



**University of
Zurich^{UZH}**



**Network
for Evaluation
of One Health**

NEOH Handbook

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Simon Rüegg

NEOH is supported by





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Evaluation of Approaches to Health with a focus on One Health

- History of One Health
- Combined approaches to health are needed because health of environment, humans, domestic animals and wildlife is an important component for sustainability and resilience of the planet.
- Problem of asymmetry of health definitions and metrics in the human-animal-environment-triade
- Funding mechanisms exist for OH, but governance doesn't change
- Introduction of the other chapters



Roadmap to a OH Agenda 2030

- sustainable development is more than the sum of its parts
- Definitions of health of humans, animals, plants, environment
- History of One Health
- Have we moved towards an integrated approach? – In many ways not
- The potential of the SDG to advance in this integration
 - SDG1: End poverty ~ diarrhoeal diseases (top 10 killer) – zoonotic
 - SDG2: Food security & sustainable agriculture – Obesity resulting from food systems
 - SDG3: healthy lives & wellbeing – determinants of cardiovascular disease
 - SDG6: water & sanitation ~ schistosomiasis – «water health»
 - SDG13: climate change impacts ~ vector borne diseases
 - SDG14: conserve oceans as resource ~ ecosystem health
 - SDG15: conserve terrestrial ecosystems ~ emerging diseases



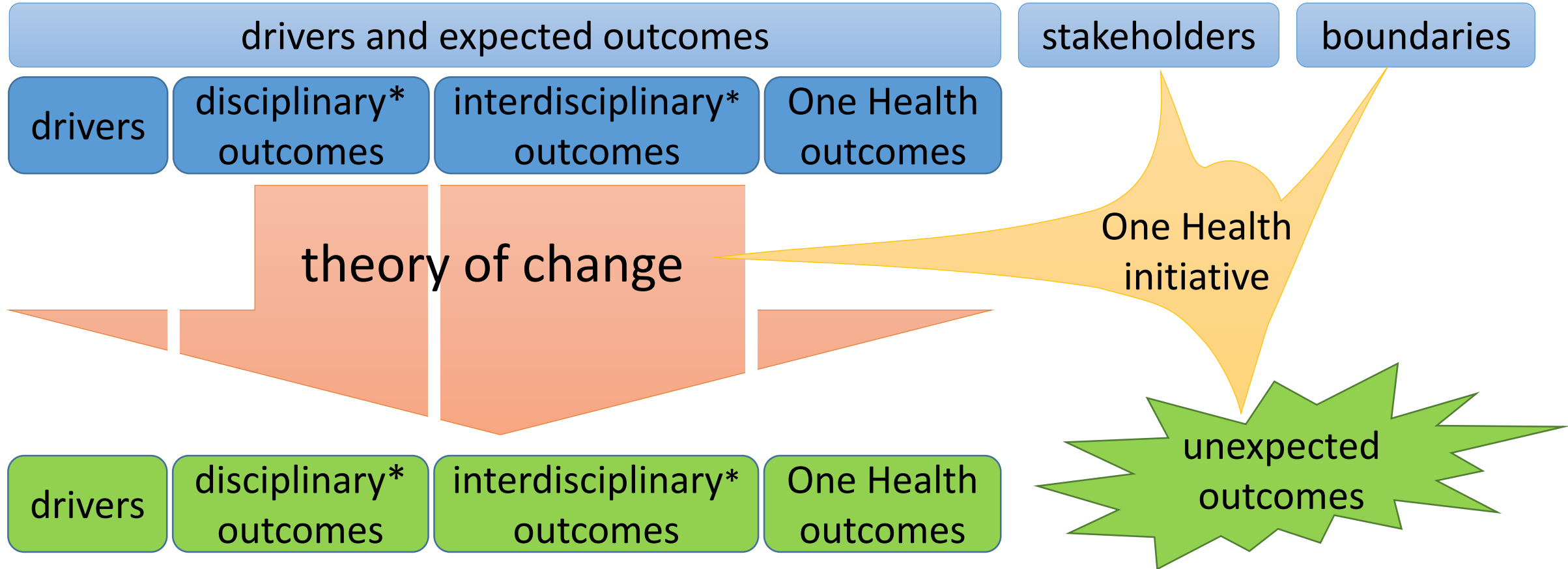
Roadmap to a OH Agenda 2030

- Discussion
 - Classical decision making relies on scientific evidence & feasibility studies resulting in the selection of the «cheapest silver bullet».
 - Complex problems require to break out of this methodology and embrace a systems approach
- Conclusion
 - We must get away from the human-centric view of health and broaden its perspective
 - "Business as usual" will continue to achieve some apparent gains in human and domestic animal health through technological advancement, whilst failure to adopt non-linear and multi-sectoral approaches in biodiversity and ecosystems health are proving unsustainable.
 - SDG Agenda provides a unique and hopefully historic opportunity for the One Health paradigm



A One Health Evaluation Framework

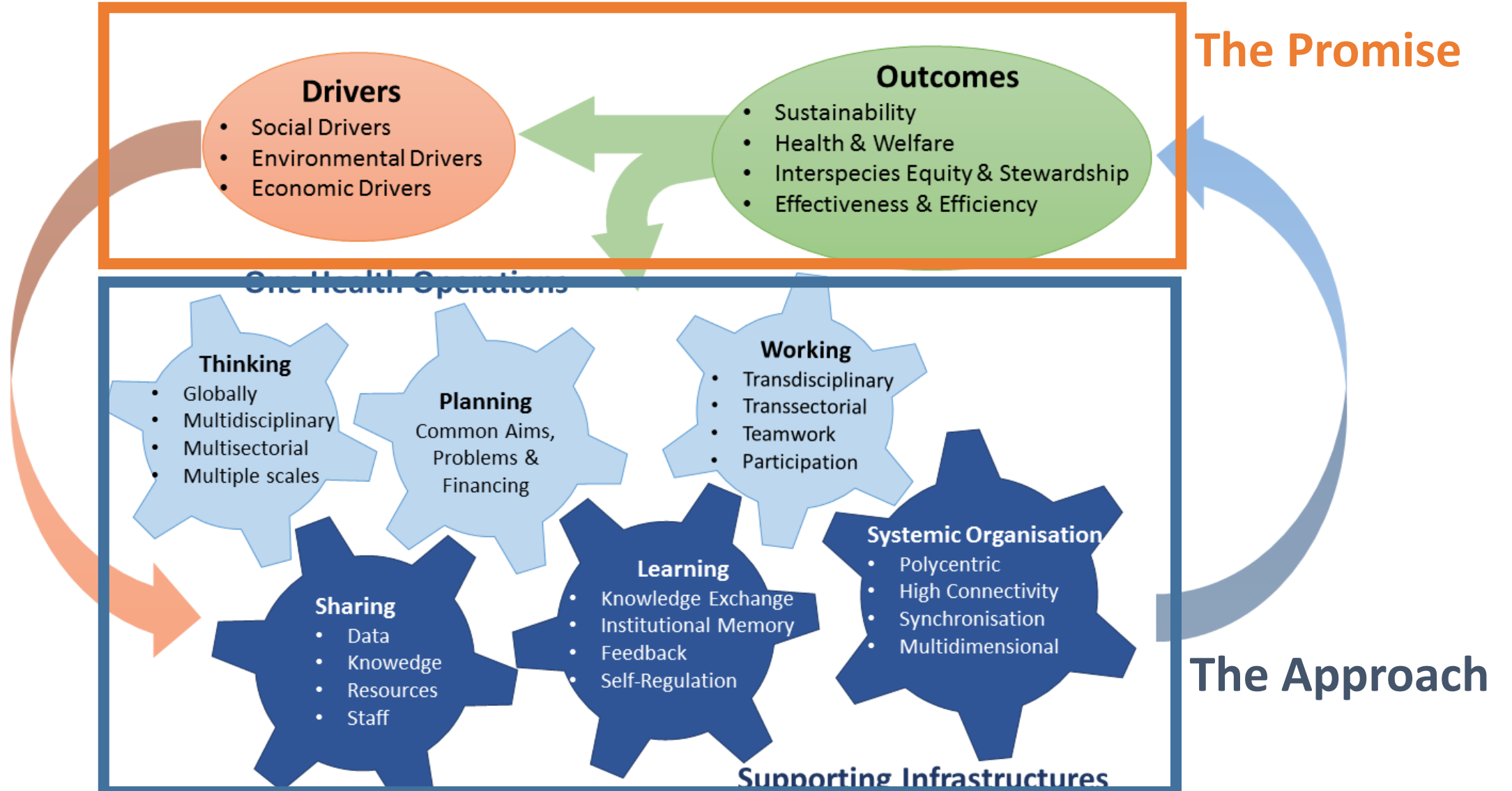
Chapter 3



*for simplicity disciplinary stands for disciplinary and sectorial

One Health Characteristics

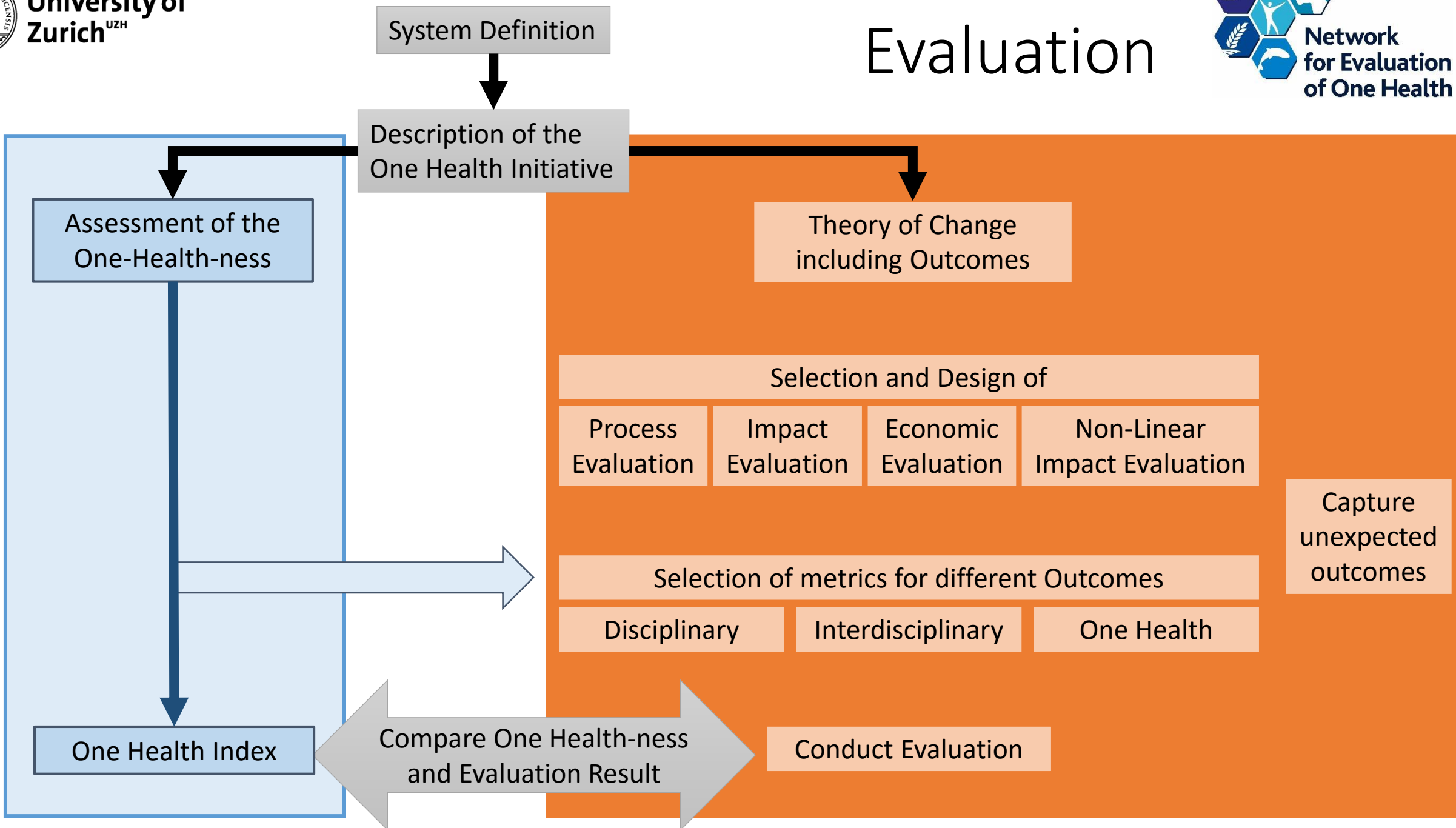
Chapter 3





Evaluation

Chapter 3





One Health Methods and Metrics

- I. Ecological Dimension
- II. Social Sustainability
- III. Economic Evaluation

Chapters 4-7

IV. Interactions and integration of the above

Work in
progress



M&M I: Ecological Dimension

- The human-animal-environment interface
- Integrated human and animal surveillance
- Integrating ecological assessments
- How to capture (conceptualize) information, How to measure the value of information/knowledge
- Inconsistent data at different time and geographical scales
- Qualitative aspects



M&M II: Social Sustainability

- Identify indicators for social sustainability in human, animal and environmental health
- Formulate questions to assess social sustainability of OH initiatives
- Discuss viability and trade-offs of these indicators.



M&M II: Social Sustainability

- What is social sustainability
- The right of current people to satisfy their needs is equal to that same right of future generations.
- Principles of social sustainability are grounded in human rights.
- Indicators of social sustainability:
 - Diversity and inclusiveness of different groups
 - Equality and equity
 - Participation
 - Human capital
 - Solidarity
 - Partnerships
 - Quality of life
- Conditions framing OH initiatives and social sustainability



M&M III: Economic Evaluation

- Economic evaluation is important for One Health because it justifies the efficient use of resources for OH.
- The main methods are
 - Cost-effectiveness analysis (CEA)
 - Cost-utility analysis (CUA)
 - Cost-benefit analysis (CBA)
- The use of money as single parameter is greatly discussed, hence we outline approaches integrating other social priorities to the economic criterion



M&M III: Economic Evaluation

- The perspective of an economic evaluation determines whose costs and outcomes are included.
- It should be carefully assessed if the assumptions of a given economic evaluation framework are appropriate, in particular regarding:
 - Qualitative information
 - Changes in the institutional framework, societal preferences and cultural norms
 - Irreversible consequences
 - Efficiency as guiding principle in One Health



M&M III: Economic Evaluation

- Dealing with complexity
 - Social-ecological systems framework
 - Food supply chain analysis
 - Bio-economic modelling
 - Dynamic transmission Model
 - Multi-Criteria Decision Analysis
- Data requirements and data sources



One Health Governance

- Practices and definitions in Global Health and One Health
- Principles in health governance
- Commonalities in Global Health and One Health governance
- Current practice in Global Health and One Health governance



NEOH Glossary

- Terminology varies in different fields of science and society
- One Health joins many fields with many such idiosyncrasies
- It will be essential to the success of the handbook to agree on a common terminology

- WG2 should identify all ambiguous terms and report them to me.



The next steps

Task	Timeline
WG2 Training School	27.6.-1.7.2016
Submit evaluation design and the time plan	after training school (8.7.2016)
Implement Evaluation	July – December 2016
Feedback/ questions on handbook	Until End December 2016
Write report on evaluation	End December 2016
Present Evaluation	16/17 January 2017
Publish case study evaluations in a special issue of an Open Access Journal	Submission deadline February 2017
Meta-Analysis by WG3	Starting Dec 2016





Questions?

Thank you for your contributions!