The Virus as a Game Changer

Corona Immunitas - The National Research Program of the Swiss School of Public Health

SSPH+ faculty meeting, June 16, 2021

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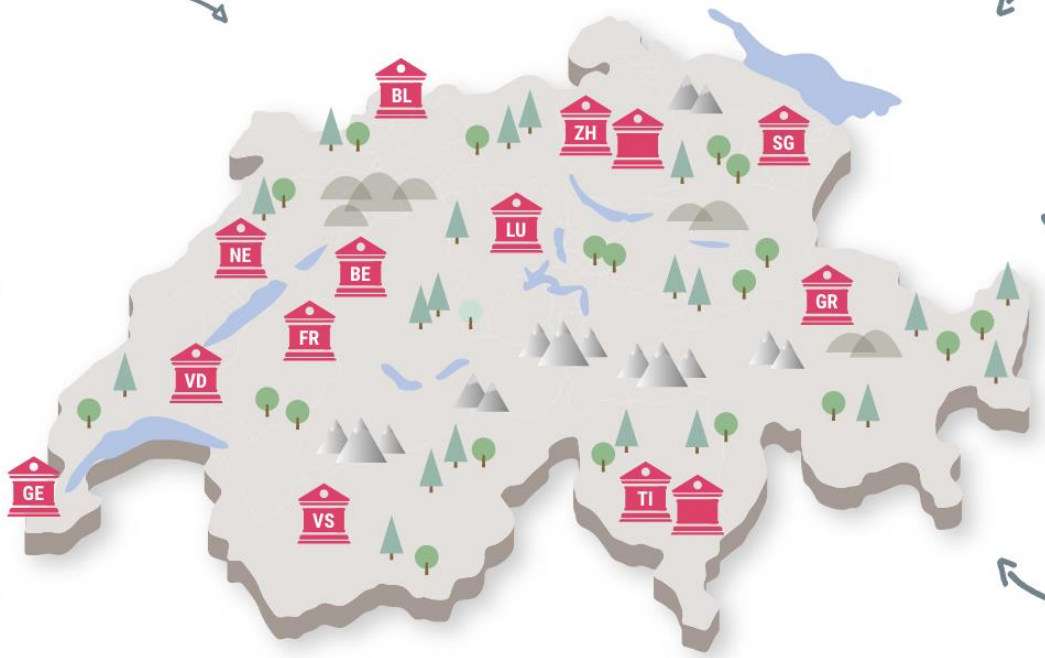
CORONA IMMUNITAS POWERED BY SSPH+

Switzerland wide program to assess the spread and impact of the pandemic

14 participating universities and health organisations

Financed through public private funding



50'000 study participants

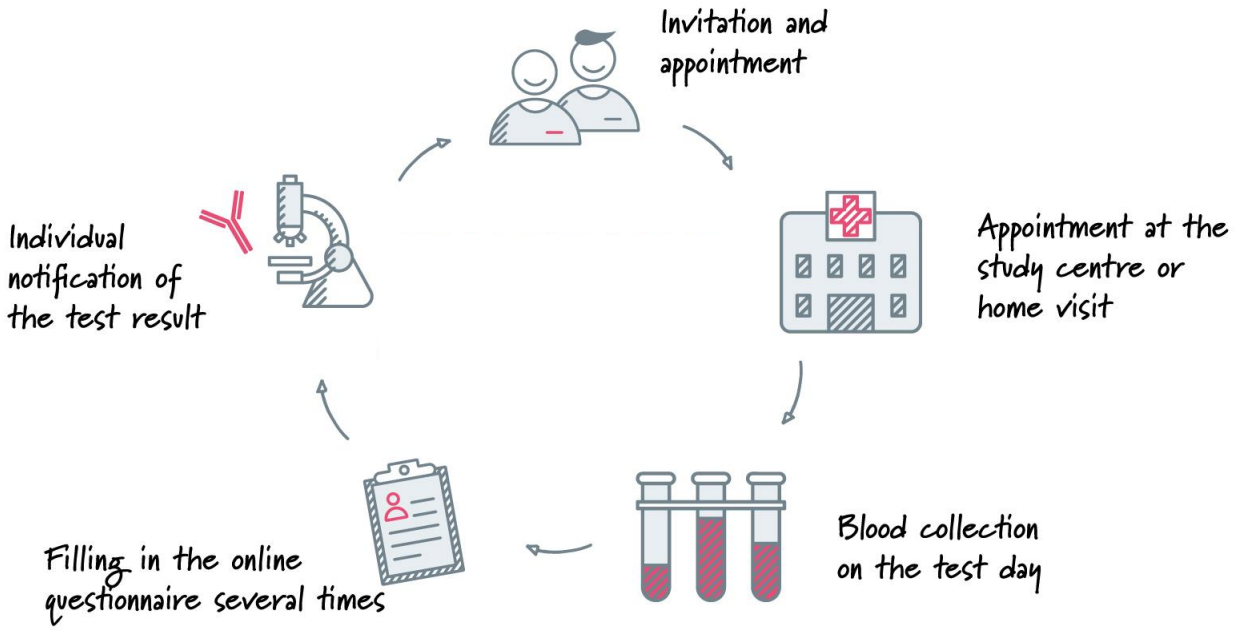
SSPH+ initiates and coordinates the programme

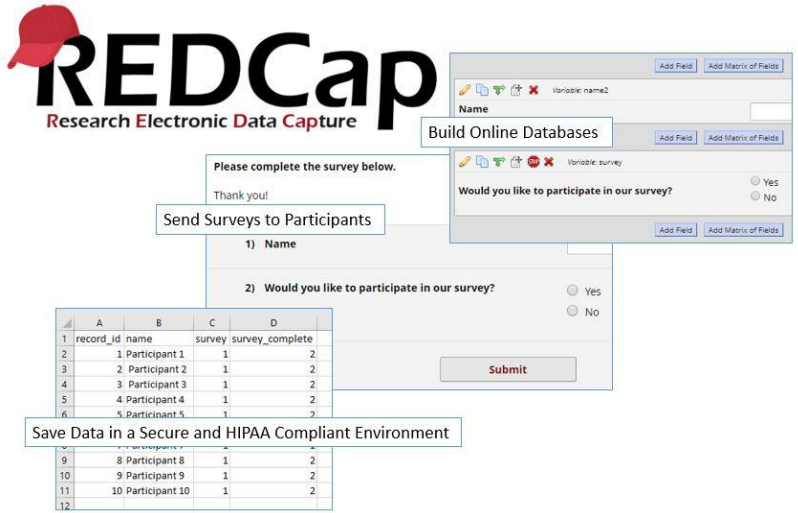
40 studies throughout Switzerland

For the health of society

Goal Corona Immunitas

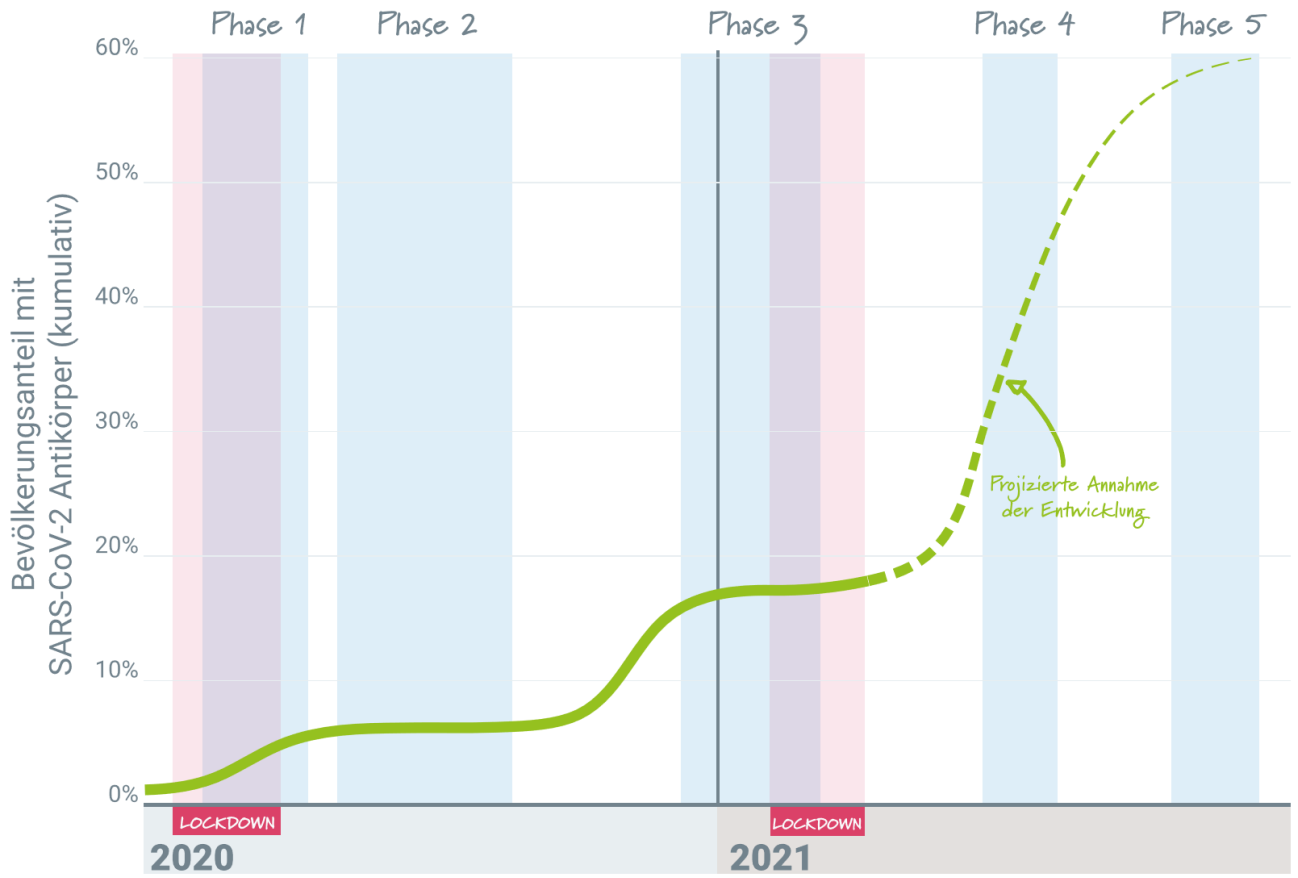
- Determine the spread and impact of SARS-CoV-2
- Repeated cross sectional or cohort studies





Fast roll out, scale up, communication, additional surveys and digital follow-up.

Phases of Corona Immunitas and key comparisons

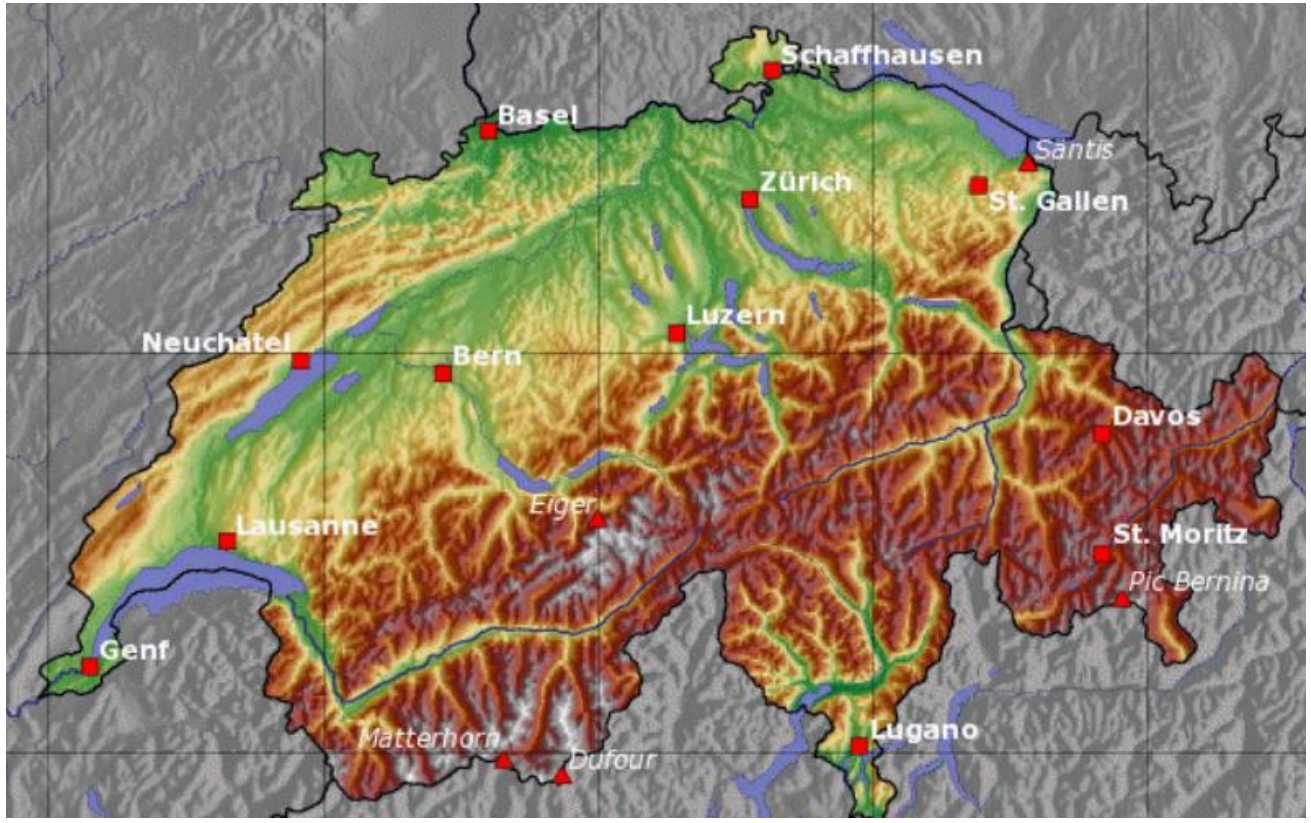


Seroprevalence in general population as anchor estimates

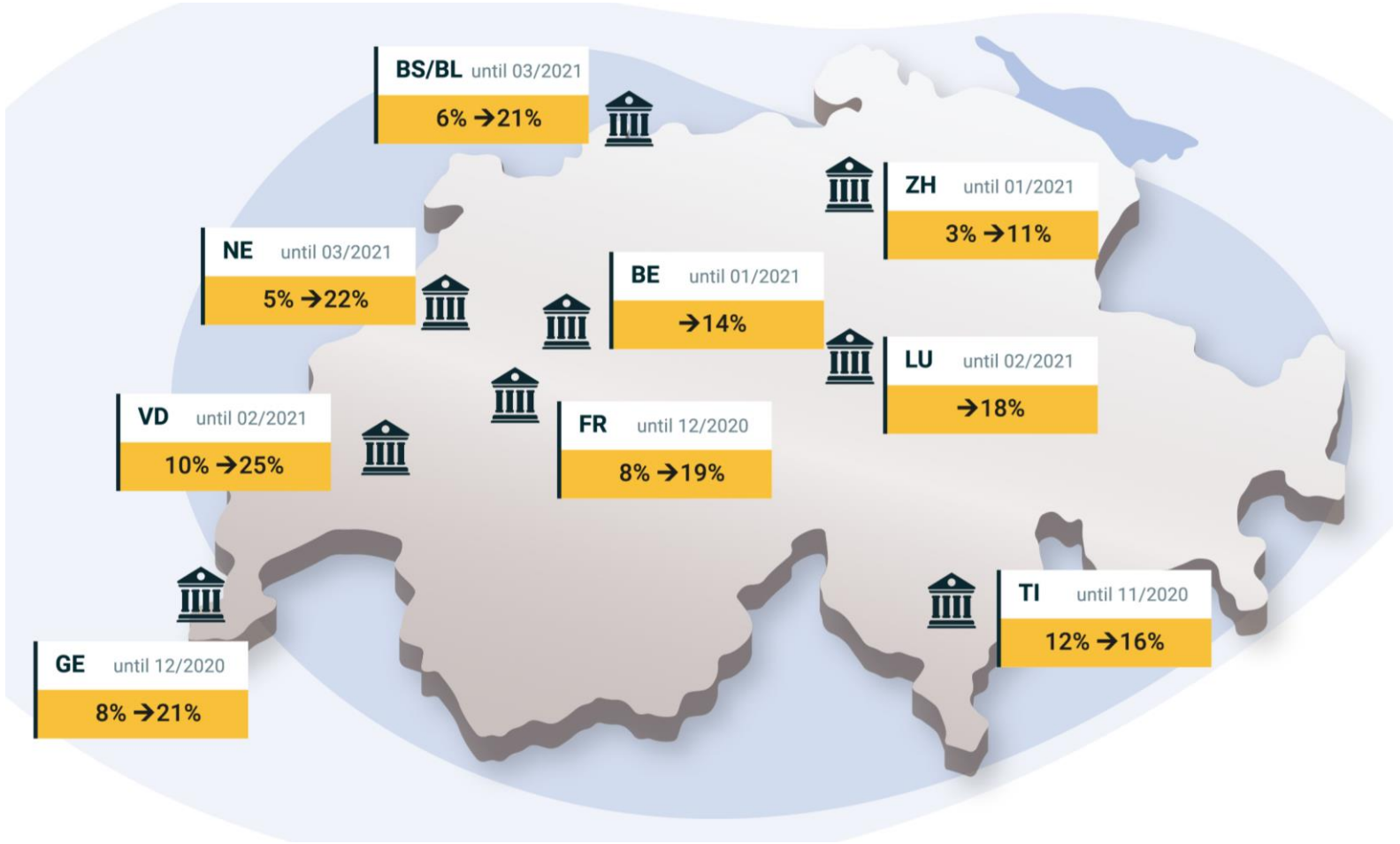
Comparisons

- Over time
- Between regions
- With exposed or vulnerable groups

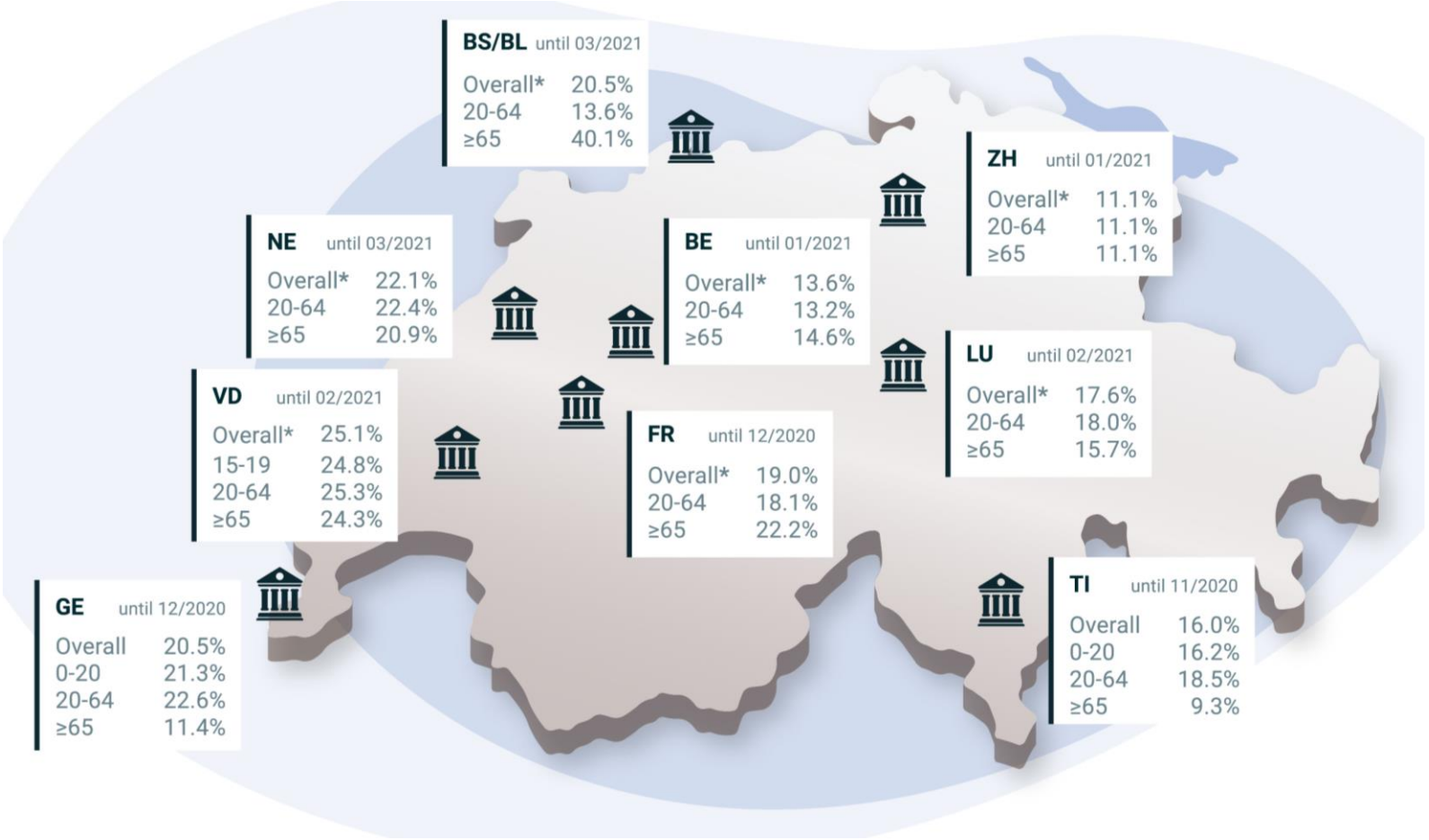
Study sites, mobile testing and digital follow-up to reach source population



Great variability of spread across regions and time



Sero-prevalence estimates between November 2020 and March 2021

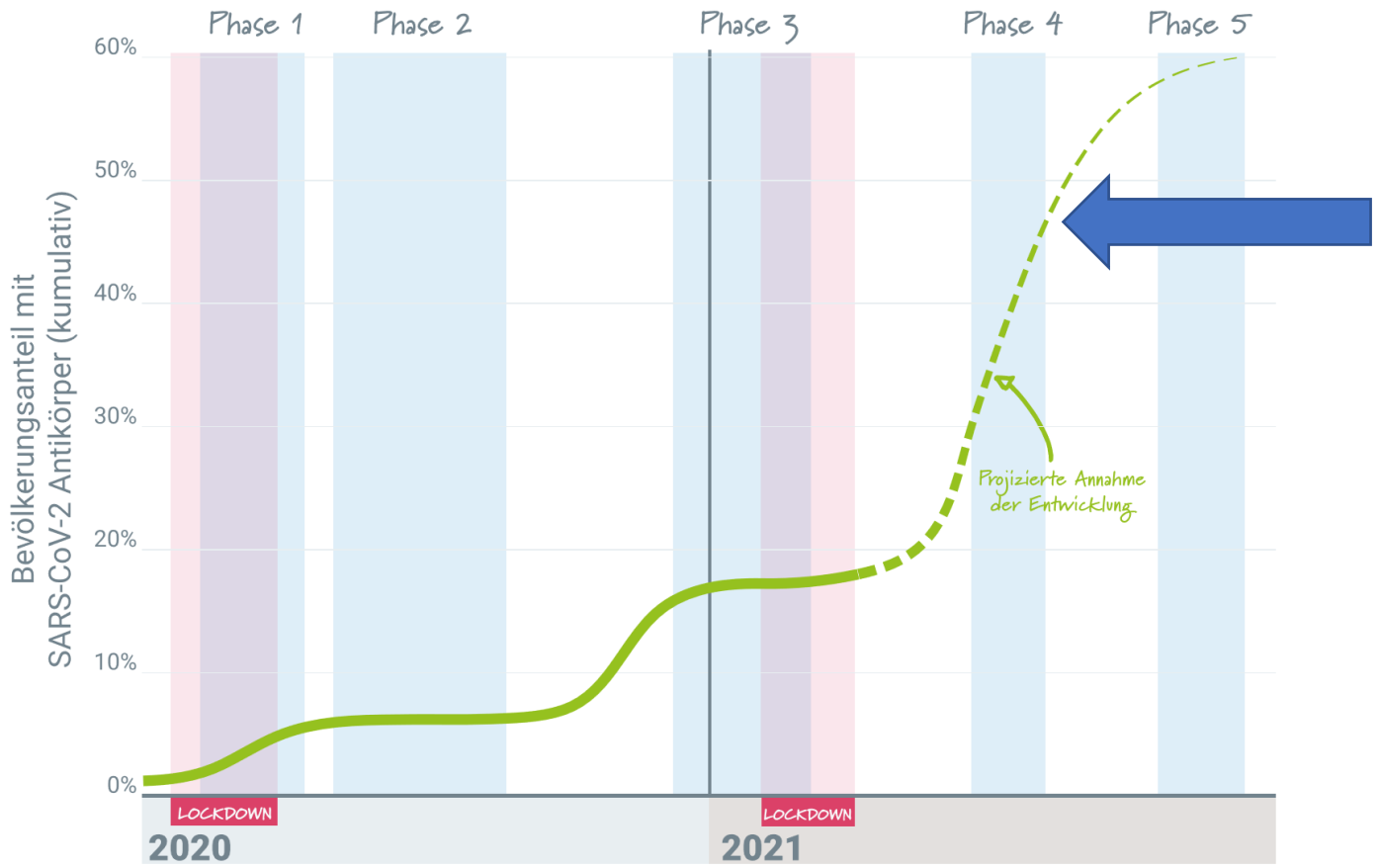


65+ catch up quickly thanks to vaccination

Ratio seropositives to PCR/antigen test positives around 3:1

>2 Million with infection so far

Planned for phase 4 of Corona Immunitas (June/July)



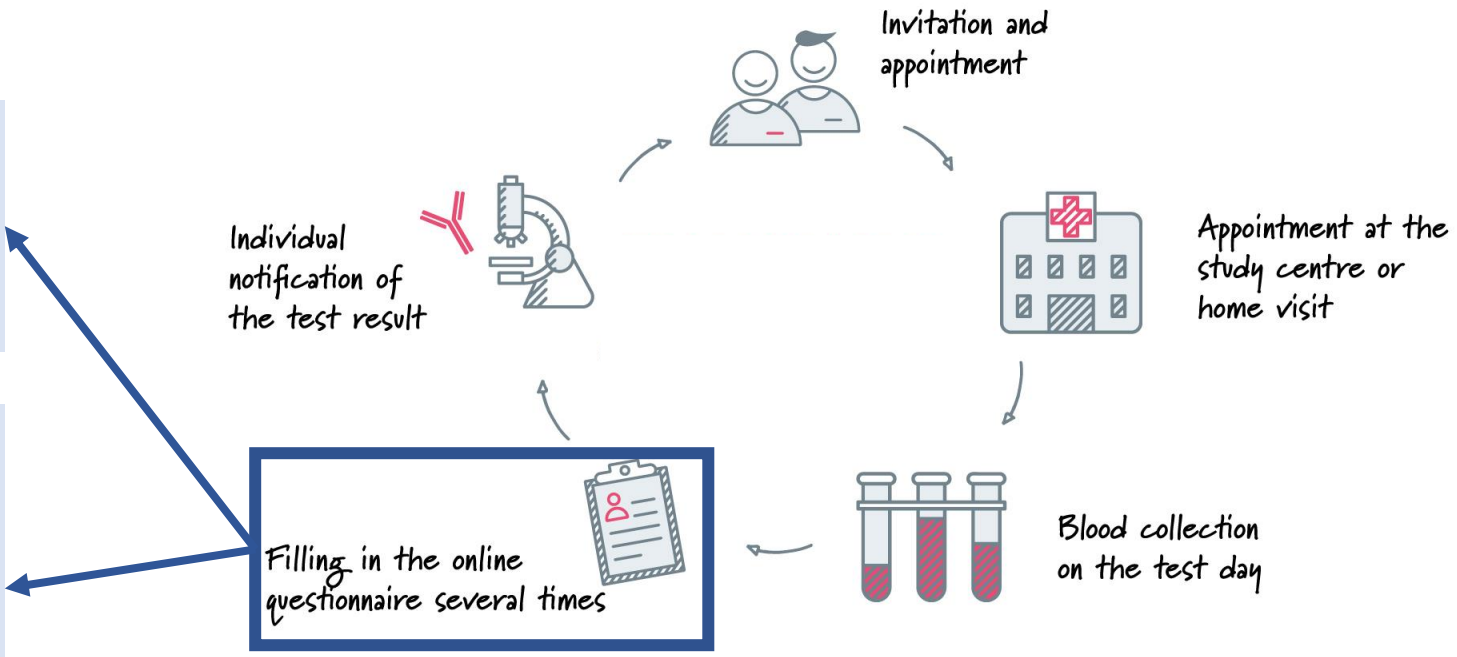
Antibodies differentiate between infection and vaccination as well as between different variants for infections

Viktor von Wyl,
University of Zurich

The Corona Immunitas Digital Cohort – monitoring population behaviour during the pandemic

Weekly surveys (short):
- Onset of symptoms
- Covid-19 tests
- Adherence to preventive measures

Monthly surveys (more extensive):
Weekly questions +
- Perception of health, economic, societal risks
- Mental health, feelings of loneliness
- Use of SwissCovid app
- Vaccination/vaccine hesitancy



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Some facts about the Corona Immunitas Digital Cohort

160K Surveys completed in total

6500 Number of completed monthly surveys

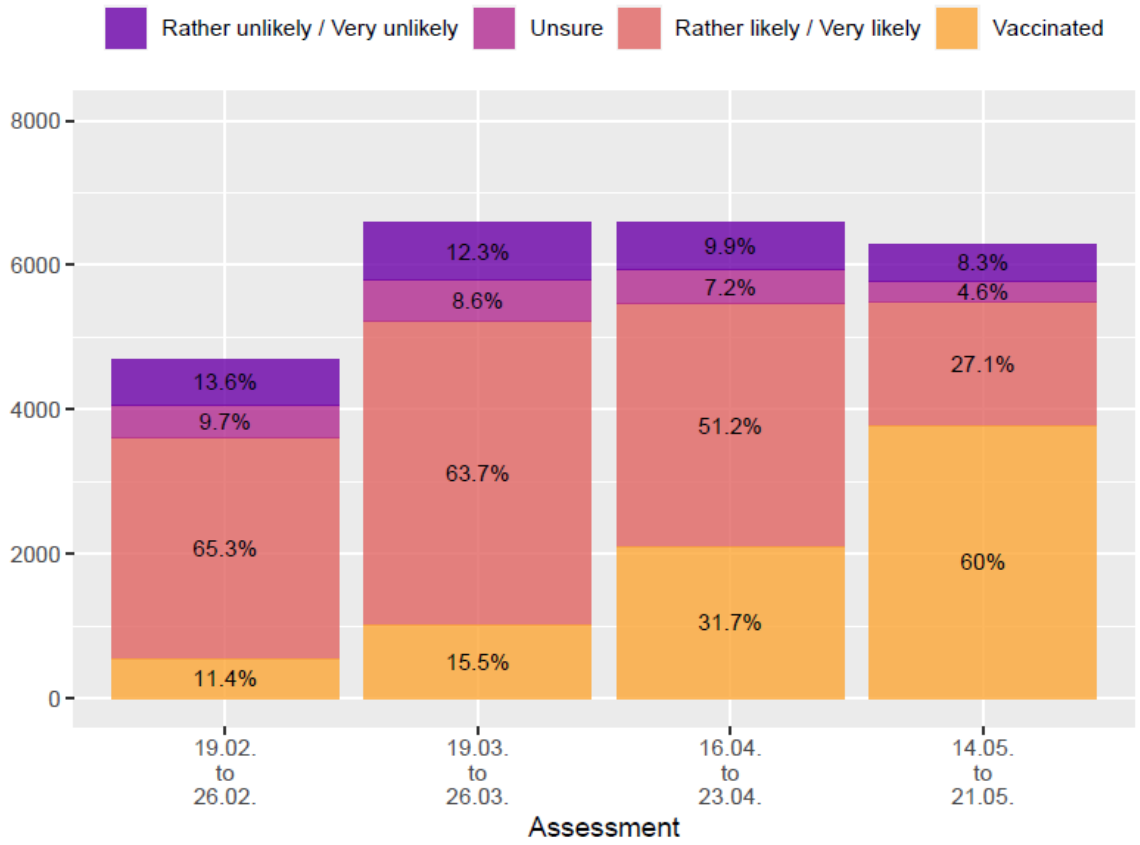
8 Additional topic-specific surveys (e.g. long covid, mental health, socio-economic impacts, …)

75% Average participation percentage for monthly surveys

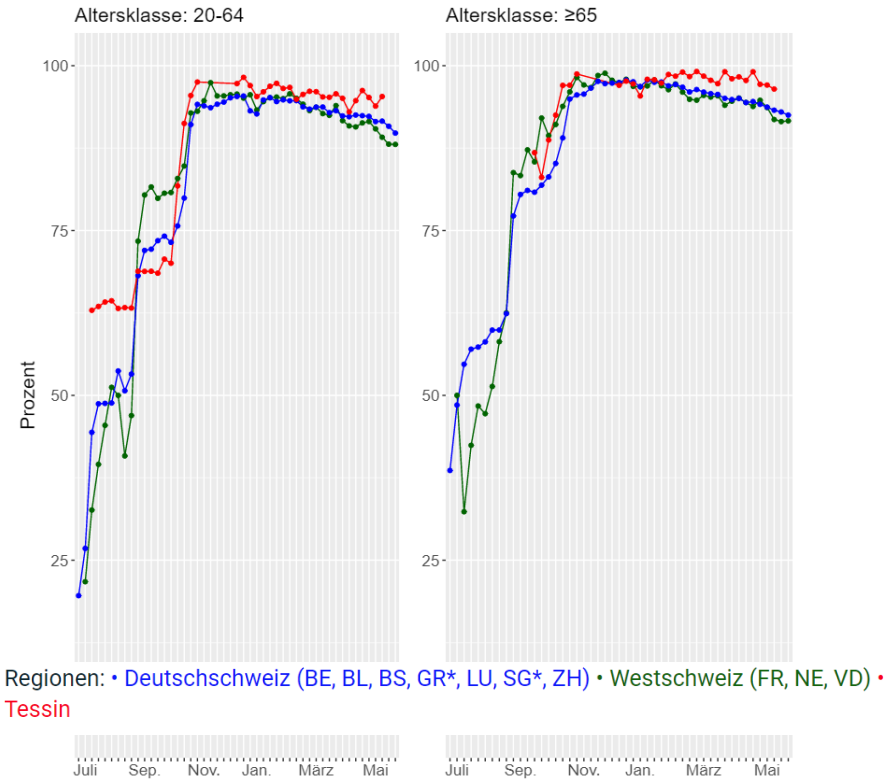
12 Cantons from all language regions, urbanity levels represented

Ongoing activities: Monitoring

1.1 Likeliness to Get Vaccinated Once Eligible or Already Vaccinated - Overall



Wie viele Menschen haben meistes oder immer eine Maske getragen?



Ongoing activities: Research questions

- Are persons of lower socio-economic status exposted to larger Covid-19 infection risks?
- How does adherence to recommended prevention measures differ by language regions (i.e. is there a Coronagraben in Switzerland)?
- What are reasons for persons not to get vaccintated?
  And how are they adhering to recommended preventive measures?
- How has the Covid-19 pandemic affected socioeconomic life of participants?
- What were the psychological/mental health impacts of the pandemic?
- How effective is the SwissCovid app?

Silvia Stringhini,
University of Geneva

Science to policy: challenges

- Time pressure: need to build reliable data in an incredibly short amount of time
- Science and scientific knowledge evolving by the day
- Data almost immediately used to inform public health decisions
- Need to inform: health authorities, scientific community, participants

Health authorities/scientific community

- Transmission of scientific results → when shall we communicate
  - ✓ At first results, although not peer reviewed
  - ✓ Press release with enough elements for politicians BUT → what about the scientific community?
  - ✓ Social media with informative thread, but what about public health authorities? And participants?
  - ✓ Pre-prints allow to share more details, and to collect larger feedback BUT more and more picked up by the media→ official press releases not done and public health authorities informed by the media
- Very difficult to control or direct the flow of information from one channel to the other

Corona Immunitas: science to policy and to science

- Point-de-presse with FOPH
- Regular meetings with FOPH
- Transmission of scientific outputs to COVID19 Science Task Force and FOPH
  - ✓ Seroprevalence
  - ✓Seropersistence
  - ✓Data on children (Ciao Corona etc)
  - ✓ Vaccination data
- Members locally inform cantonal authorities
- Newsletters to members and scientific community

Scientific Impact

- Several high level publications from several CI groups that have informed the international scientific community
- Continued improvement and update of research question based on evolving situation
- Progressive build-up of a governance system for national population-based data which can persist in the future for national projects

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Stephane Cullati,
University of Fribourg

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Lessons learned from the launch of a quasi-national public health programme

Issues:	Examples:	Lesson learned:
Full remote work when multi-centres	• "When?" (timing of data collection) (risk of significant time lag) • "How they collect data? (process of data collection) (risk of lack of design equivalence)	• *Draw temporal map/figure showing centres' timing* • *Draw map / figure showing centres' processes*
Variety of electronic data capture (EDC) software	Equivalence between instruments of data collection (risk of validity threat or insufficient instruments standardisation; risk of delay)	• *Use 1 single EDC (central) or multiple servers but with the same EDC* • *Draw a temporal sequence of implementation across centres*

Lessons learned from the launch of a quasi-national public health programme

Issues:	Examples:	Lesson learned:
Diversity of languages	• Translating data collection instruments (risk of delay) • Implementation multi-languages instruments in the EDC software (risk of errors)	- • *Set up the EDC software in English (not in local language)*
Combining paper and online formats	• Equivalence between paper and online instruments (risk of errors) • Branching logics equivalence between online and papers (risk of errors)	• *Create a word processing document mirroring the EDC instrument* • *(same)*

Fabian Vollrath,
APS

Game Changer in a nutshell: Collaboration, Budget, Time Record

The Challenge: A Crisis Situation in March 2020.

1. Starting from zero: no knowledge - no experience - no existing cooperation
2. No money
3. Heterogeneity of unis and health institutions: different interests - exponents in the spotlight for the first time
4. No processes - no umbrella structure - no overarching decision-making & leadership role
5. Media pressure: all of a sudden in the spotlight - expectations from media, public and politics

A real success story

Challenge	How we solved it
Starting from Zero	Courage, hands on mentality, willingness to take risks, strong personalities, good network, the drive to implement
No money	Professional fundraising, networking, credible concept
Heterogeneity	Professional management, excellent coordination, acceptance & trust among all stakeholders, regular internal communication
No processes, No umbrella structure, No overarching «Leader»	Representation of all sites in the EC -> decisions by consensus, clearly show the added value of everyone, clear separation of scientific & nonscientific, allocate resources wisely
Media pressure	Professional communication & media strategy, definition of the right contact person for each topic

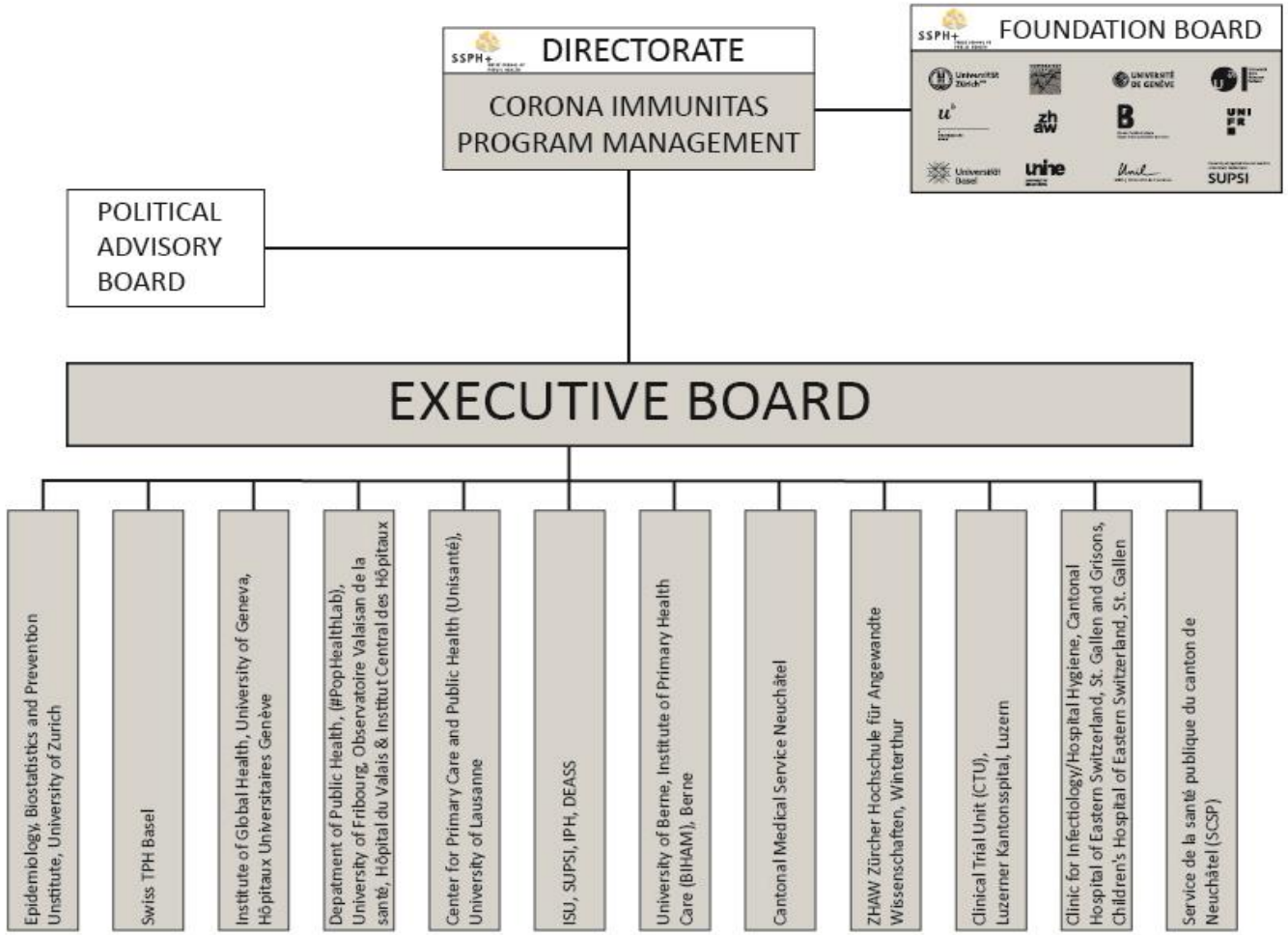
Governance

Game Changer:

Competencies: EC decides on operational matters. Contracts are signed by SSPH+.

Coordination: Weekly calls with each department and discussion of issues: EC, General, Digital Follow Up, Coms

Organization: Flat hierarchy, professional non-scientific program management



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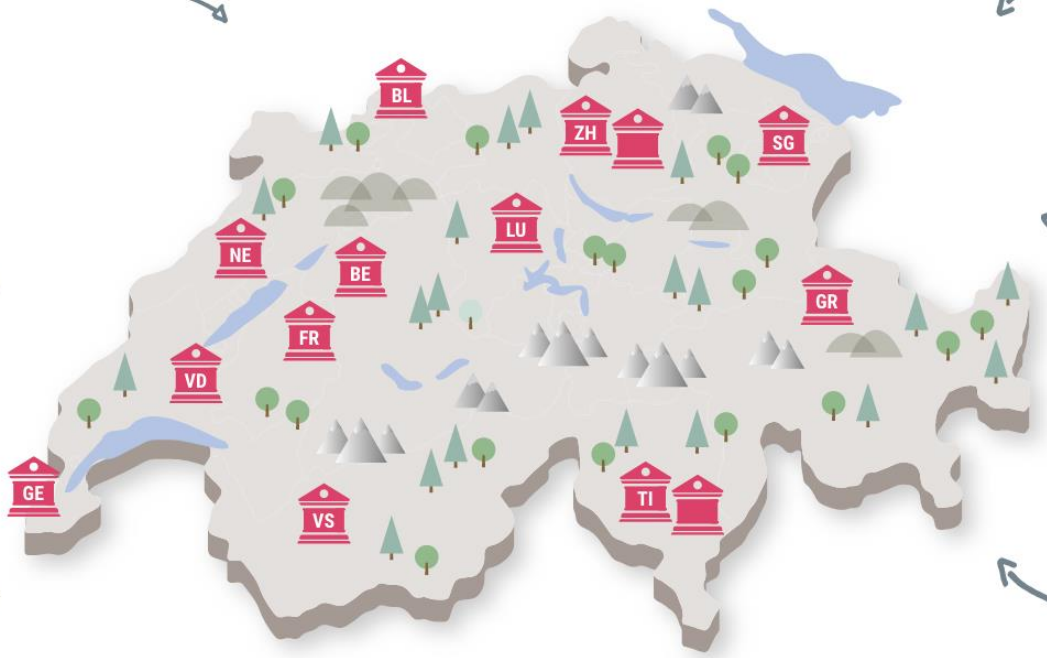

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