The next 25 years

On some key challenges for social science
in the context of the new technology wave
and old global problems

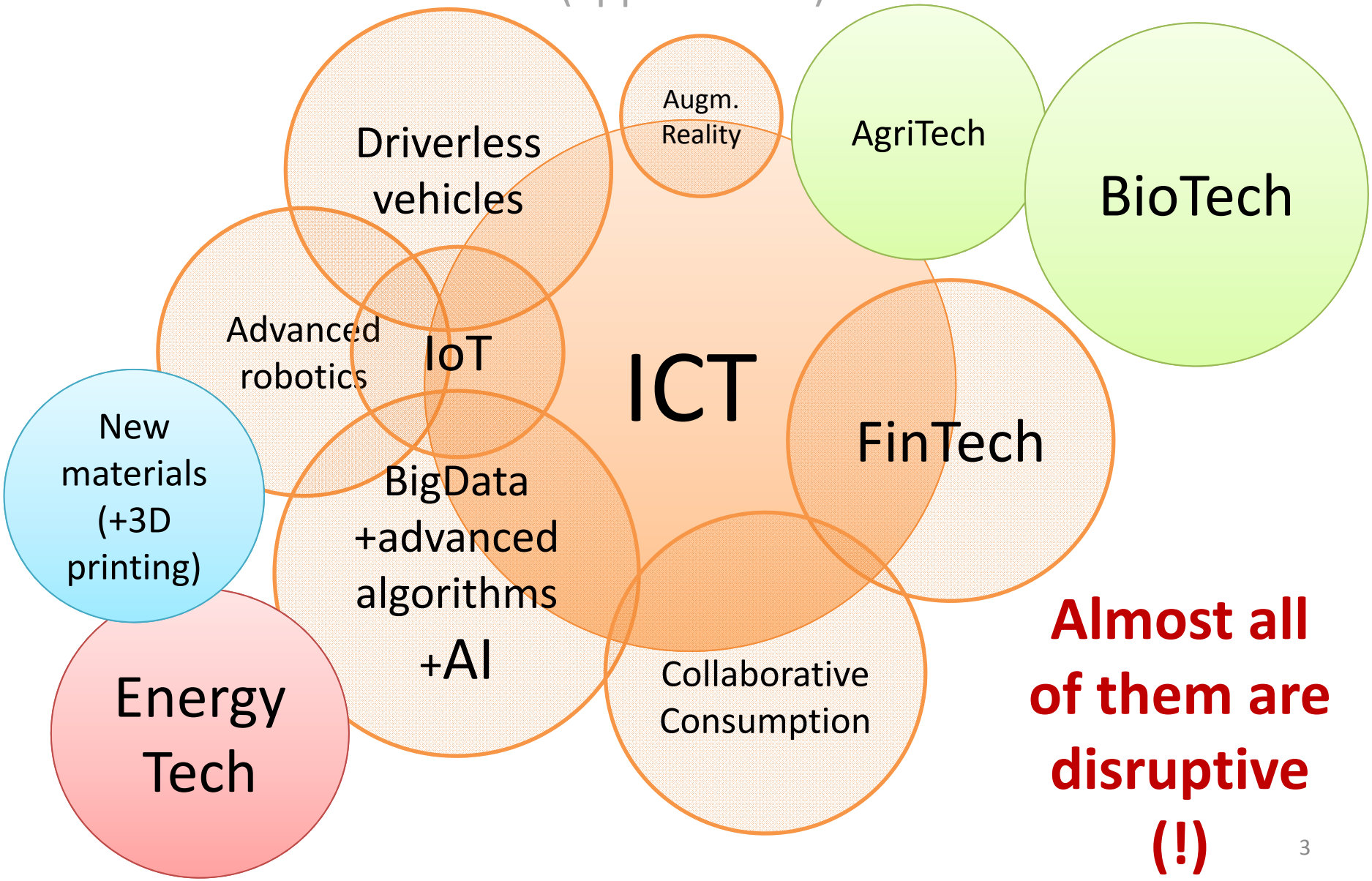
New Technology Wave (NTW)

why it's important to speak about

- New worldwide wave of studies, projections and government initiatives concerning the new technologies
  - is it a dry shot or a real upcoming revolution?
- The new technologies topic was discussed for many years. Enthusiasm used to be great but not all expectations came true
  - Habituation
- Nevertheless, there are more and more signs that we stand just before the revolutionary changed in many spheres

New Technologies Map

(approximate)



Almost all of them are disruptive (!)

So many disruptive technologies? What's happened?

- Transformation of quantity into quality
- Some triggers for digital technologies:
  - progress in electronics
    - speed
    - size
    - energy efficiency
    - costs
  - progress in algorithms and interfaces
  - the rise of smartphones (cause and consequence)

What are the outcomes?

- Productivity gain (or even leap)
- New services / new ways of old service delivery
- Basic challenge: adaptation to disruption
  - quick transformation of demand for different occupations
- Mentioned issues are widely discussed
- “How to catch the wave” is the essence of the most publications and initiatives
  - Good for leaders, but what are the side-effects for the rest?

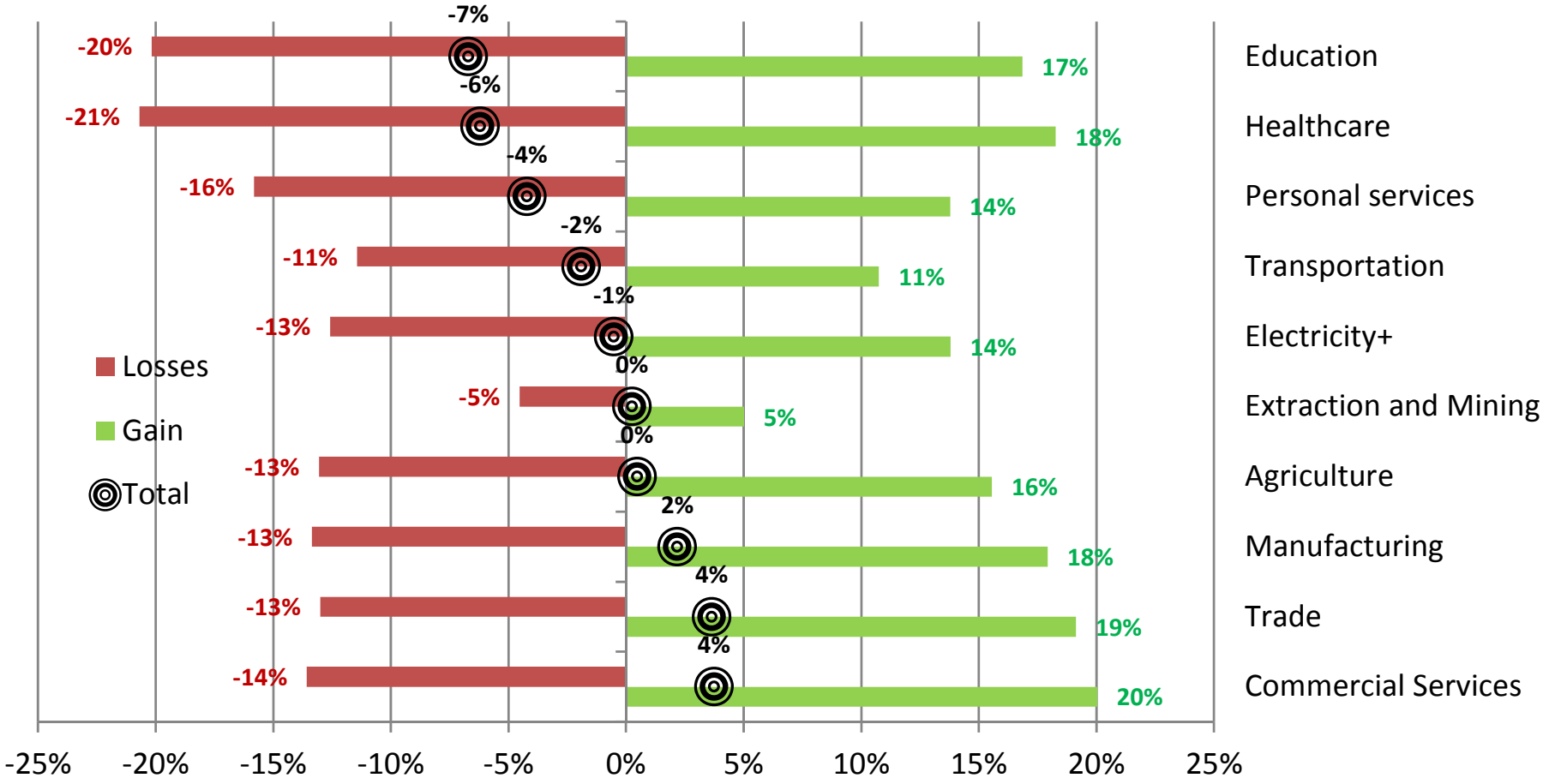
Less discussed effects of NTW

- Many non-tradable services turn into tradable (and "semi-tradables" turn into "very-tradables")
  - we'll see completely new map of world trade in services in a decade
- Strong favorable conditions for monopolization in services (world scale)
  - one type of service − one world company (the scale produces entry barriers + easy acquisition)
- "Useless commodities"
  - Peak oil demand, $15-20 / barrel is not a fiction
  - slowing demand growth for other commodities

Estimates for Russia

- In 2015 we estimated the positive effects of new technologies adoption
  - by economic spheres and industries
  - based on survey of big expert pool
- Later we added preliminary expert estimates of negative effects (trade in services)
- At the core of calculations – input-output tables
  - Russian statistic committee recently released detailed IOT (180 industries)
- Final result: close to zero, uneven by sectors

Expected gain and losses* in value added due to: 1) ICT progress; 2) increasing trade in services by sectors of Russian economy



** preliminary estimates (not for citation)*

Other risks and challenges of NTW

- Huge redistribution of value added among countries
  - net gain for current leading countries or more likely companies
  - alternative: strong government regulation, new trade wars
  - zero effect for certain countries
- Substantial net losses for current commodity exporters
  - increasing risks of instability and conflicts
- Increasing gap between
  - the most developed and the least developed countries
  - the most developed and developed countries
- Migration challenge

In conclusion:
we need additional effort to consider

- the whole spectrum of the NTW consequences
  - all the risks of slumping commodities prices
- possible win-win solutions in regulation for new trade in services
- migration (!)
  - the key topic: inclusion
  - political correctness should not impede

Thank you very much