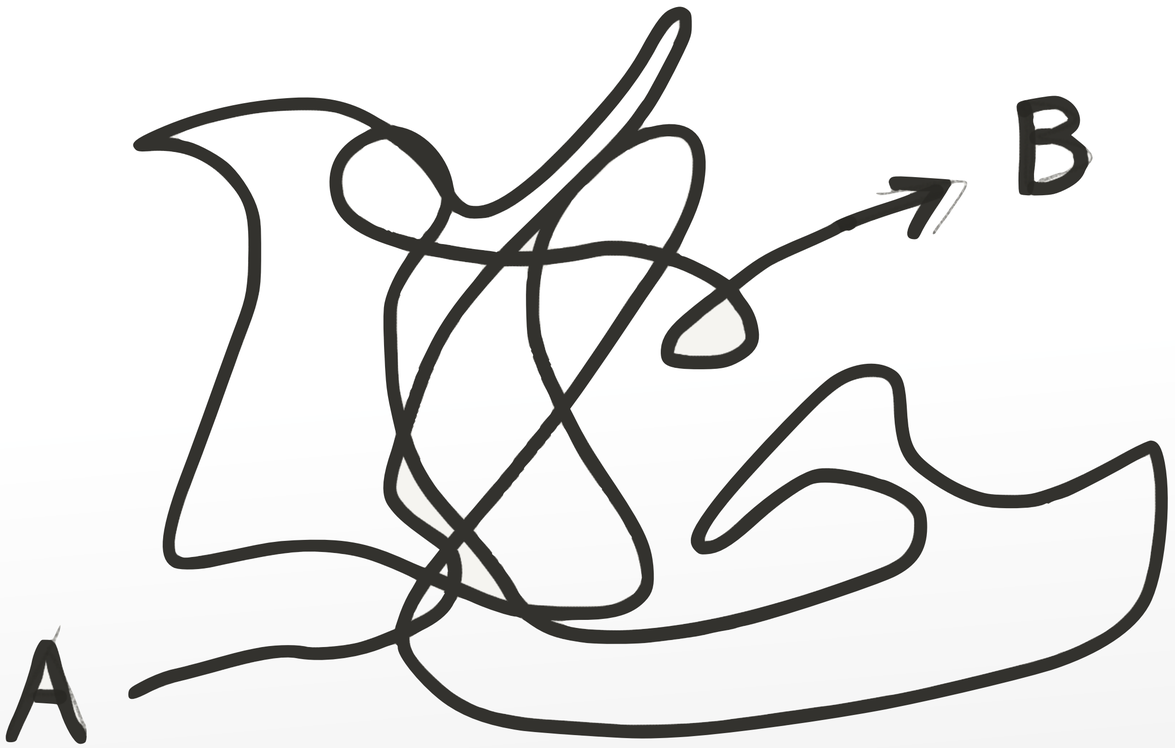
Implementation

Hugo Sax, MD | Head Infection Control | Division of Infectious Diseases and Hospital Epidemiology | USZ

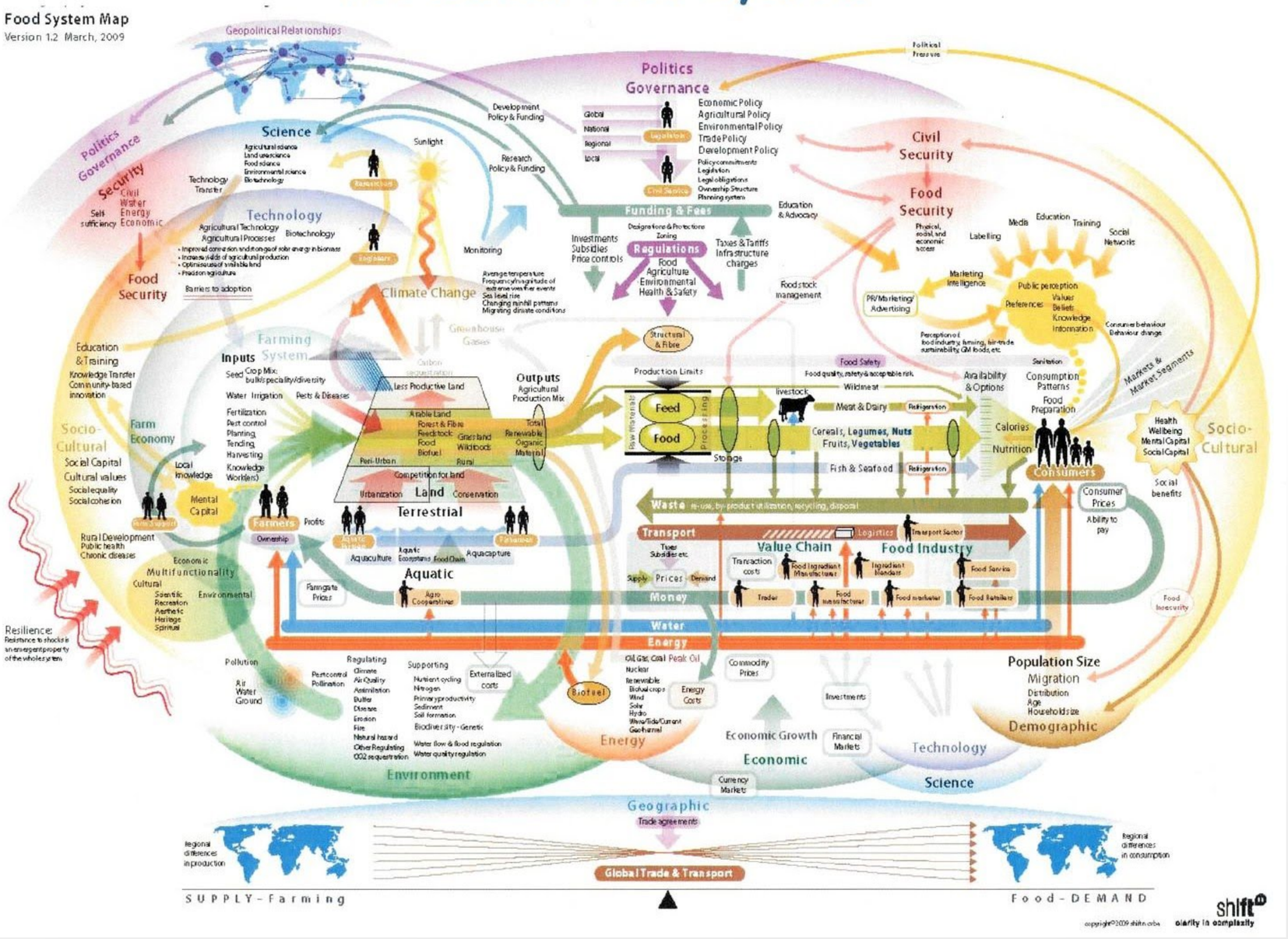
USZ Universitäts Spital Zürich

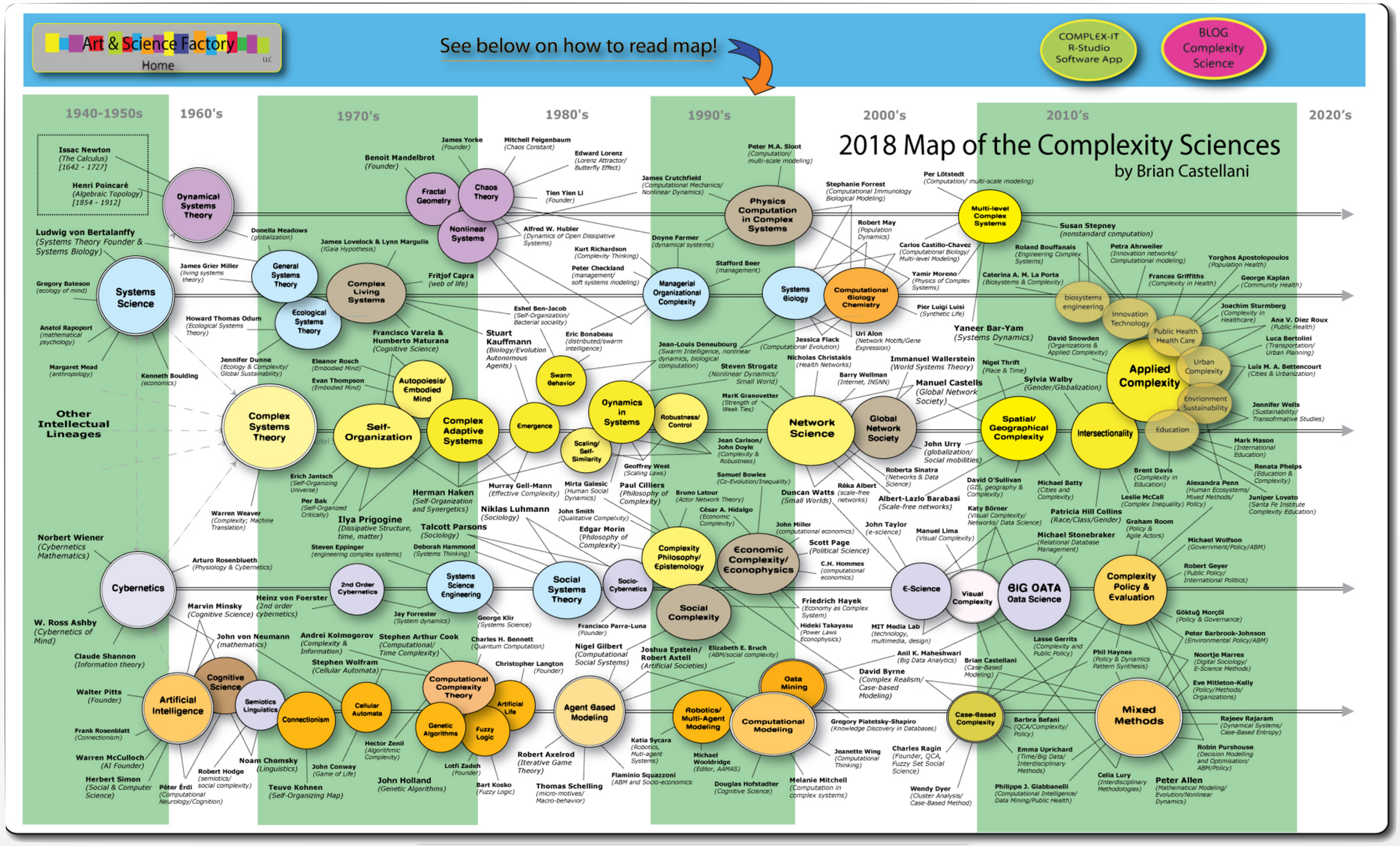
Universität Zürich[UZH]


B
A


B
A

The Global Food System





https://www.art-sciencefactory.com/complexity-map_feb09.html

ALL PROBLEMS RESULT FROM THE MISMATCH BETWEEN
HOW REAL-WORLD SYSTEMS WORK
AND HOW WE THINK THEY WORK.

THINK BETTER

SOLUTIONS, SCIENCE,
FAMILIES, SCHOOLS,
BUSINESSES, GOVERNMENT,
SOCIETIES.

BECOME A

SYSTEMS THINKER

FOLLOW 4 SIMPLE RULES.

MAKE DISTINCTIONS AND RECOGNIZE SYSTEMS, RELATIONSHIPS, AND PERSPECTIVES (DSRP).

MIX AND MATCH THESE RULES LIKE PRIMARY COLORS.

SYSTEMS THINKERS CHALLENGE BOUNDARIES, SEE INTERCONNECTIONS, AND ARE PART OF A LARGER WHOLE.

WHEN YOU CHANGE THE WAY YOU LOOK AT THINGS, THE THINGS YOU LOOK AT CHANGE.

SYSTEMS THINKING IS A NEW ETHOS.

SMALL THINGS DONE BY MANY CAN LEAD TO BIG CHANGES.
WHEN WE TAKE THE TIME TO THINK ABOUT THE WAYS WE THINK, IDEAS THAT CAN CHANGE THE WORLD BECOME POSSIBLE.

USZ Universitäts Spital Zürich
Universität Zürich[UZH]
HumanLabZ.org
hugo.sax@usz.ch

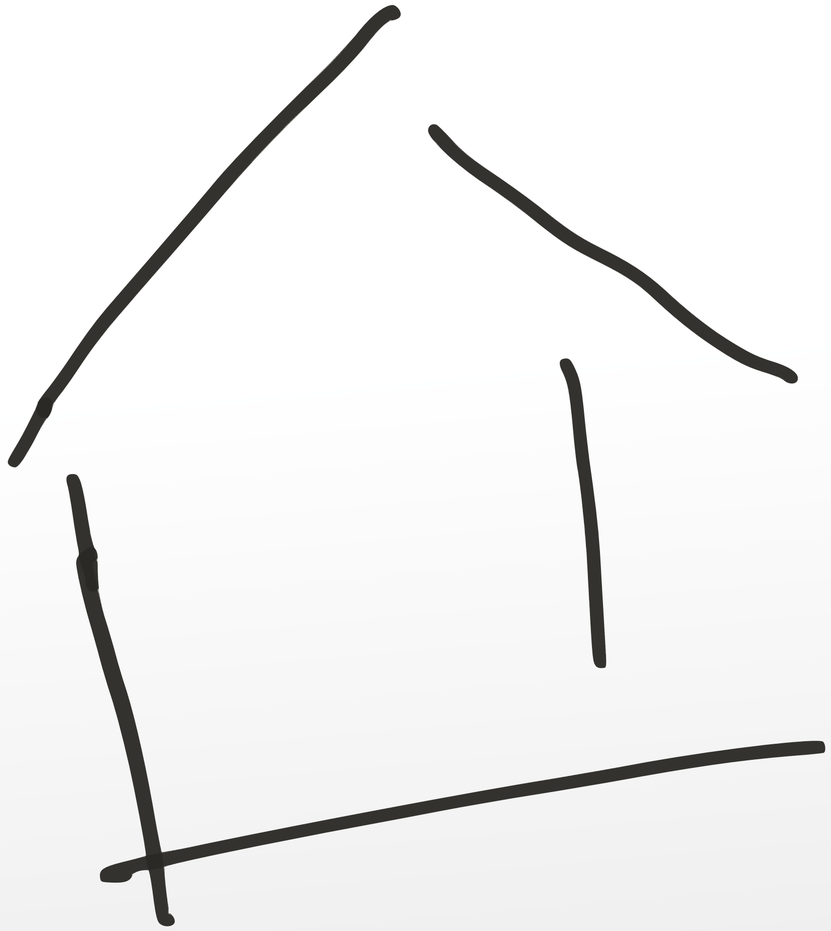
Thinking tools

Daniel C. Dennett. Intuition Pumps and Other Tools for Thinking. Norton 2013, New York, NY.

Thinking tools

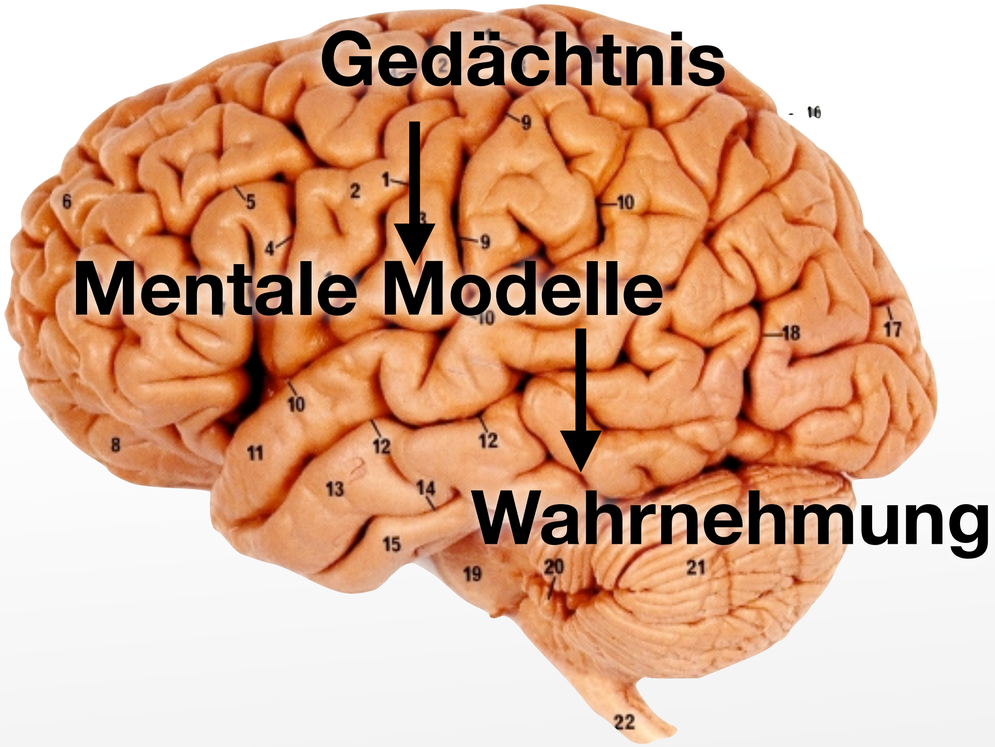
You can’t do much carpeting with your bare hands, and you can’t do much thinking with your bare brain. - **Bo Dahlbom**

Daniel C. Dennett. Intuition Pumps and Other Tools for Thinking. Norton 2013, New York, NY.

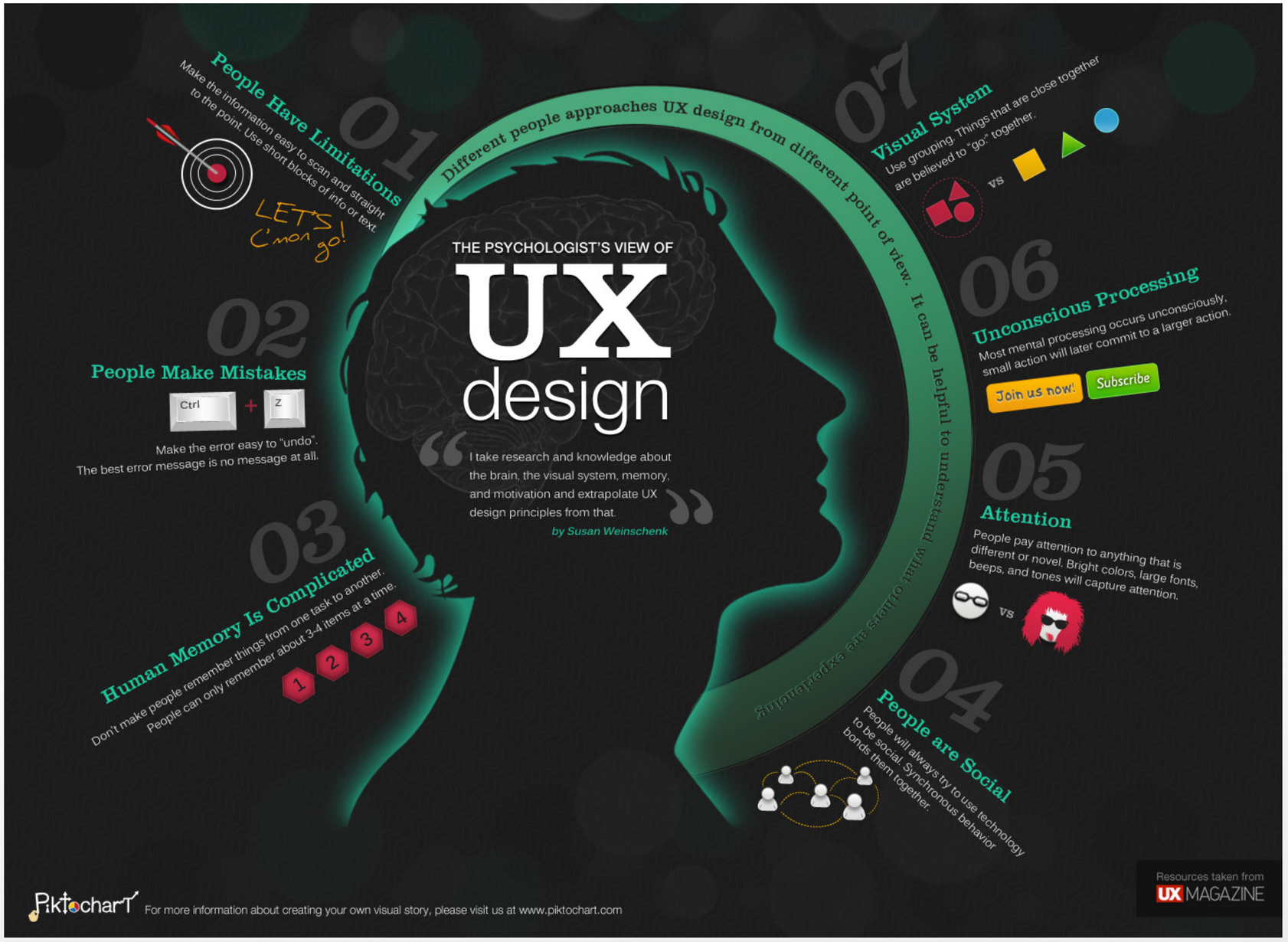


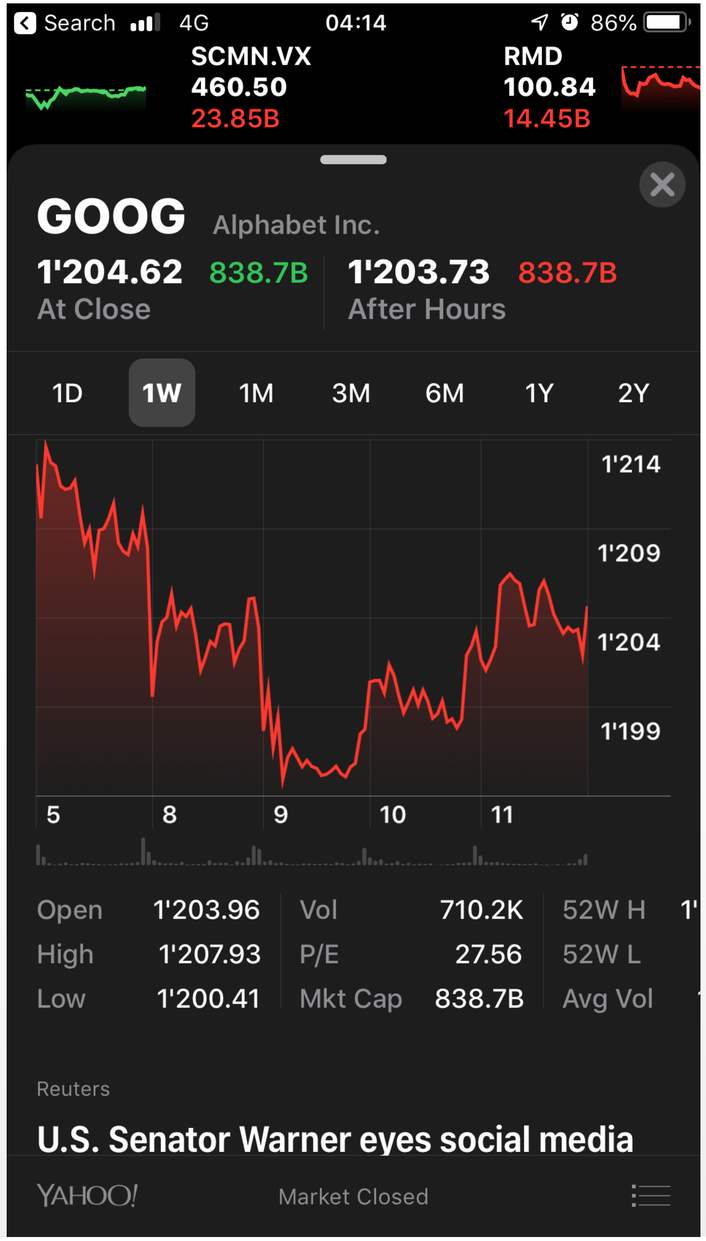
Die Welt (ist) in unserem Kopf.

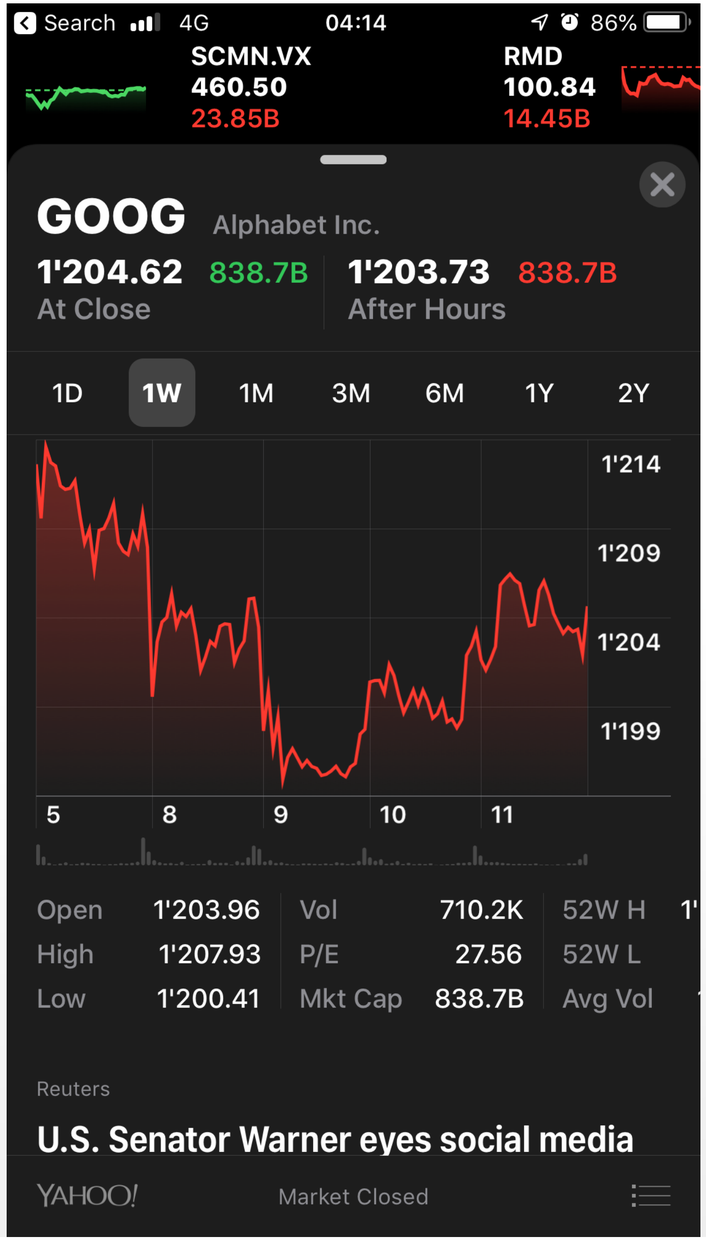
Welt → Sehen →



Sax H, Clack L Mental models: a basic concept for human factors design in infection prevention. **J Hosp Infect 2015;89(4):335–9.** Doi: 10.1016/j.jhin.2014.12.008.


01
People Have Limitations
Make the information easy to scan and straight to the point. Use short blocks of info or text.
LET'S C'mon go!
02
People Make Mistakes
Ctrl + Z
Make the error easy to "undo".
The best error message is no message at all.
03
Human Memory Is Complicated
Don't make people remember things from one task to another.
People can only remember about 3-4 items at a time.
1 2 3 4
Different people approaches UX design from different point of view. It can be helpful to understand what others use experiencing.
THE PSYCHOLOGIST'S VIEW OF
UX design
"I take research and knowledge about the brain, the visual system, memory, and motivation and extrapolate UX design principles from that."
by Susan Weinschenk
04
People are Social
People will always try to use technology to be social. Synchronous behavior bonds them together.
05
Attention
People pay attention to anything that is different or novel. Bright colors, large fonts, beeps, and tones will capture attention.
vs
06
Unconscious Processing
Most mental processing occurs unconsciously, small action will later commit to a larger action.
Join us now! Subscribe
07
Visual System
Use grouping. Things that are close together are believed to "go" together.
vs
Piktochart
For more information about creating your own visual story, please visit us at www.piktochart.com
Resources taken from
UX MAGAZINE


Search 4G 04:14 86%
SCMN.VX
460.50
23.85B
RMD
100.84
14.45B
GOOG Alphabet Inc.
1'204.62 838.7B
At Close
1'203.73 838.7B
After Hours
1D 1W 1M 3M 6M 1Y 2Y
1'214
1'209
1'204
1'199
5 8 9 10 11
Open 1'203.96
High 1'207.93
Low 1'200.41
Vol 710.2K
P/E 27.56
Mkt Cap 838.7B
52W H
52W L
Avg Vol
Reuters
U.S. Senator Warner eyes social media
YAHOO!
Market Closed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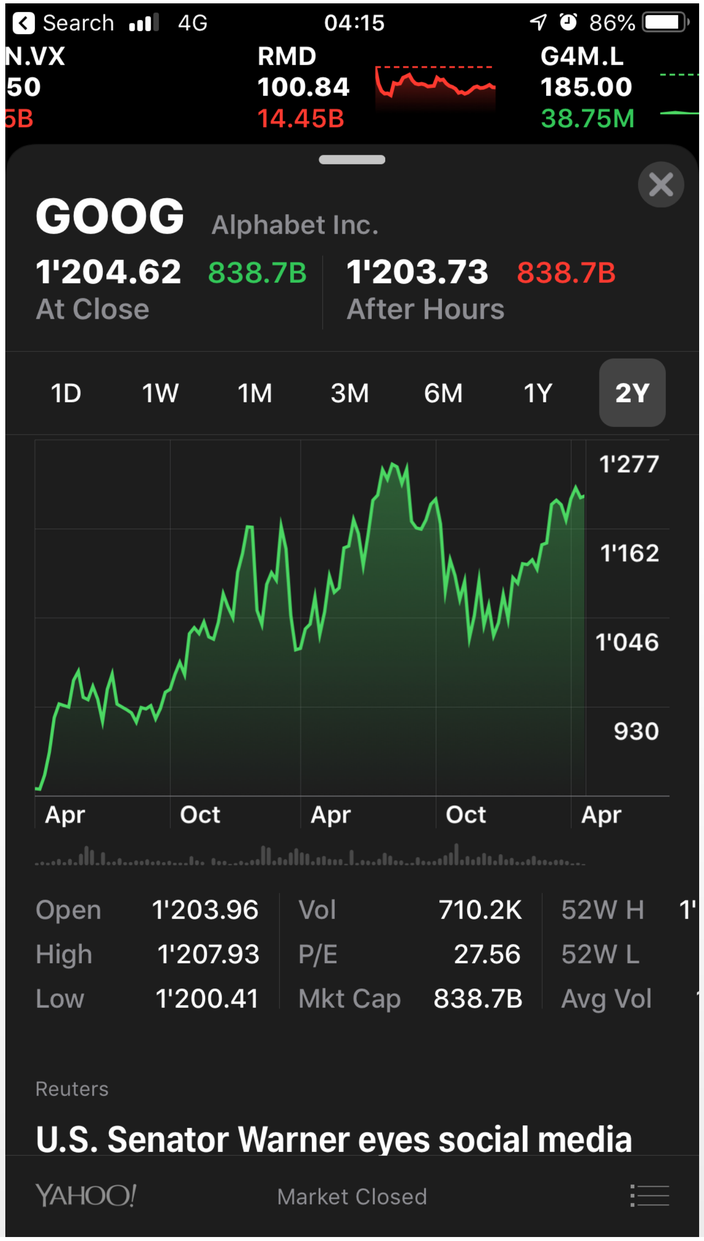
Search 4G 04:15 86%
N.VX
50
5B
RMD
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14.45B
G4M.L
185.00
38.75M
GOOG
Alphabet Inc.
1'204.62
838.7B
At Close
1'203.73
838.7B
After Hours
1D 1W 1M 3M 6M 1Y 2Y
1'277
1'162
1'046
930
Apr Oct Apr Oct Apr
Open 1'203.96
High 1'207.93
Low 1'200.41
Vol 710.2K
P/E 27.56
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52W H 1'
52W L
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Reuters
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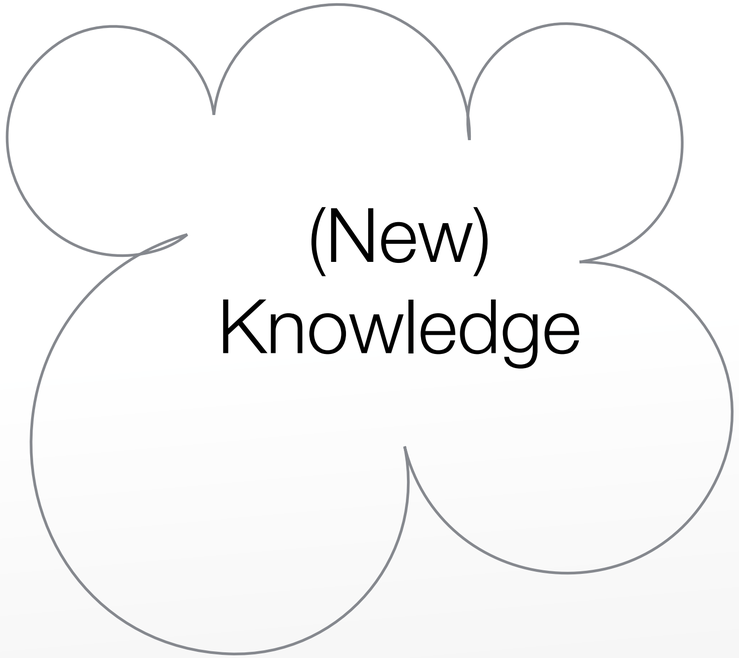
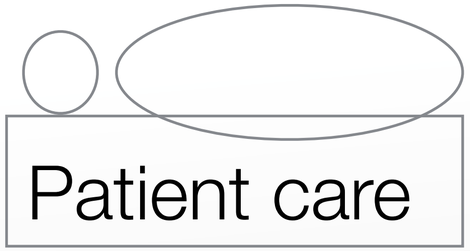
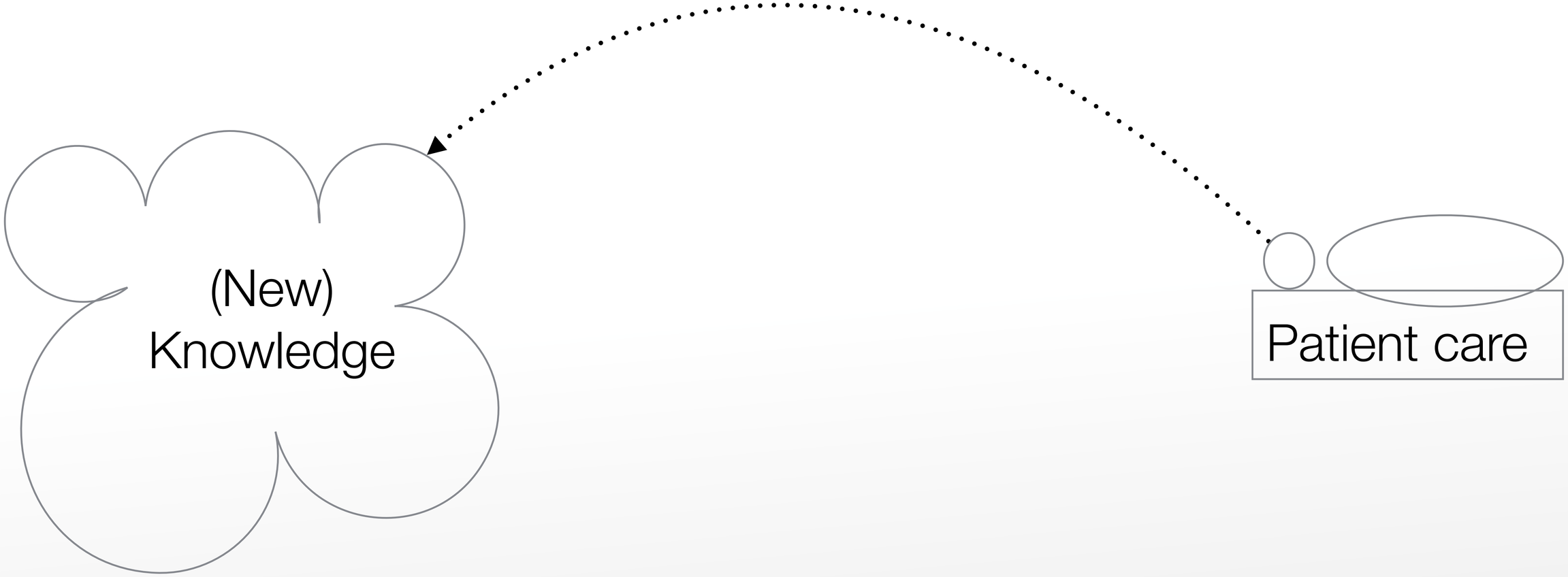
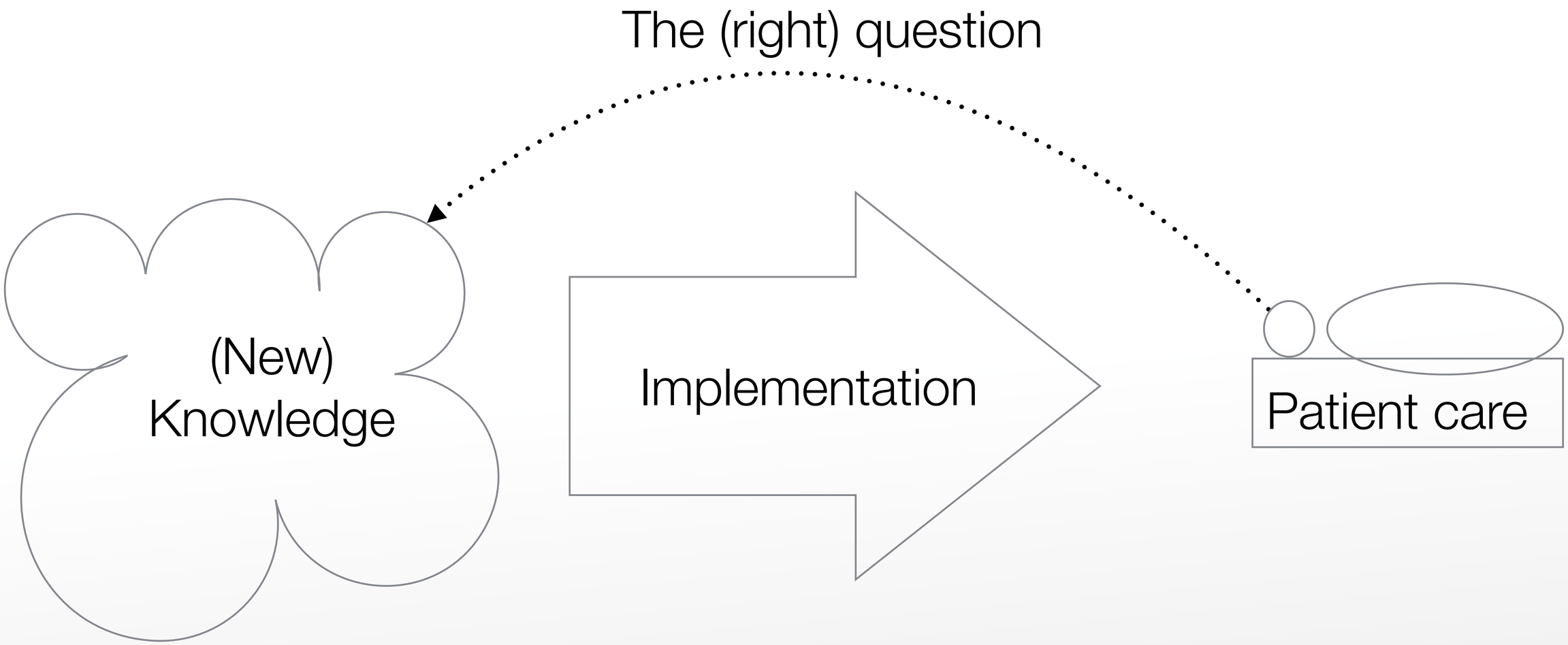
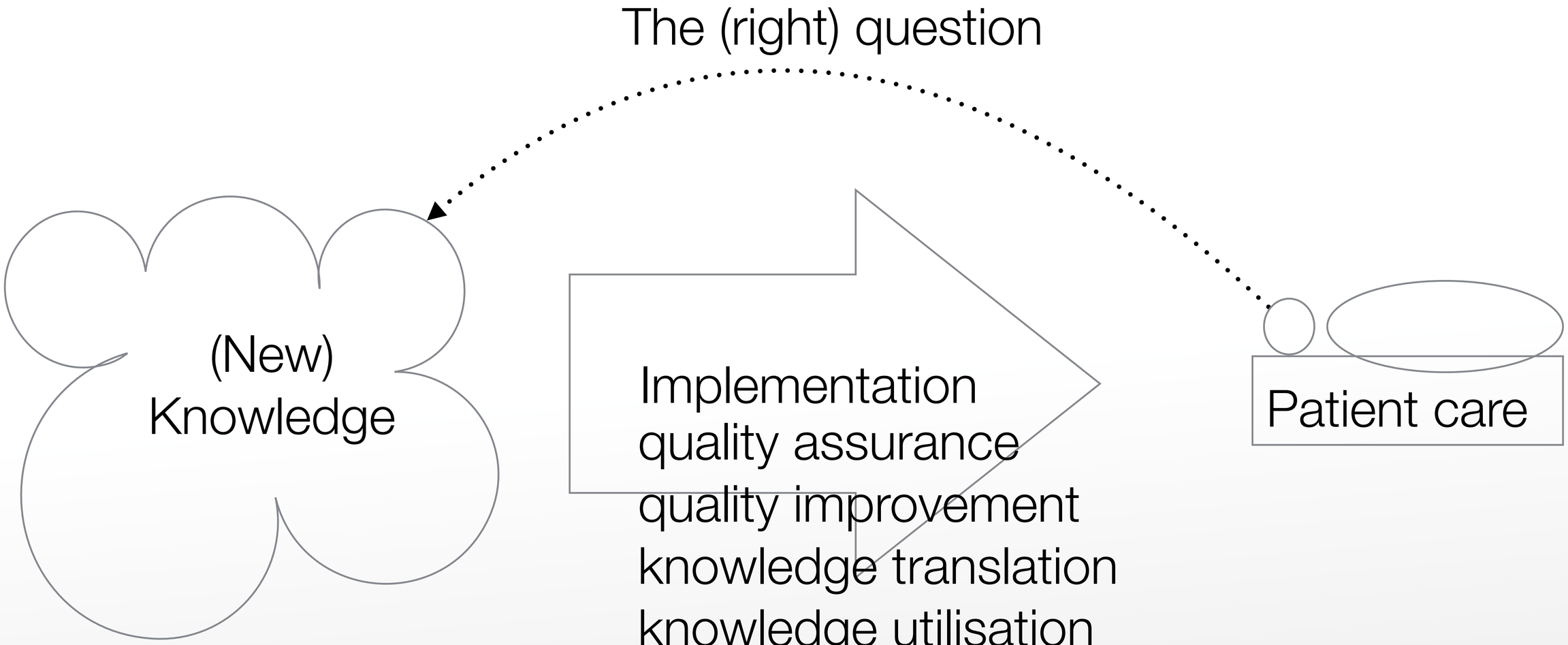

(New)
Knowledge

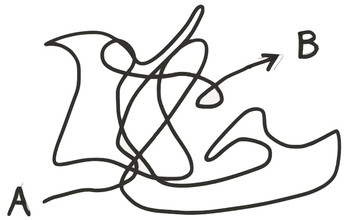

Patient care

The (right) question

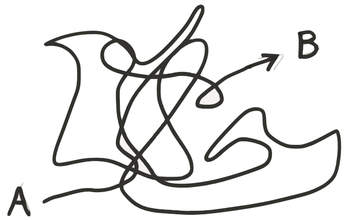



The (right) question
(New)
Knowledge
Implementation
Patient care


The (right) question
(New)
Knowledge
Implementation
quality assurance
quality improvement
knowledge translation
knowledge utilisation
knowledge transfer and exchange
innovation diffusion
research utilisation
evidence-informed policy
Patient care

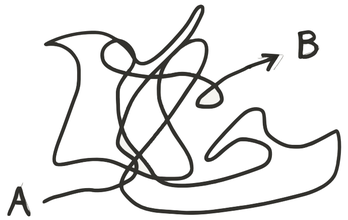


Implementation

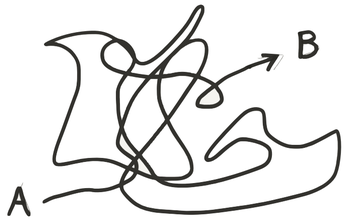


Adoption >> Implementation

Adoption >> Implementation

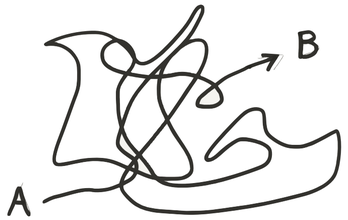


Sustainability?



Sustainability?

Adoption >> Implementation >> Institutionalisation



Sustainability?

Adoption >> Implementation >> Institutionalisation >> Explementation

Erfolgreich und nachhaltig implementieren?

Implementation Science

“Wir können uns Naivität nicht mehr leisten.”

AIMD framework

A - Aims (Warum?)
I - Ingredients (Was?)
M - Mechanism (Wie wirkt es?)
D - Delivery (Wie wird es implementiert?)

Bragge P, Grimshaw JM, Lokker C, Colquhoun H, AIMD Writing/Working Group AIMD - a validated, simplified framework of interventions to promote and integrate evidence into health practices, systems, and policies. BMC Med Res Methodol 2017;17(1):38. Doi: 10.1186/s12874-017-0314-8.

i-PARISH framework

Promoting Action on Research Implementation in Health Services

$$SI = Fac^{n} (I + R + C)$$

Erfolgreiche Intervention = Facilitation (Innovation + Personen + Kontext)

Harvey G, Kitson A PARIHS revisited: from heuristic to integrated framework for the successful implementation of knowledge into practice. **Implement Sci 2016;11(1):33.** Doi: 10.1186/s13012-016-0398-2.

hugo.sax@usz.ch

Consolidated Framework for Implementation Research | **CFIR**

Damschroder LJ, et al. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. **Implement Sci 2009;4:50.**

Conceptual Model for Considering the Determinants of Diffusion, Dissemination, and Implementation of Innovations in Health Service Delivery and Organization | Greenhalg 2004

Conceptual Model for Implementation Effectiveness | Klein 1996

Dimensions of Strategic Change | Pettigrew 1992

Theory-based Taxonomy for Implementation | Leeman 2007

PARiHS Framework: Promoting Action on Research Implementation in Health Services | Kitson 2002

Ottawa Model of Research Use | Graham 2004

Conceptual Framework for Transferring Research to Practice | 2007

Diagnositic/Needs Assessment | Kochevar 2006

Stetler Model of Research Utilization | Stetler 2001

Technology Implementation Process Model | | Edmondson 2001

Replicating Effective Programs Framework | 2007

Organizational Transformation Model | VanDeusen Lukas 2007

Implementation of Change: A Model | Grol 2007

Framework of Dissemination in Health Services Intervention Research | Mendel 2008

Conceptual Framework for Implementation of Defined Practices and Programs | Fixsen 2005

Will it Work Here? A Decision-maker's Guide Adopting Innovations | Brach 2008

Availability, Responsiveness and Continuity: An Organizational and Community Intervention Model | Glisson 2005

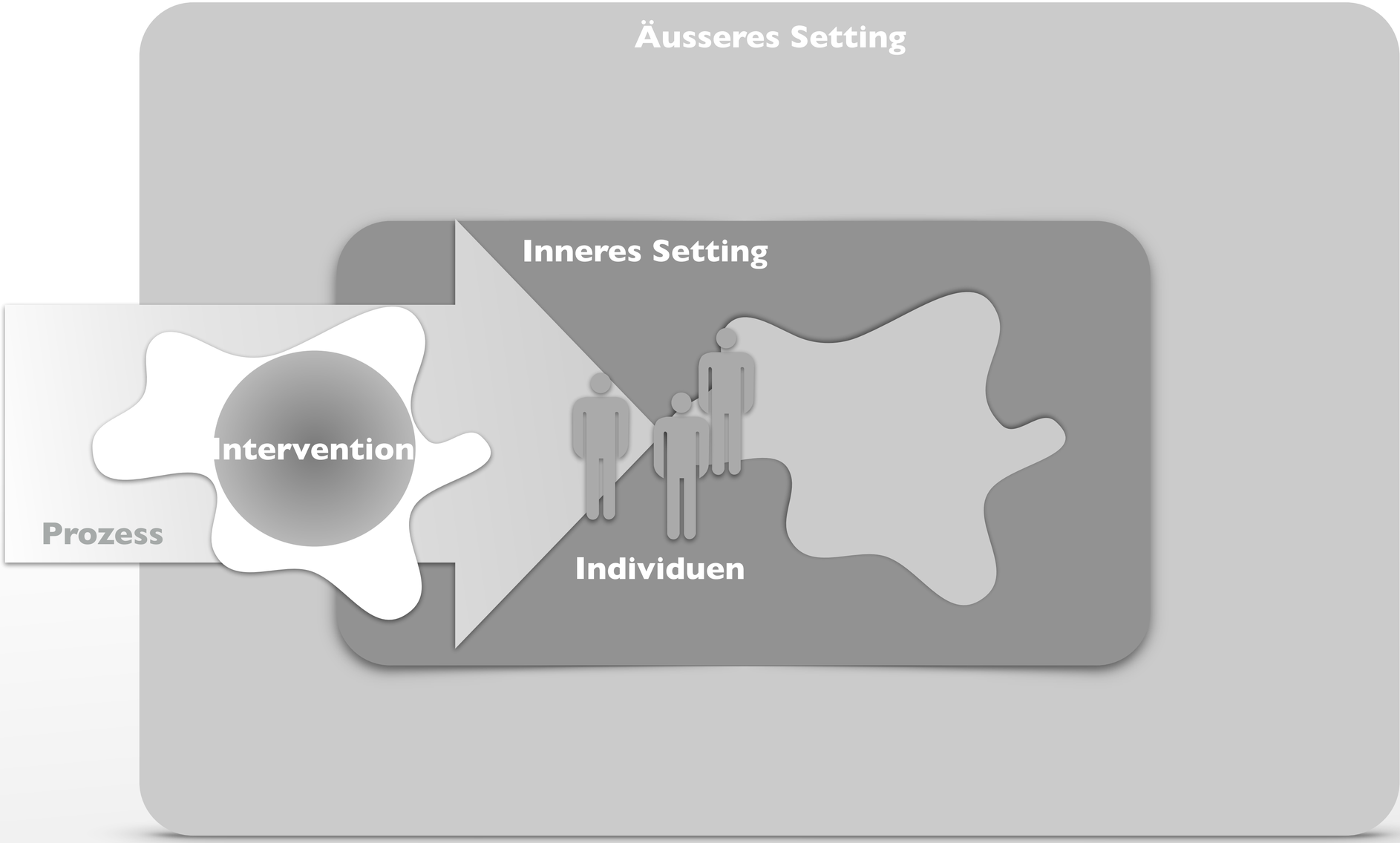
A Practical, Robust Implementation and Sustainability Model (PRISM) | Feldstein 2008

Multi-level Conceptual Framework of Organizational Innovation Adoption | Frambach 2001

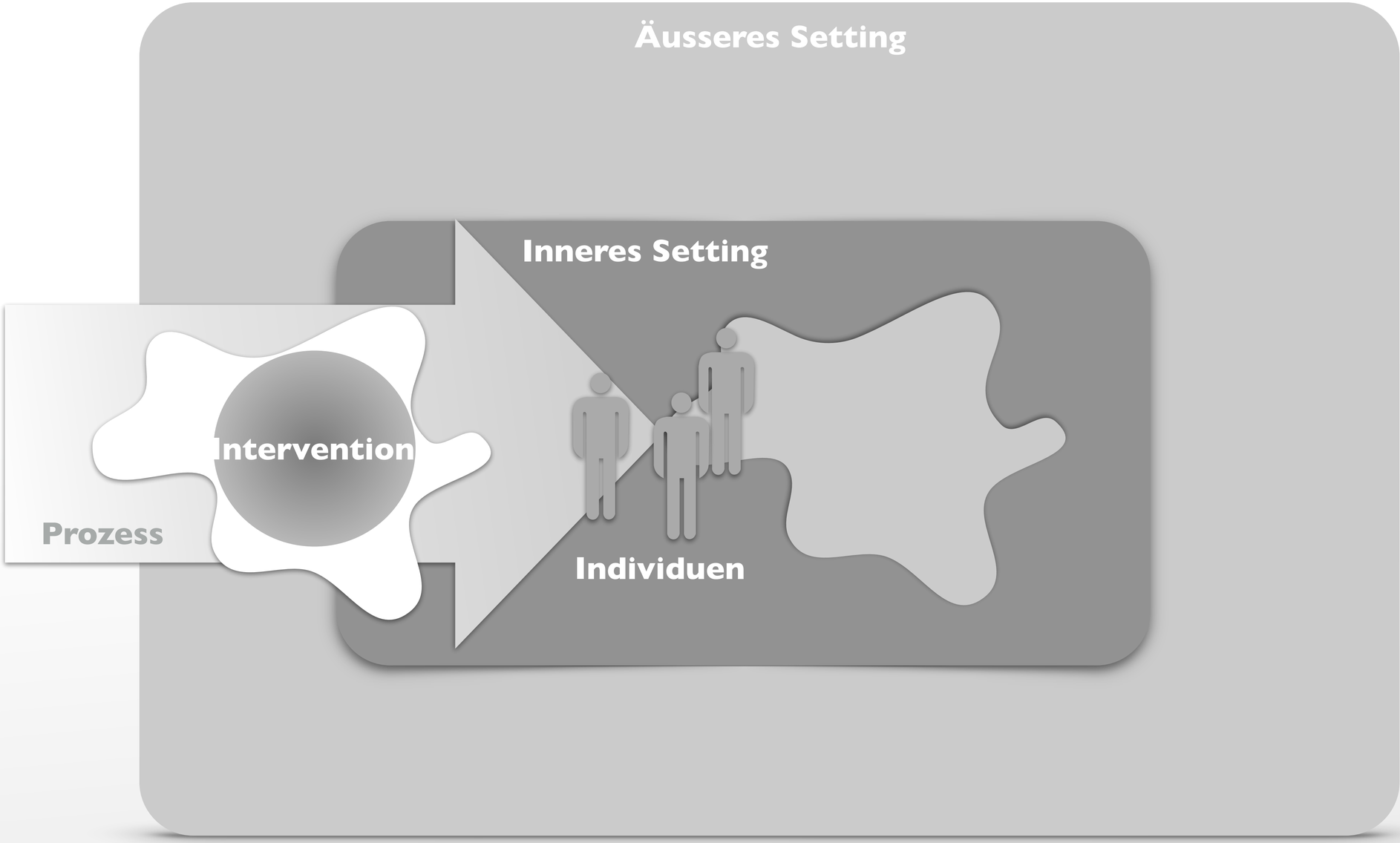
19 frameworks

>> constructs

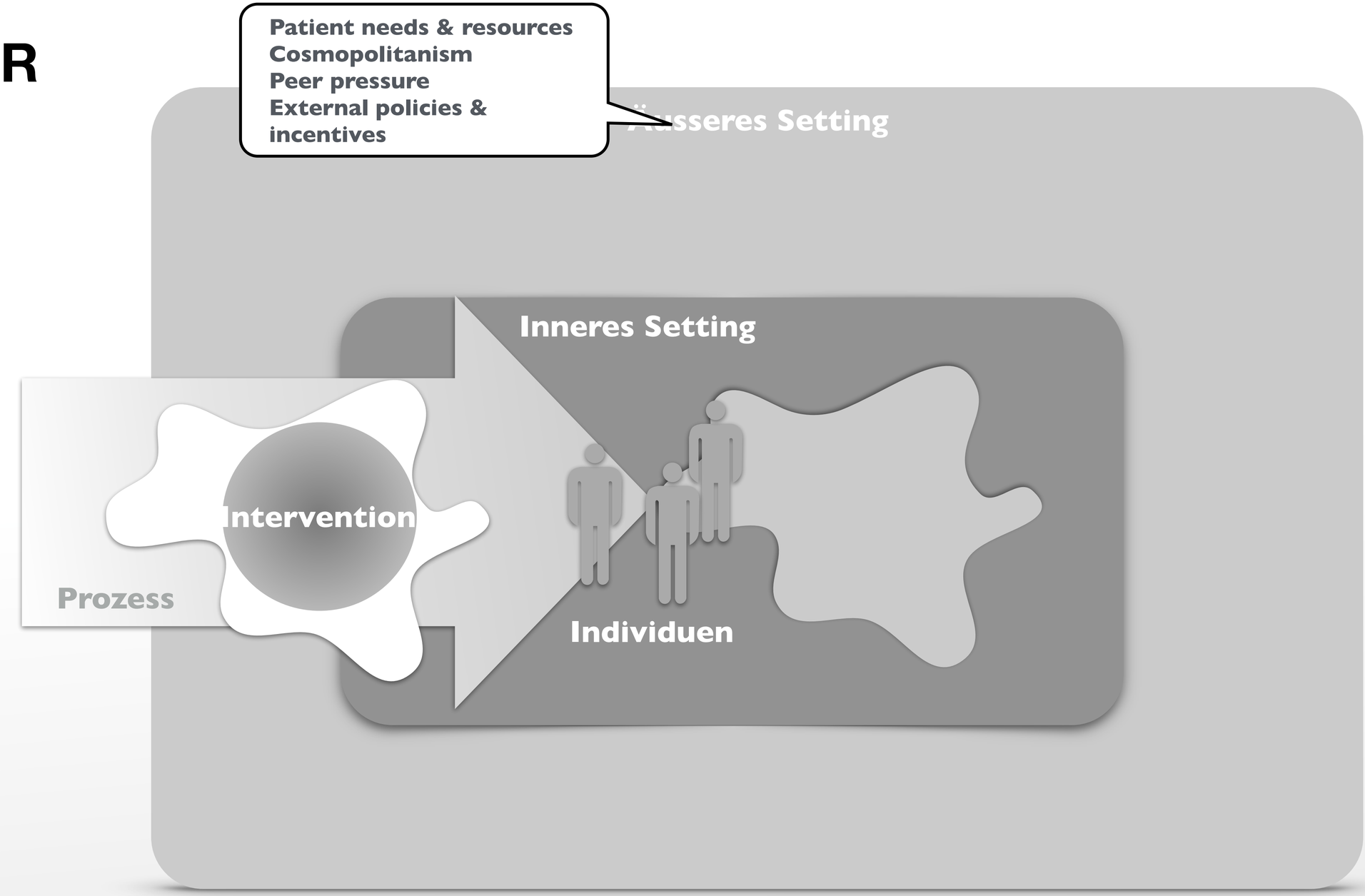
CFIR


Äusseres Setting
Inneres Setting
Intervention
Prozess
Individuen

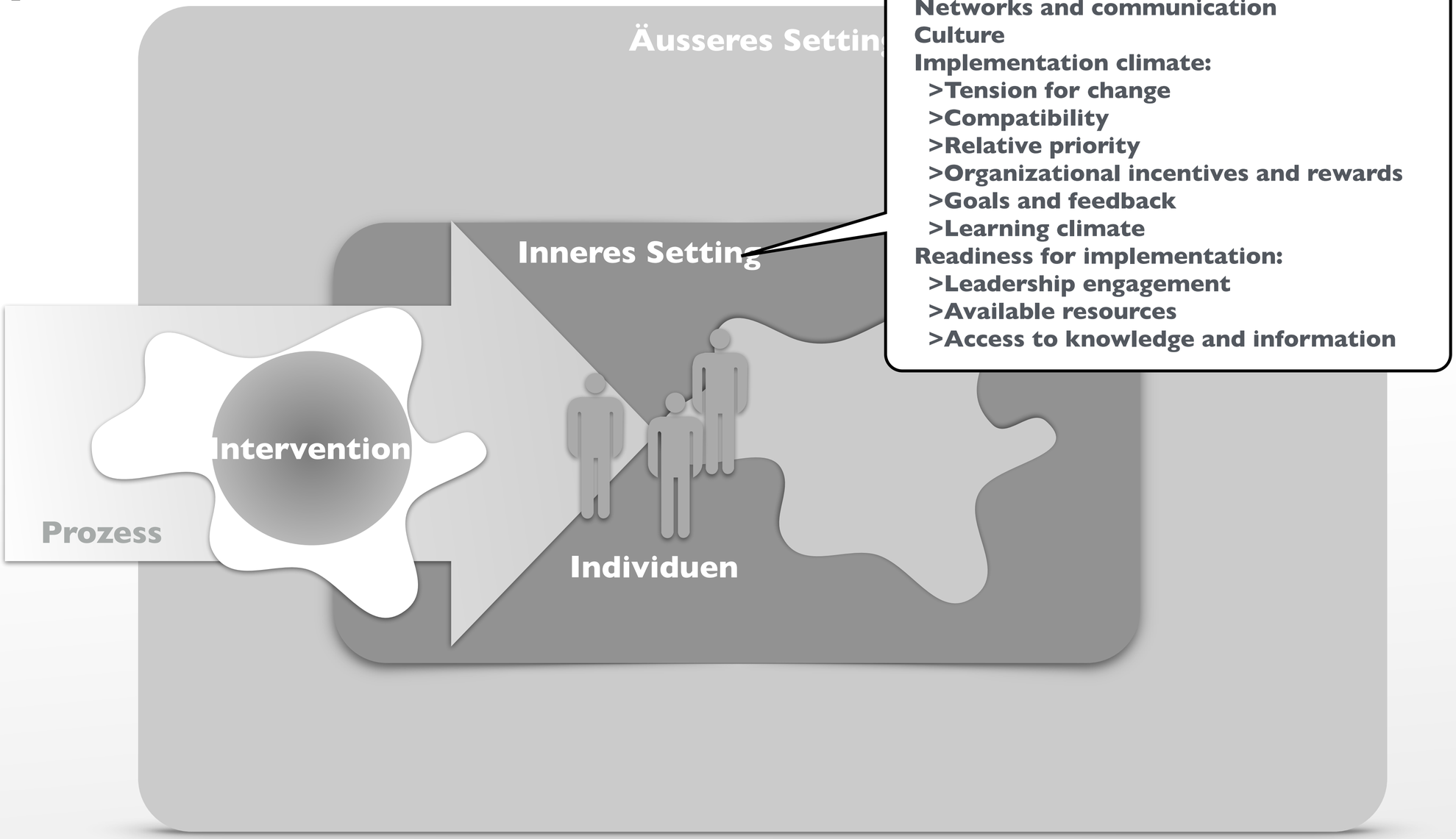
CFIR


Äusseres Setting
Inneres Setting
Intervention
Prozess
Individuen

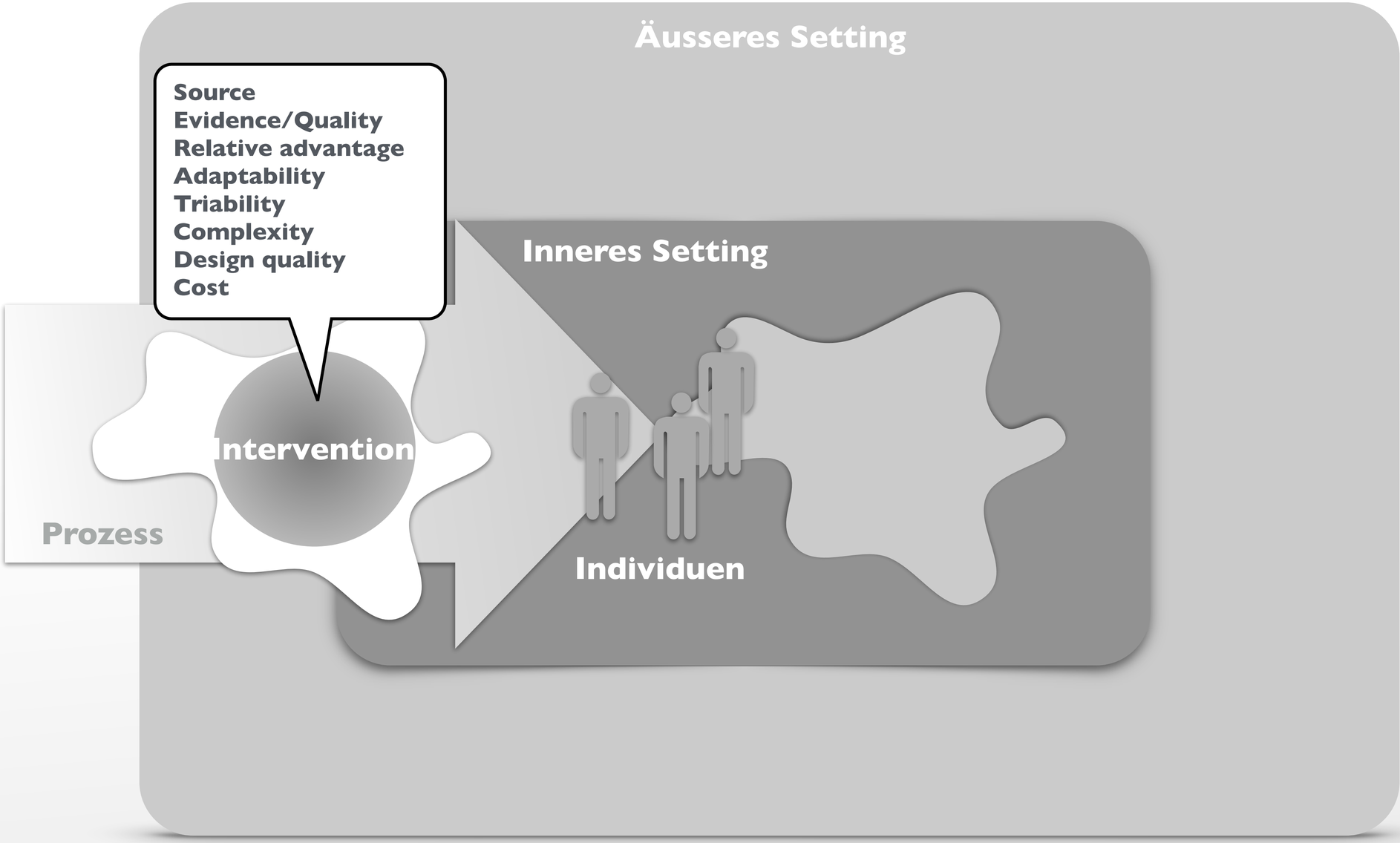
CFIR


Patient needs & resources
Cosmopolitanism
Peer pressure
External policies & incentives
Äusseres Setting
Inneres Setting
Intervention
Prozess
Individuen

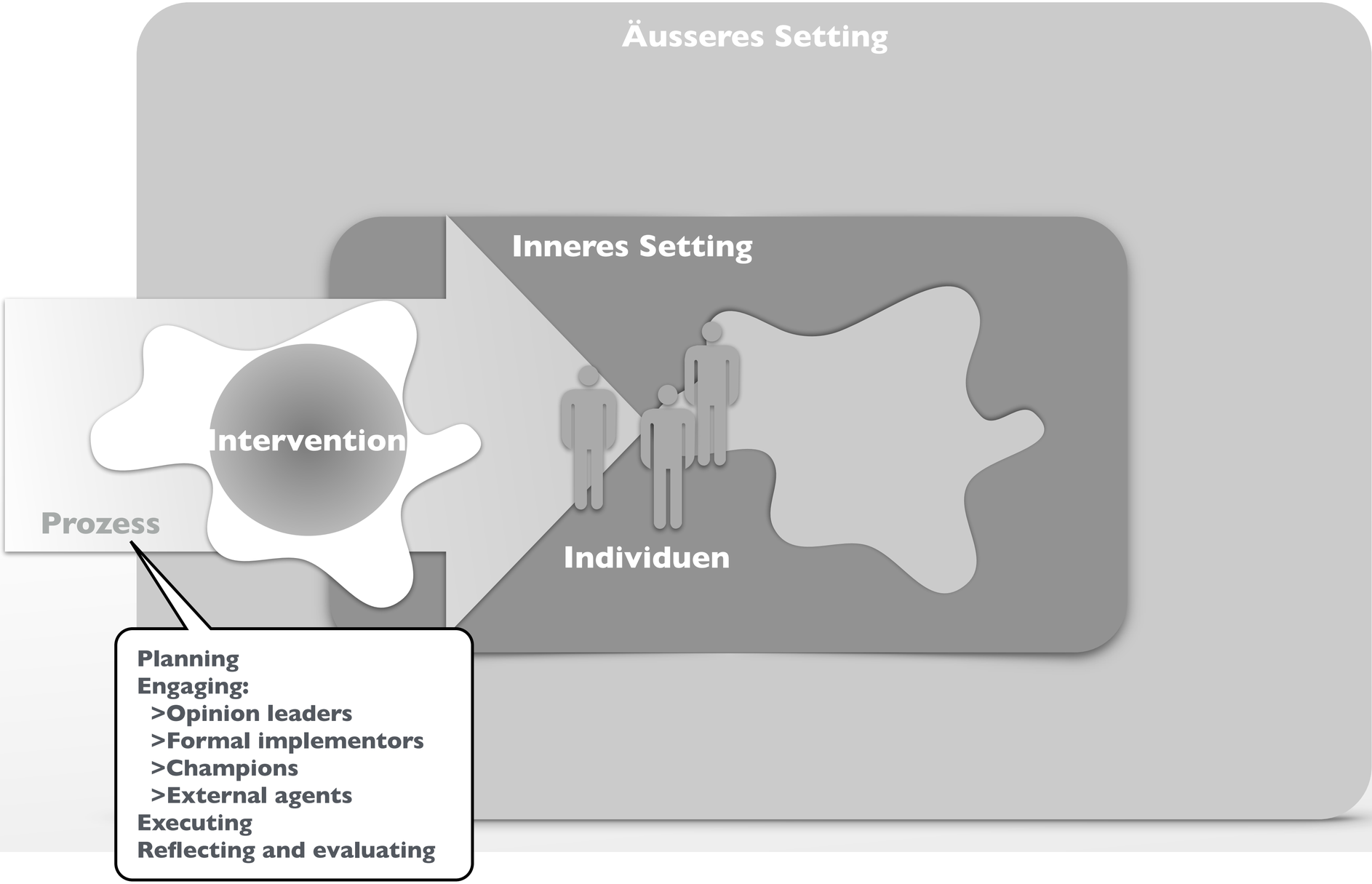
CFIR


Äusseres Setting
Inneres Setting
Intervention
Prozess
Individuen
Structural characteristics
Networks and communication
Culture
Implementation climate:
>Tension for change
>Compatibility
>Relative priority
>Organizational incentives and rewards
>Goals and feedback
>Learning climate
Readiness for implementation:
>Leadership engagement
>Available resources
>Access to knowledge and information

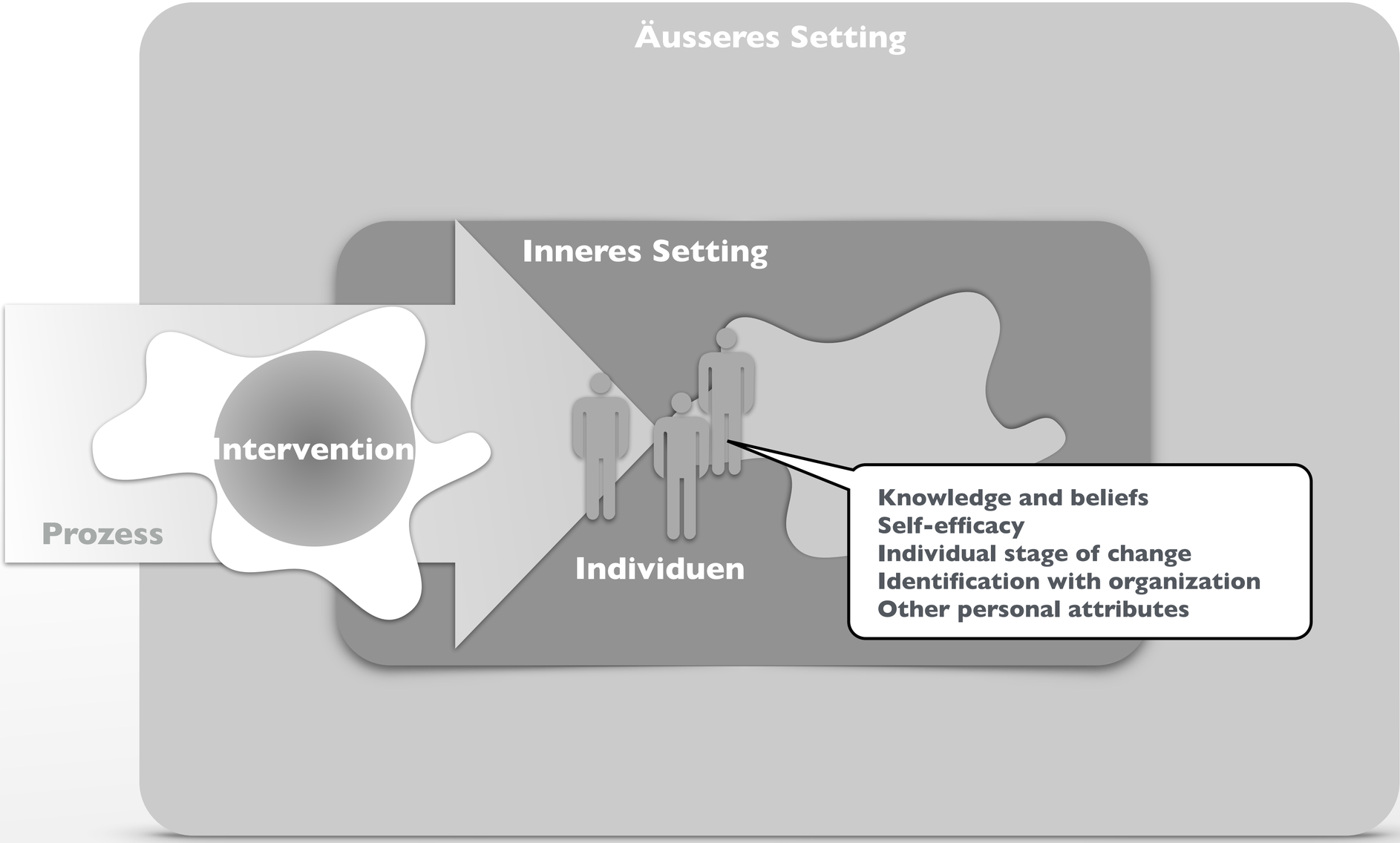
CFIR

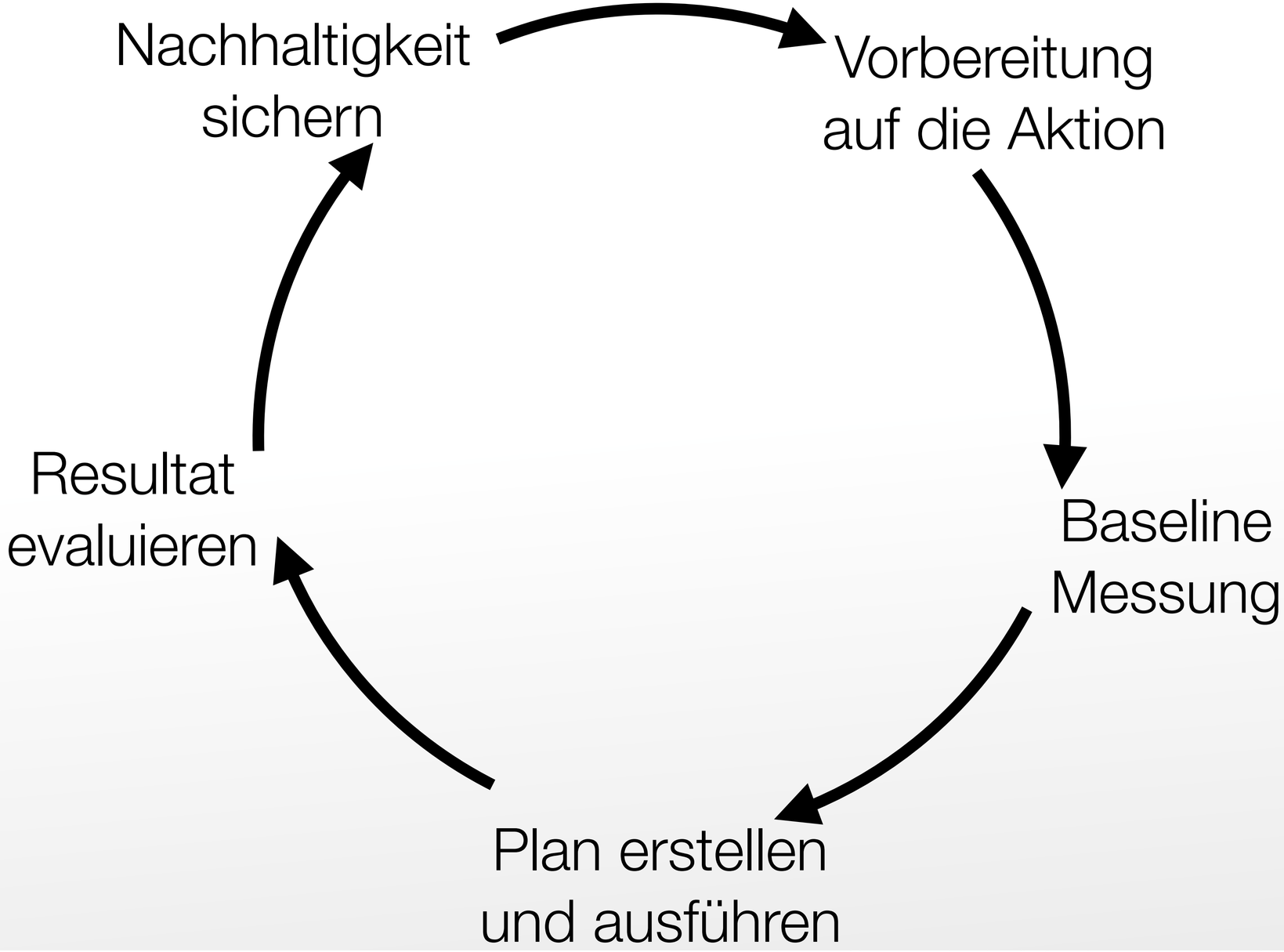

Äusseres Setting
Source
Evidence/Quality
Relative advantage
Adaptability
Triability
Complexity
Design quality
Cost
Inneres Setting
Intervention
Prozess
Individuen

CFIR


Äusseres Setting
Inneres Setting
Intervention
Prozess
Individuen
Planning
Engaging:
>Opinion leaders
>Formal implementors
>Champions
>External agents
Executing
Reflecting and evaluating

CFIR


Äusseres Setting
Inneres Setting
Intervention
Prozess
Individuen
Knowledge and beliefs
Self-efficacy
Individual stage of change
Identification with organization
Other personal attributes



https://www.who.int/infection-prevention/publications/core-components/en/

Multimodale Strategie

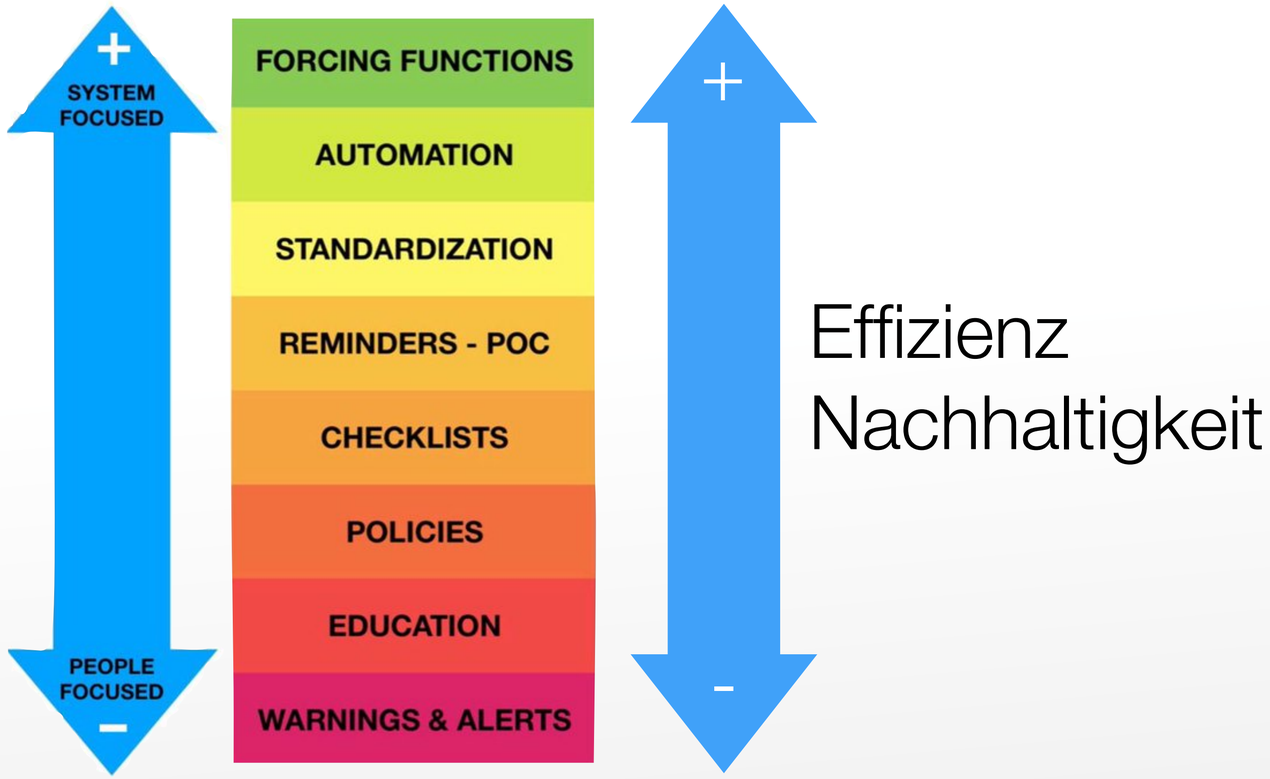
Leadership / Kultur

User-centered Infrastruktur- und Prozess-Design

Erinnerungshilfen

Training

Monitoring und Feedback



Cafazzo JA, St-Cyr O. From discovery to design: the evolution of human factors in healthcare. **Healthcare Quarterly (Toronto, Ont) 2012;15 Spec No:24–9.**

ORIGINAL RESEARCH

Implementing infection prevention practices across European hospitals: an in-depth qualitative assessment

Lauren Clack,[1,2] Walter Zingg,[2] Sanjay Saint,[3,4] Alejandra Casillas,[5] Sylvie Touveneau,[2] Fabricio da Liberdade Jantarada,[2] Ursina Willi,[1] Tjallie van der Kooi,[6] Laura J Damschroder,[3] Jane H Forman,[3] Molly Harrod,[3] Sarah Krein,[3,4] Didier Pittet,[2] Hugo Sax,[1,2] PROHIBIT Consortium

Implementation Agendas
Resources
Boundary-spanning

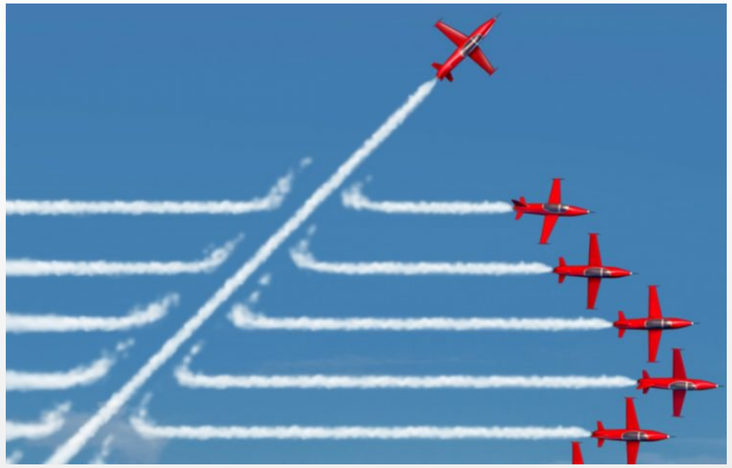
Clack, L., Zingg, W., Saint, S., Casillas, A., Touveneau, S., da Liberdade Jantarada, F., et al. (2018). Implementing infection prevention practices across European hospitals: an in-depth qualitative assessment. BMJ Quality & Safety, 27(10), 771–780. http://doi.org/10.1136/bmjqs-2017-007675

Implementation Archetypes

Classics

Steered Ship

Disrupted



Surfers

hugo.sax@usz.ch

Die 5% Story

Meine persönlichen Tipps

- ✓ Setze (gewagte und SMART) Ziele
- ✓ Sichere zuerst die nötigen Ressourcen
- ✓ Identifiziere das Problem vor Ort
- ✓ Finde sympathische, charismatische Leader
- ✓ Mach Lärm
- ✓ Lasse Gruppen sich gegenseitig sehen
- ✓ Favorisiere Systemlösungen vs. Menschenlösungen
- ✓ Scheitere früh und oft
- ✓ Habe viel Geduld

Ressourcen

Damschroder, Implement Sci 2009: CFIR framework

Harvey, Implement Sci 2016; i.PARIHS framework

Flottrop, Implement Sci 2013: Checklist for quality improvement

Gurses, Joint Commission J 2009; BIM tool

WHO Core components:https://www.who.int/infection-prevention/publications/core-components/en/

Holden, Ergonomics 2013; SEIPS 2.0

Clack, BMJ Q&S 2018; In-Depth

Sax, J Hosp Infect 2016; Mental models

Overtveit, BMJ Q&S 2011; Context

Cafazzo, Healthcare Quaterly 2012; Implementation hierarchy