: What are the Implications for financial markets and interest rates? What are the lessons learned from Japan?

■ Topics 2019 (4/4)

The unique population dynamics of Switzerland

12. The history of retirement in Switzerland: When did it start, how and why? What are the lessons from other countries?



Thank you!