

Workshop: Amenability of US Healthcare to Blockchain-Enabled Self-Sovereign Identity (SSI)

Participant booklet

Thursday, August 10, 2023

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Booklet table of content



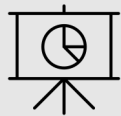
Preliminary workshop agenda



Workshop participants



Research details



Pre-workshop research results



Additional workshop information

Preliminary agenda and housekeeping

When	What	
10:00 am - 10:15 am EDT 04:00 pm - 04:15 pm CET	Welcome message Introduction to the research study	
10:15 am - 10:40 am EDT 04:15 pm - 04:40 pm CET	Topic: Blockchain-enabled SSI properties Activity: Word jam	Priming
10:40 am - 10:55 am EDT 04:40 pm - 04:55 pm CET	Topic: Pre-workshop expert interviews and survey results Activity: Open discussion	
10:55 am - 11:00 am EDT 04:55 pm - 05:00 pm CET	Break (5 min)	
11:00 am - 12:00 pm EDT 05:00 pm - 06:00 pm CET	Topic: Exploring assessment framework components Activity: Card sorting	Designing I
12:00 pm - 12:05 pm EDT 06:00 pm - 06:05 pm CET	Break (5 min)	
12:05 pm - 12:45 pm EDT 06:05 pm - 06:45 pm CET	Topic: Converging on assessment framework components Activity: Dot voting	Designing II
12:45 pm - 01:00 pm EDT 06:45 pm - 07:00 pm CET	Reflection & closing	Debriefing

Housekeeping

- The session will be recorded
- I have to keep track of time and might have to move us forward – thus, I do not do this because I am rude but because I have to in the interest of time

About thing.online

- On the left side, if you pull out the sidebar, you can see the agenda items (thing.online calls them *flows*)
- If you move your avatar close to another avatar until a circle appears, you are having a private conversation with that person, meaning the rest cannot hear it. If you want to leave the private conversation, just move your avatars away from each other until the circle disappears
- If you run into an issue, just text me on WhatsApp (+ 49 15162809750) or send me a LinkedIn message, I am more likely to see that pop up on my phone than an email
- It only works with Google Chrome and on a desktop (no mobile unfortunately)

Workshop participants

Participants



Alexander Colgan
Head of Strategic Partnerships & Marketing,
LedgerDomain
alex.colgan@ledgerdomain.com
<https://www.linkedin.com/in/alexcolgan/>

Location

Nova Scotia, Canada

Background

Started working as a writer for Leap Motion, a hand-tracking start-up that was more of an AI start-up dressed up like a hand-tracking start-up

Did some consulting work

Is currently Head of Strategic Partnerships & Marketing at LedgerDomain – a decentralized identity company for the pharmaceutical supply chain, and thus, DSCSA (Drug Supply Chain Security Act) insider

Participants



Daniel Fritz

Executive Director, PharmaLedger Association

daniel@pharmaledger.org

<https://www.linkedin.com/in/dafritz/>

Location

Basel, Switzerland

Background

Held various global supply chain positions at Novartis, remaining loyal to the firm for over 20 years

Transferred to PharmaLedger, a consortium that researches the value of blockchain technology for the healthcare industry, as Industry Project Leader, ensuring successful coordination and collaboration between the consortium members

Moved up to the position of Executive Director at PharmaLedger Association – a not-for-profit Swiss Association, to enable and foster a Digital Trust Ecosystem (DTE) in healthcare

Participants



Debbie Bucci
Chief Data Officer, Equideum Health
debbie.bucci@equideum.com
<https://www.linkedin.com/in/debbie-bucci/>

Location

Bethesda, United States

Background

Is a working musician and provides therapeutic music sessions

Worked for the federal government for the department of Health & Human Services through her engagement at and NIH and ONC.

She recognized the potential of decentralization and identity early on and became an active participant in the digital identity community. She has been working on these topics at the National Institutes of Health (NIH) and the National Institute of Standards and Technology (NIST), as well as at the Internet Identity Workshop (IIW). Furthermore, she is the brain behind the ONC "Blockchain in Healthcare" whitepaper contest.

She identity journey continues at Equideum Health.

Participants



Drummond Reed
Director, Trust Services, Gen Digital
drummond.reed@gendigital.com
<https://www.linkedin.com/in/drummondreed/>

Location	Seattle, United States
Background	<p>Has spent a quarter-century in Internet identity, security, privacy, and trust frameworks</p> <p>Served as Director, Trust Services at Avast after the acquisition of Evernym where he was the Chief Trust Officer</p> <p>He is a co-author of the book <i>Self-Sovereign Identity</i> (Manning Publications, 2021), co-editor of the W3C Decentralized Identifiers (DID) 1.0 specification, and co-author of the Respect Trust Framework, which was honored with the Privacy Award at the 2011 European Identity Conference</p> <p>Currently he is Director, Trust Services at GenDigital – a company that unites trusted consumer brands (Norton, Avast, LifeLock and Avria) under one company</p>

Participants



Evin McMullen

Co-founder and CEO, Disco.xyz

evin@disco.xyz

<https://www.linkedin.com/in/evin-mcmullen/>

Location

New York City, United States

Background

She has been interested in technology since a young age. Growing up during the Napster era, she was fascinated by file sharing and the intellectual property issues it raised

Evin proceeded to pursue a bachelor's degree in information systems at Yale

Excited about the promises of web3 she got together with a few friends and founded Disco to bring self-sovereign identity to the Metaverse

Participants



Kaliya Young
Identity Woman
kaliya@identitywoman.net
<https://www.linkedin.com/in/kaliya/>

Location

San Francisco Bay Area, United States

Background

Kaliya (also known as "The Identity Woman") is a prominent figure and influential voice in the field of digital identity and SSI

She co-founded IIW, which convenes twice a year to discuss the Internet's missing identity layer with like-minded individuals

Kaliya has published a significant body of work, including blog posts, articles, and her book titled *The Domains of Identity* (2020)

She continues taking the lead in steering the conversation towards the development of decentralized identity

Participants



Philippe Page

Chair of the Board of Trustees, The Human Colossus Foundation

<https://www.linkedin.com/in/philippe-page-948727109/>

Location

Geneva, Switzerland

Background

He obtained his Ph.D. in physics at a time when the HTTP protocol was just starting to find its first users

Since then, he has worked in various companies and industries, such as consulting and banking, always in business and transformation roles

Upon the emergence of blockchain technology, he developed an interest in the Sovrin Foundation and became involved

As part of his current endeavor, The Human Colossus Foundation, which aims to establish a dynamic data economy by utilizing innovative technologies that ensure data verifiability, immutability, and trusted consent, he devotes considerable time to research and has published numerous papers. His most recent one is titled *Dynamic Data Economy: An alternative model of digital transformation*

Participants



Stephan Baur

Principle IT Architect and Technology Strategist, Kaiser
Permanente IT
stephan.x.baur@kp.org
<https://www.linkedin.com/in/stephanbaur/>

Location

San Francisco, United States

Background

He has extensive experience in the healthcare sector, having worked at Kaiser Permanente for over a decade, attracted by the sector’s purpose.

Stephan began his career as a young software engineer for a telecom company in Europe and was involved in the initial stages of transforming existing telecom networks to the Internet

The dotcom boom brought him to San Francisco, where he worked as a consultant for a while

After transitioning into healthcare, he quickly focused on emerging technologies and has since built his reputation in the digital identity space by holding working sessions at IIW and attending other such events

Researcher



Sophia Goeppinger

Master student, University of St.Gallen | Exchange
Semester, Columbia Business School
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sgoeppinger23@gsb.columbia.edu
<https://www.linkedin.com/in/sophia-goeppinger/>

Location

New York City, United States

Background

She holds a bachelor's degree in International Management from ESCP Business School and currently pursues a master's degree in Strategy and International Management at the University of St. Gallen, Switzerland. As a part of the program, she joined Columbia Business School's MBA class

During an internship at Roche Pharma, she discovered her love for healthcare and has since made it her mission to be an enabler and driver of transformative impact at scale in the sector

She is a blockchain enthusiast since 2017. That enthusiasm has led her to learn about self-sovereign identity through various engaging discussions with her former Blockchain and Cryptocurrencies professor Omid Malekan.

Her master's thesis on blockchain-enabled SSI in US healthcare lets her merge her interest in both fields

Observers



Omid Malekan

Explainer-in-Chief | Adjunct Professor, Columbia Business School

om44@columbia.edu

<https://www.linkedin.com/in/omid-malekan/>

Location

New York City, United States

Background

In crypto as a hobbyist since 2013, professionally since 2017

He published two books: The Story of the Blockchain (2018) & Re-Architecting Trust (2022)

He has written for New York Times, FT, Harvard Business Review, and Coindesk

He worked at Citi Ventures and consulted companies and industry groups

He teaches at Columbia Business School, where he passionately imparts knowledge through several cutting-edge courses on blockchain and cryptocurrency. Through has led him to become one of Sophia's thesis mentors and supervisors

Observers



Alexander Meier

Research Associate, University of St.Gallen

alexander.meier@unisg.ch

<https://www.linkedin.com/in/alexander-meier-234142164/>

Location

St.Gallen, Switzerland

Background

He holds a master's degree in Management and Technology from the Technical University of Munich and pursued his Ph.D. in Philosophy at the University of St.Gallen

As a member of the Institute of Information Management at St.Gallen, he is highly enthusiastic about blockchain and is currently working on the topic of blockchain application in education with a focus on upskilling

In that capacity, he is assisting Sophia in her master's thesis

Research details

Methodology

Participatory action research study

Objective: Develop a framework for assessing the amenability (= suitability) of US healthcare system use cases to SSI

Unit of analyses: Use case, system

	Goals	Research Steps
Diagnosing	<ul style="list-style-type: none"> (i) Identification and (ii) definition of primary problems to successful deployment, meaning value-adding adoption and use, of administrative, technological innovations in the US healthcare system that share one or more characteristics with SSI to substantiate the need for an SSI amenability use-case assessment. (ii) Development of a theoretical problem statement based on theoretical foundations 	<ul style="list-style-type: none"> (i) Semi-structured expert interview study and coding (Gläser and Laudel, 2009) with representatives of <u>core</u> HC stakeholders: Providers, payers, payviders, federal agencies, health IT vendors, clinical data exchanges, academia, manufacturers, emerging technology companies, and cross-stakeholders (ii) Qualitative patient survey
Action Planning	<ul style="list-style-type: none"> (i) Development of amenability assessment model dimensions (i.e., a method) based on theoretical foundations (ii) Operationalization of the model and making it qualitatively testable (iii) Identification of implications for SSI endeavors in US healthcare (iv) Initial evaluation of the assessment model 	<ul style="list-style-type: none"> (i) Workshop with (HC) self-sovereign identity experts with a focus on SSI through verifiable credentials
Action Taking	Application of the amenability assessment model w/ HC stakeholders, evaluation of the main proposition(s), and recommendations for action	<ul style="list-style-type: none"> (i) Semi-structured interviews with HC stakeholders from diagnosing stage: Providers, payers, payviders, federal agencies, health IT vendors, clinical data exchanges, academia, manufacturers, emerging technology companies, and cross-stakeholders (Part 1)
Evaluation	Evaluation of outcomes of the action research interventions: <ul style="list-style-type: none"> (i) Check interview data for completeness and accuracy (ii) Clarification of whether the assessment model provides a solid basis to prepare the decision-making process as to whether and how to deploy HC SSI (iii) Final evaluation of whether HC SSI use cases can be implemented 	<ul style="list-style-type: none"> (i) Semi-structured review interviews with HC stakeholders from diagnosing stage: Providers, payers, payviders, federal agencies, health IT vendors, clinical data exchanges, academia, manufacturers, emerging technology companies, and cross-stakeholders (Part 2)
Specifying Learnings	Knowledge documentation and communication to stakeholders from (i) research and (ii) practice (i.e., core HC stakeholders and SSI community)	<ul style="list-style-type: none"> (i) This thesis (ii) Action research documentation (iii) Final assessment model presentation

We are here
now

Sources: Baskerville, R. (1999); Baskerville, R. & Wood-Harper, T. (1996); Stairway to heaven or highway to hell: A model for assessing CA use cases

Unit of analyses

1 System analysis

2 Use case

My thesis operates on two levels of unit of analysis, i.e., (1) looking at the **entire healthcare system** and not just individual actors in a vacuum, and (2) setting the scope purposefully at the **use-case level**

1 System analysis

- The research is purposefully set at a system level, looking at the entire healthcare system as a whole
- Rational:
 - “To understand an organized whole, we must know both the parts and the relations between them”¹.
 - One of blockchain-enabled SSI’s properties is strong, positive network effects

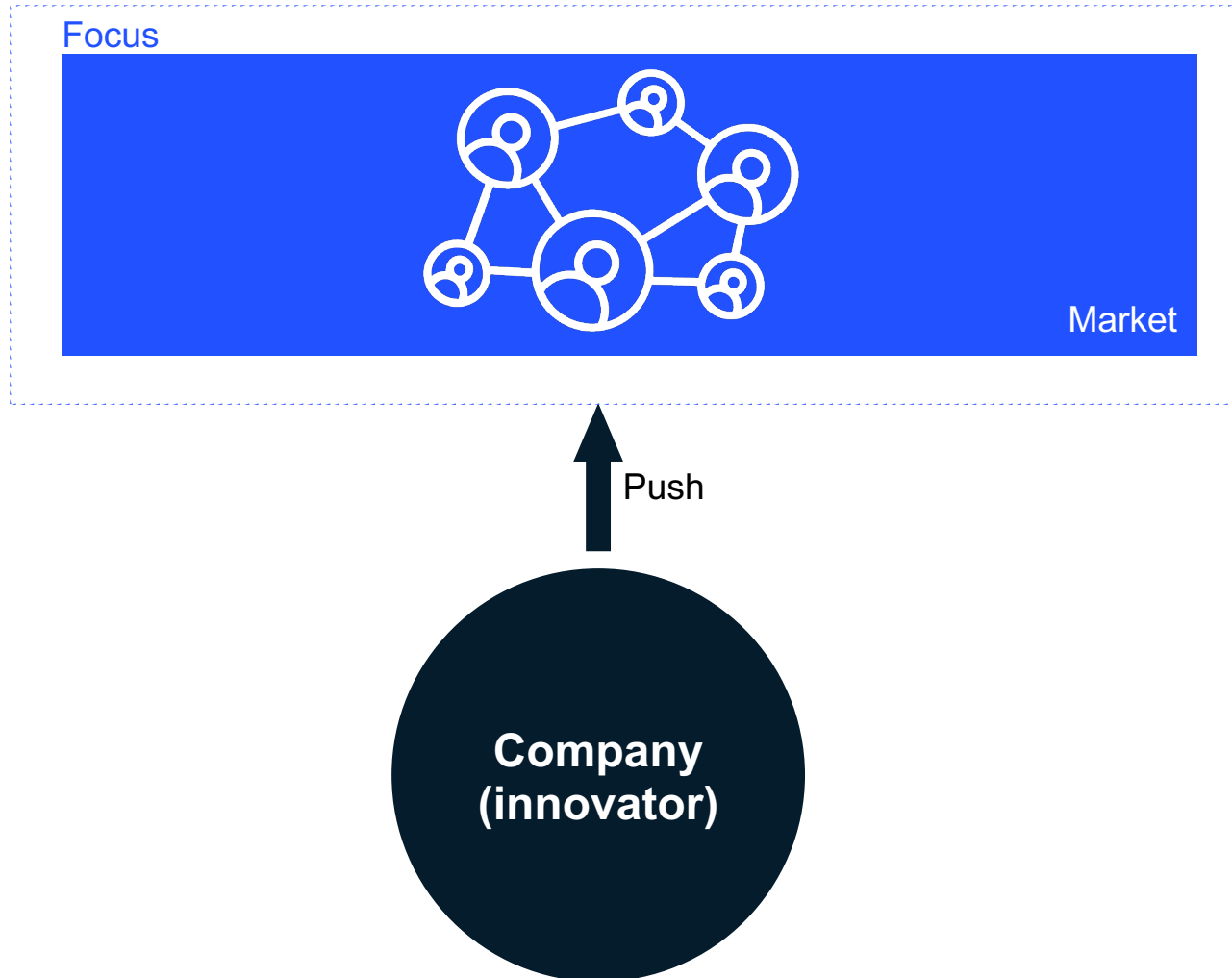
2 Use case

- Use cases can be broken down into a sequence of processes that again comprise several tasks and conditions that determine the task sequence^{2, 3}.
- Rational to drill down to a use case unit of analysis:
 - Provides boundaries and scope to make an intangible, potentially paradigm-shifting technology like SSI feel more structured
 - Federal agencies operate at the use case level for policies and mandates, and these are often key drivers for the successful deployment of technologies with characteristics similar to SSI (see pre-workshop research results below, slide 43)
 - Aids in identifying the chess pieces that play a role and play out the relative responsibilities of each

Sources: ¹Bertalanffy (1972, p. 411), ²Van Der Aalst et al. (2004), ³Goodhue and Thompson (1995)

The study focuses on the market circumstances of adoption and implementation, not the capabilities of the innovator

Study focus lens



It is certainly relevant that the company entering the market with a technology that it wants to see adopted and used has sufficient resources, skills, and resilience, but these aspects are beyond the scope of this study. Rather than that, this study **focuses** on the **market circumstances** that the technology is anticipated to encounter upon its introduction.

Establishing a common ground amidst interpretational variance

Definitions overview

Amenability

The likelihood of the **successful deployment** of blockchain-enabled SSI in the US healthcare system

Successful deployment

Value-adding adoption and use

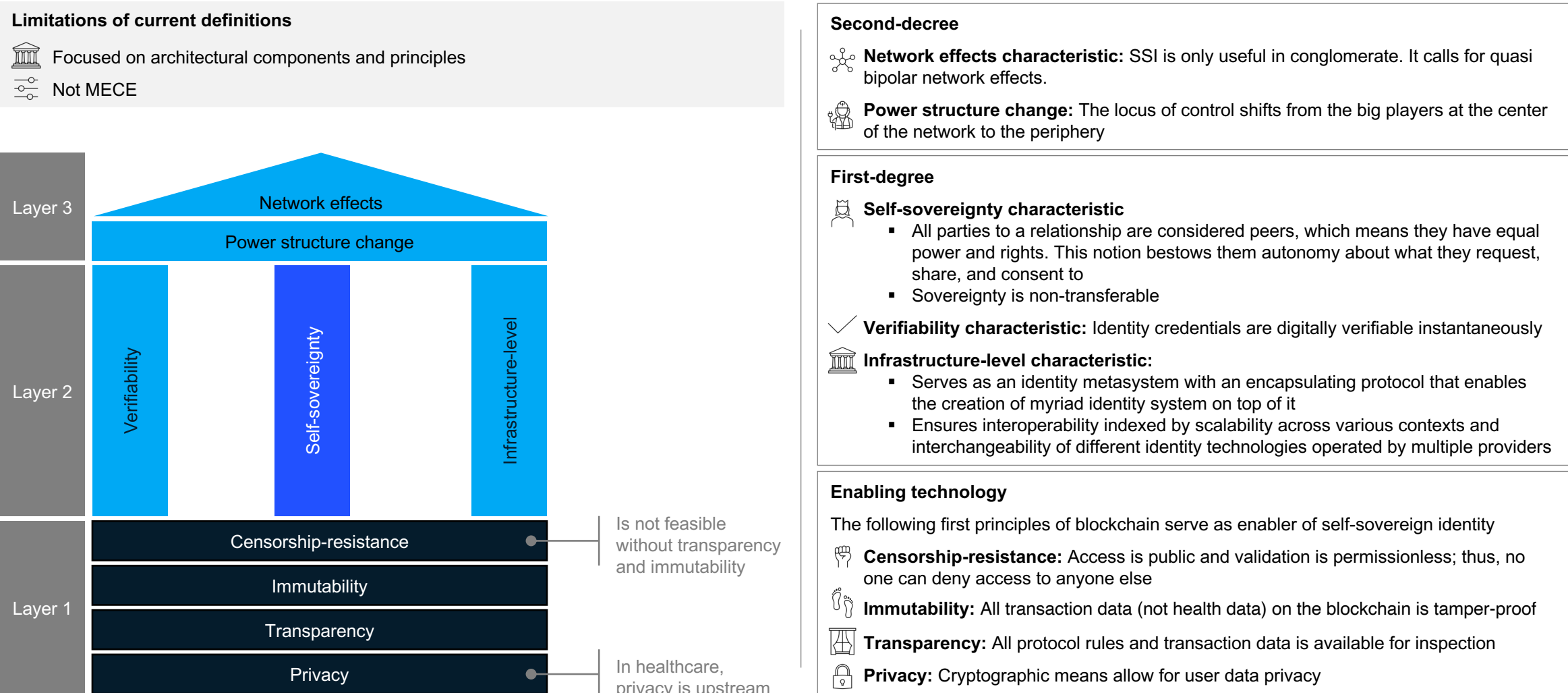
- **Value adding:** Realization of the true potential of the technology (i.e., using the technology to its full intended potential; this includes the notion of scalability)
- **Adoption:** All the information gathering, conceptualization, and planning for the adoption of an innovation leading up to the decision to adopt
- **Use:** All the events, actions, and decisions involved in putting the innovation into use

Unsuccessful deployment

Any deviation from a set **goal** with a set **timeline**, and a set **scope**

Characteristics of a blockchain-enabled identity metasystem

Defining blockchain-enabled SSI in the healthcare context



Pre-workshop research results

Expert interviews

Participants

Interview partners overview (1/3)


N = 15

Interview partner belonging to multiple stakeholder groups

	Stakeholder group	#	Interview partner code	Position	Duration
Diagnosis Stakeholder Expert Interviews	Providers	1	PV1_DI	MD (Cardiologist)	1h
		2	PV2_CDE3_DI	MD (Family physician)	1h
		3	PV3_ETC2_DI	MD (Emergency physician)	1h 30m
	Payers	4	PY1_A3_DI	Senior director	1h 30m
		5	PY2_DI	Director emerging technologies	1h 30m
	Payviders	6	PYV1_DI	Principal IT architect and technology strategist	1h 50m

Interview partners overview (2/3)

N = 15

 Interview partner belonging to multiple stakeholder groups

	Stakeholder group	#	Interview partner code	Position	Duration
Diagnosis Stakeholder Expert Interviews	Manufacturers	7	M1_DI	Senior manager	Part 1: 45m Part 2: 40m
		8	M2_DI	Global access strategy leader	1h
	Federal agencies	9	FA1_DI	Deputy national coordinator	1h 50m
		10	CDE2_FA2_DI	Branch chief of privacy and security office of technology; security advisor to chief privacy and security officer	1h 30m
	Clinical data exchanges	11	CDE1_A1_DI	Board member	45m
		12	CDE2_FA2_DI	Chief data officer	1h 30m
		13	PV2_CDE3_DI	Chief medical officer	1h

Interview partners overview (3/3)

N = 15

Interview partner belonging to multiple stakeholder groups

	Stakeholder group	#	Interview partner code	Position	Duration
Diagnosis Stakeholder Expert Interviews	Health IT vendors	14	HITV1_DI	Product management and implementation consultant	1h
	Emerging tech companies	15	ETC1_DI	Head of strategic partnerships & marketing	1h 30m
		16	PV3_ETC2_DI	Founder and CEO	1h 30m
	Academia	17	CDE1_A1_DI	Adjunct professor	45m
		18	CS2_A2_DI	Adjunct professor	1h 30m
		19	PY1_A3_DI	Adjunct professor	1h 30m
	Cross-stakeholders	20	CS1_DI	Consultant	Part 1: 1h 30m Part 2: 1h 30m
		21	CS2_A2_DI	Venture capitalist	1h 30m

Interview partner coding legend

1. First letter: Stakeholder

Code	Code meaning
A	Academia
CDE	Clinical data exchanges
CS	Cross-stakeholder
ETC	Emerging technology company
FA	Federal agencies
HITV	Health IT vendors
M	Manufacturer
PT	Patient
PY	Payer
PV	Provider
PYV	Payvider (integrated system)

2. Number: Interview number within the stakeholder group

3. _

4. Action research stage:

- “D”: Diagnosis
- “AP”: Action planning
- “AT”: Action taking
- “E”: Evaluation

5. If an action research stage has several empirical phases, this is the phase

- “I”: first phase/research step within the respective action research stage
- “II” second phase/research step within the respective action research stage

E.g., PY1_DI means, “First payer interview partner from the first phase of the diagnosis stage (i.e., stakeholder interviews).”

Patient survey

Participants

Patient survey participants demographics

N = 25

Demographic characteristic	Sample (#)	Sample (%)
Age		
18-24	5	20.0
25-34	9	36.0
35-44	4	16.0
45-54	4	16.0
55-65	2	8.0
65-74	1	4.0
75 and over		
Gender		
Male	11	44.0
Female	13	52.0
Non-binary	1	4.0
Number of years living in the US		
<1		
1-5	1	4.0
6-10	1	4.0
11-15		
16-20	2	8.0
21 and over	21	84.0
Number of scheduled doctor appointments per year		
More than once a month		
Every 1 to 2 months	3	12.0
Every 3 to 6 months	7	28.0
Every 7 to 12 months	5	20.0
Less than once a year	10	40.0

Purpose the patient survey

An online (N = 19) and hard paper copy (N = 6) patient survey was conducted to account for the patient's voice about technology deployment problems in the US healthcare system.

How

While the online survey was coded in Qualtrics and administered in Prolific, the researcher engaged in convenience sampling, distributing the survey to people passing by on the street in a lower-income neighborhood of New York with the objective to minimize the digital divide bias.

Results

Why is the successful deployment of administrative technology so important?

Implications of unsuccessful deployment

First-order implications



No advancement in better care for people



Degradation of patient care as the physician's energy is being taken towards often uncompensated administrative tasks

Second-order implications



Lack of **employee satisfaction, burnout**



Lack of **customer satisfaction**



Mistrust and **uncertainty** towards the deployment of any future technology



Loss in momentum and the **window of opportunity** in the space



Financial impact with sunk costs, delayed billing, and lack of additional financial commitment to drive the deployment process



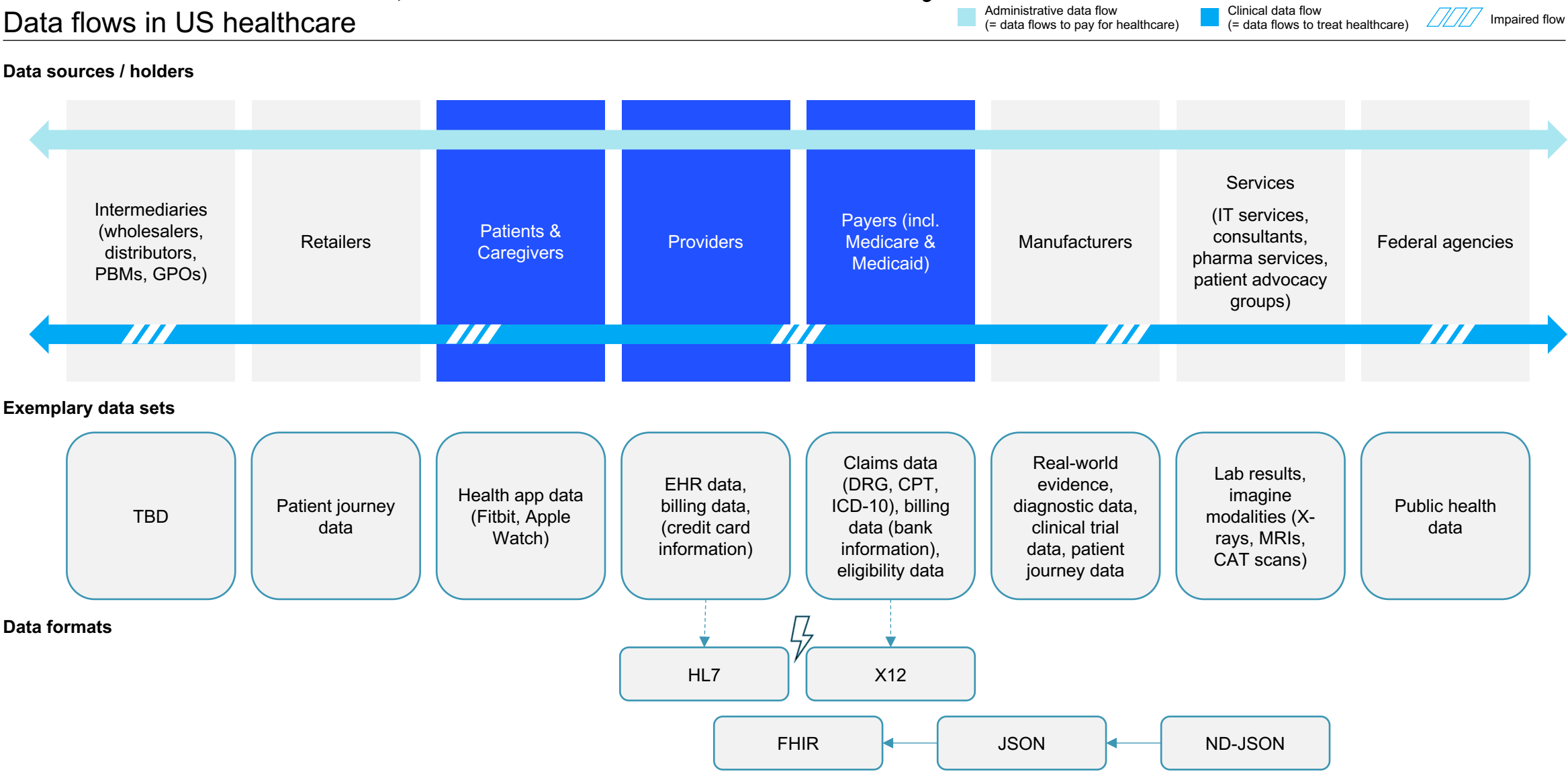
Escalation of unsuccessful deployment to the C-Suite



The **vacuum is filled with something** that could be a **worse** outcome

There are two primary data flows, administrative data flow and clinical data flow, in the US healthcare system

Data flows in US healthcare



The following technologies were discussed during the interviews and patient survey

Electronic health records (EHRs)

Standardized data formats (FHIR, X12, etc.)

Blockchain
(in general, and in the context of digital identity)

Artificial intelligence (AI)

Electronic patient support programs

Technology discussion frequency

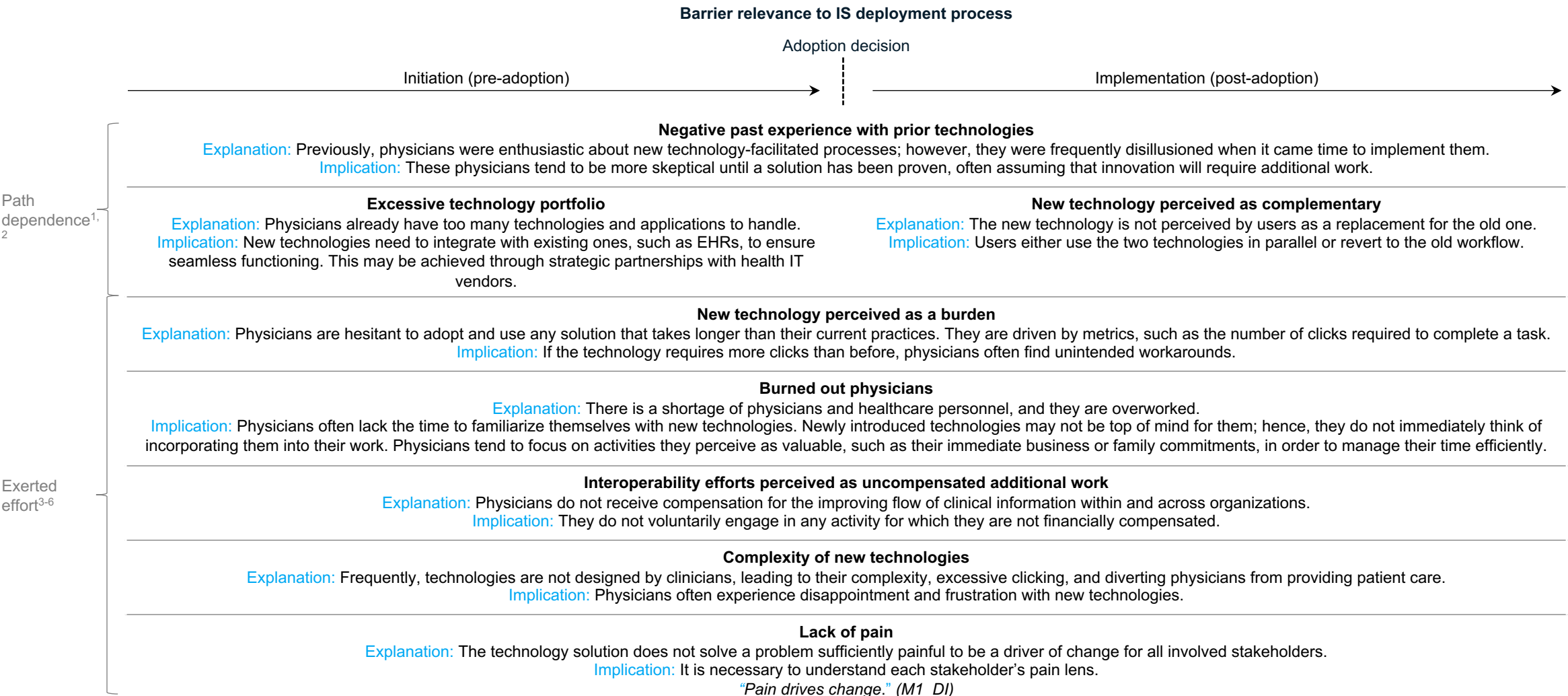


Because these technologies were discussed in an administrative context, as opposed to a medical context, they will be referred to as **administrative technologies/information systems (IS)** from this point forward, although this term might not do justice to all of the technologies involved.

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (1/15)

Owner of deployment barriers: Individual

Theoretical foundation

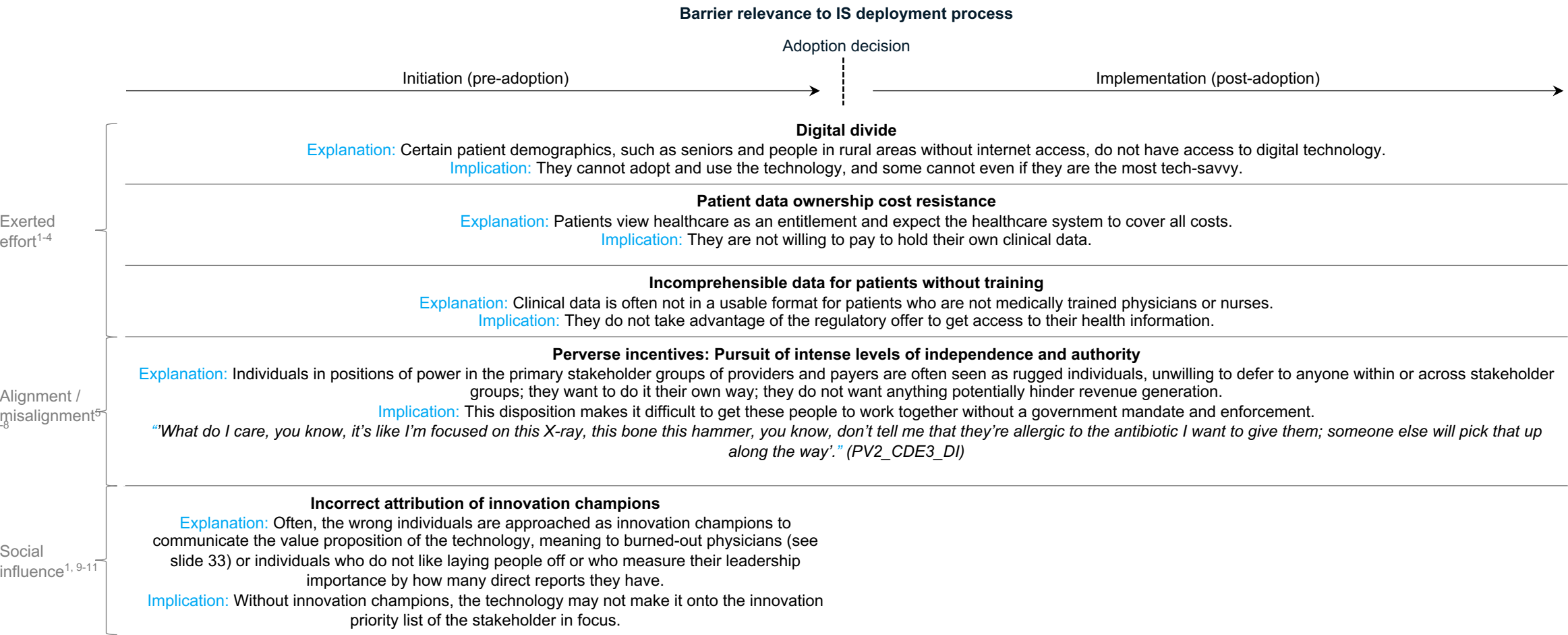


Sources:¹DiMaggio (1988), ²Cohen and Levinthal (1990), ³Venkatesh et al., (2003), ⁴Thompson and Graetz (2019), ⁵Kruse et al. (2016a), ⁶Kruse et al. (2016b)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (2/15)

Owner of deployment barriers: Individual

Theoretical foundation

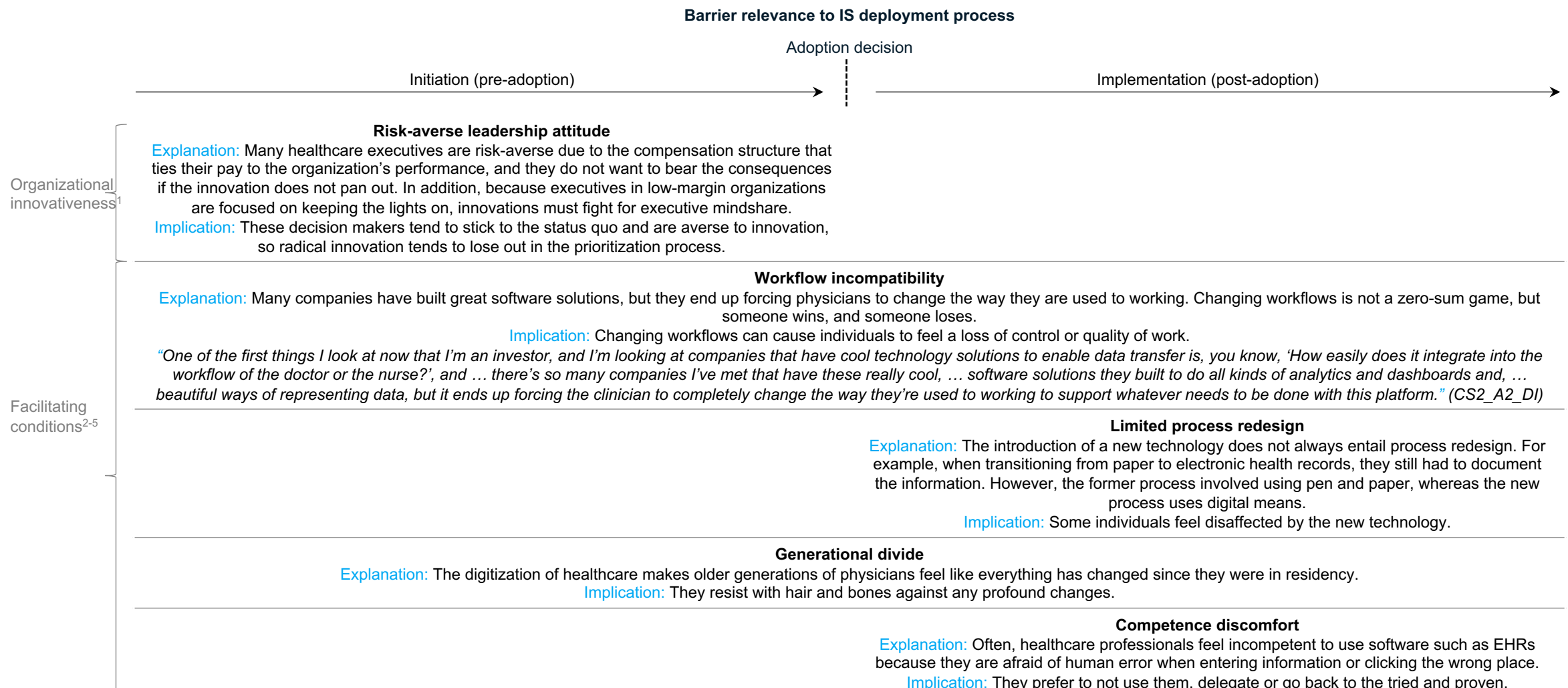


Sources: ¹Venkatesh et al., (2003), ²Thompson and Graetz (2019), ³Kruse et al. (2016a), ⁴Kruse et al. (2016b), ⁵Holmgren & Adler-Milstein (2016), ⁶Corsaro and Snehota (2011), ⁷Kahn (1969), ⁸Hansen and Baroody (2020), ⁹Rogers (2005), ¹⁰Kraut et al. (1998), ¹¹Hao et al. (2018)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (3/15)

Owner of deployment barriers: Individual

Theoretical foundation

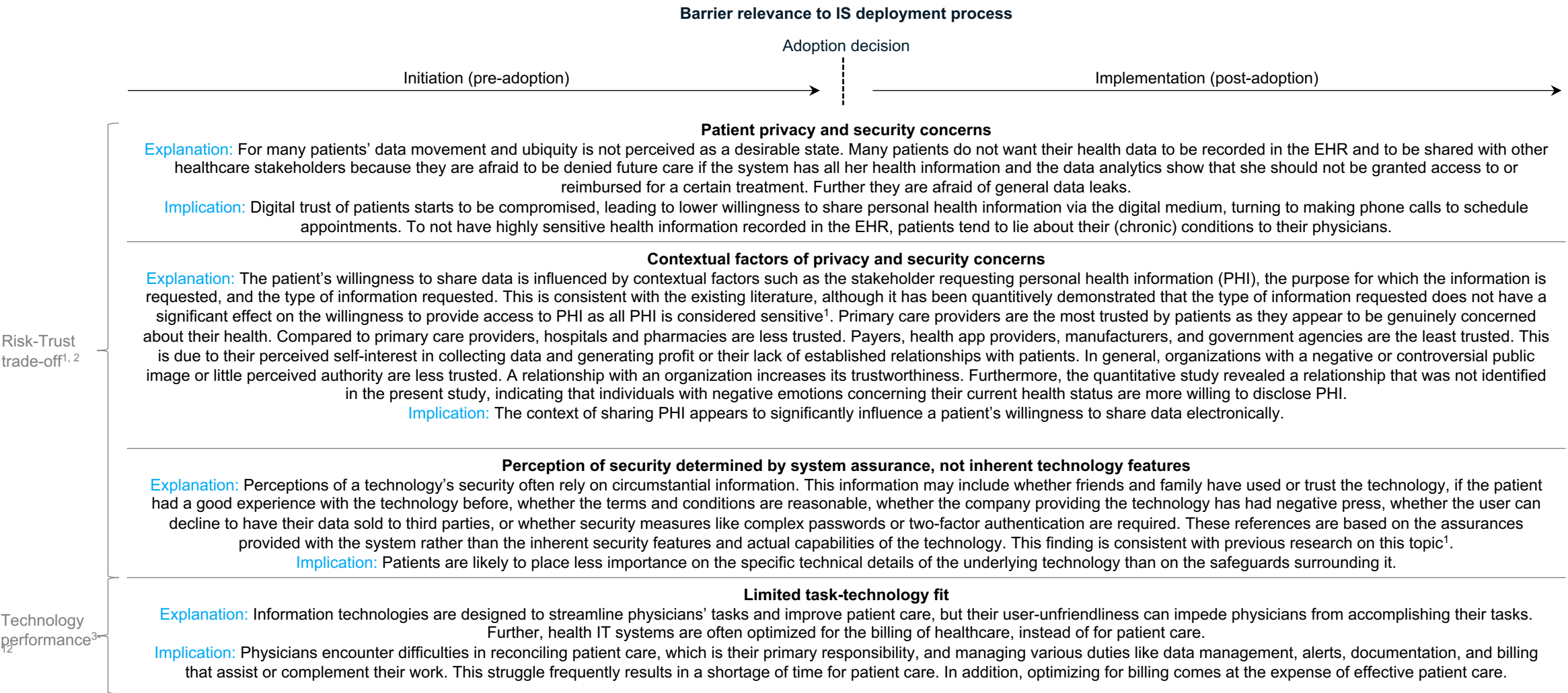


Sources: ¹Rogers (2005), ²Venkatesh et al., (2003), ³Teckert (2020), ⁴Dauwed (2019), ⁵Kruse et al. (2016a)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (4/15)

Owner of deployment barriers: Individual

Theoretical foundation

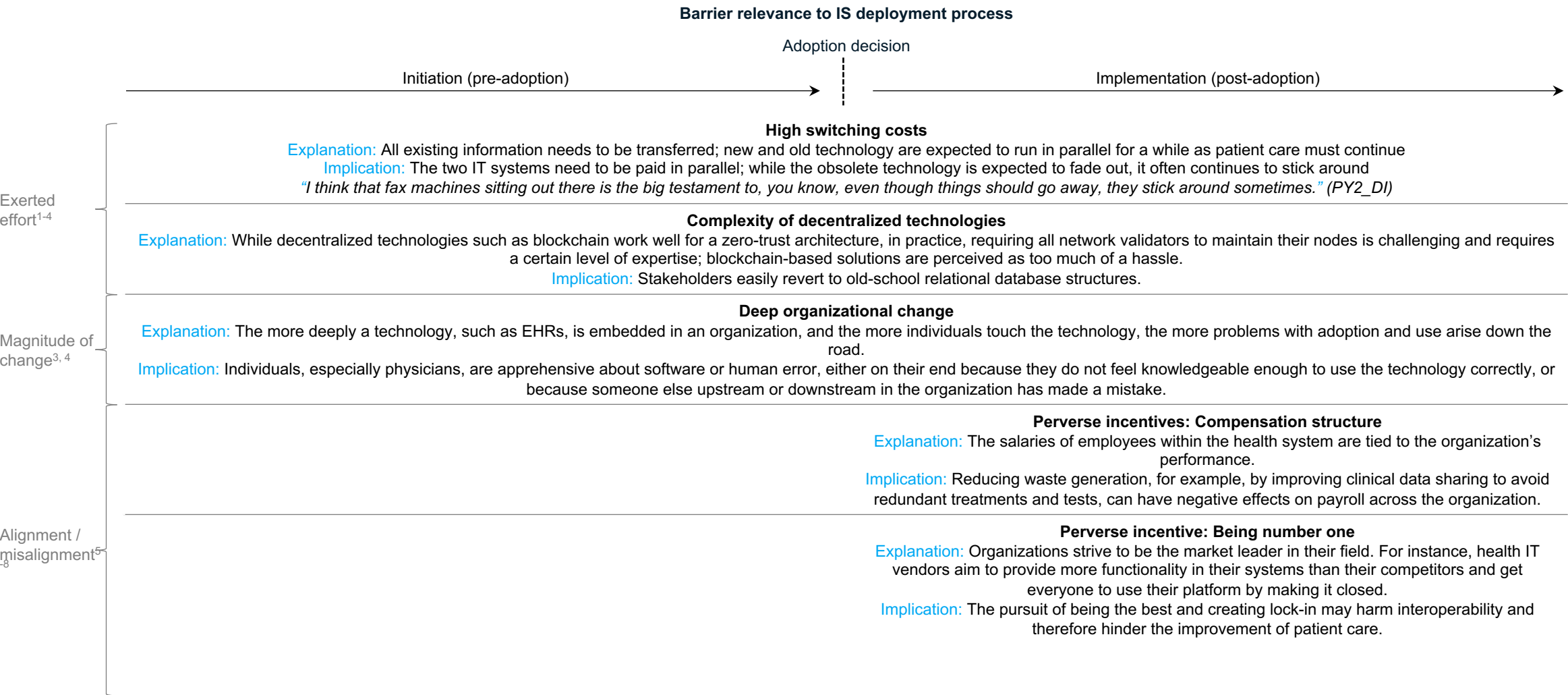


Sources: ¹Anderson and Agarwal (2011), ²Mauwed et al. (2019), ³Zhu et al. (2006), ⁴Thompson and Graetz (2019), ⁵Rathert et al. (2017), ⁶Adler-Milstein et al. (2015), ⁷Scarborough and Kyratsis (2022), ⁸Martinez et al. (2023), ⁹Sahi et al. (2018), ¹⁰Teckert (2020), ¹¹Kruse et al. (2016a), ¹²Kruse et al. (2016b)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (5/15)

Owner of deployment barriers: Organization

Theoretical foundation

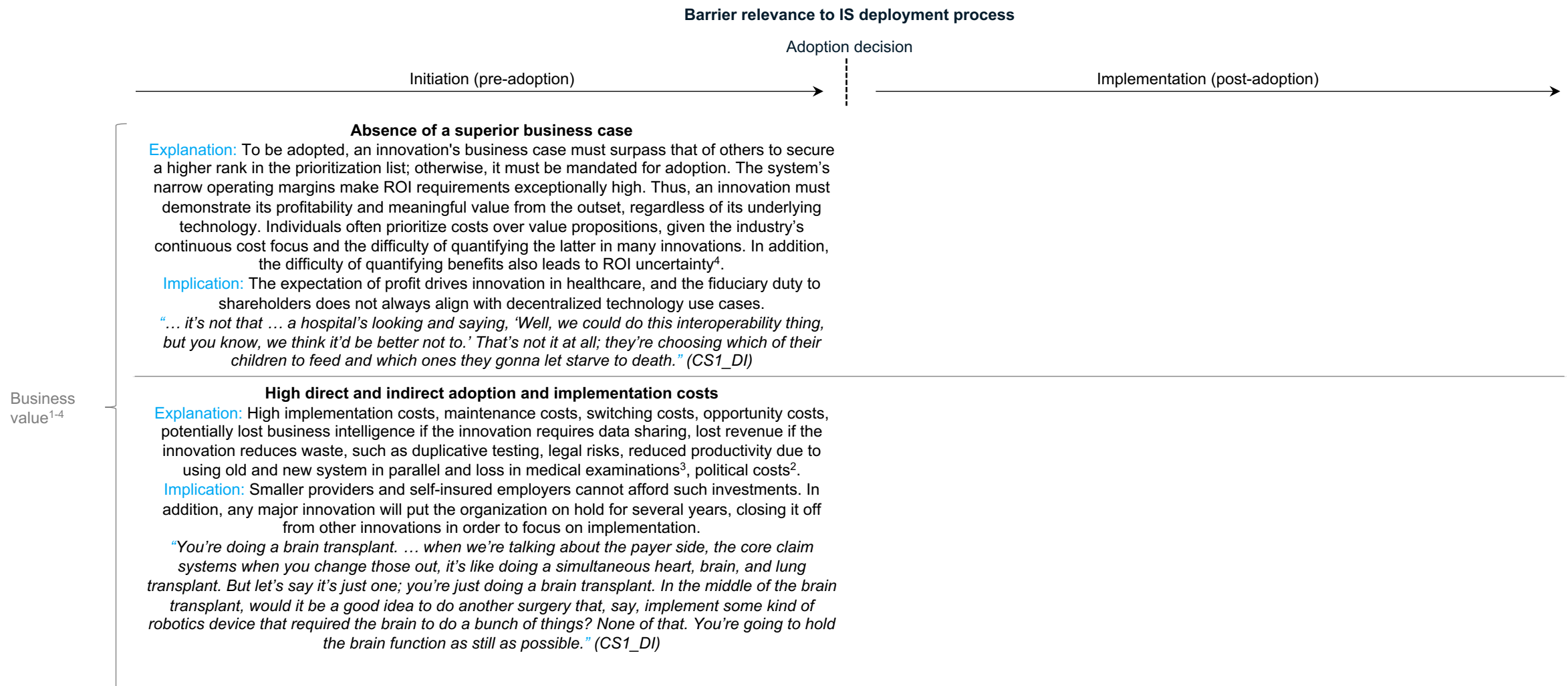


Sources: ¹Venkatesh et al., (2003), ²Thompson and Graetz (2019), ³Kruse et al. (2016a), ⁴Kruse et al. (2016b), ⁵Holmgren & Adler-Milstein (2016), ⁶Corsaro and Snehota (2011), ⁷Kahn (1969), ⁸Hansen and Baroody (2020)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (6/15)

Owner of deployment barriers: Organization

■ Theoretical foundation

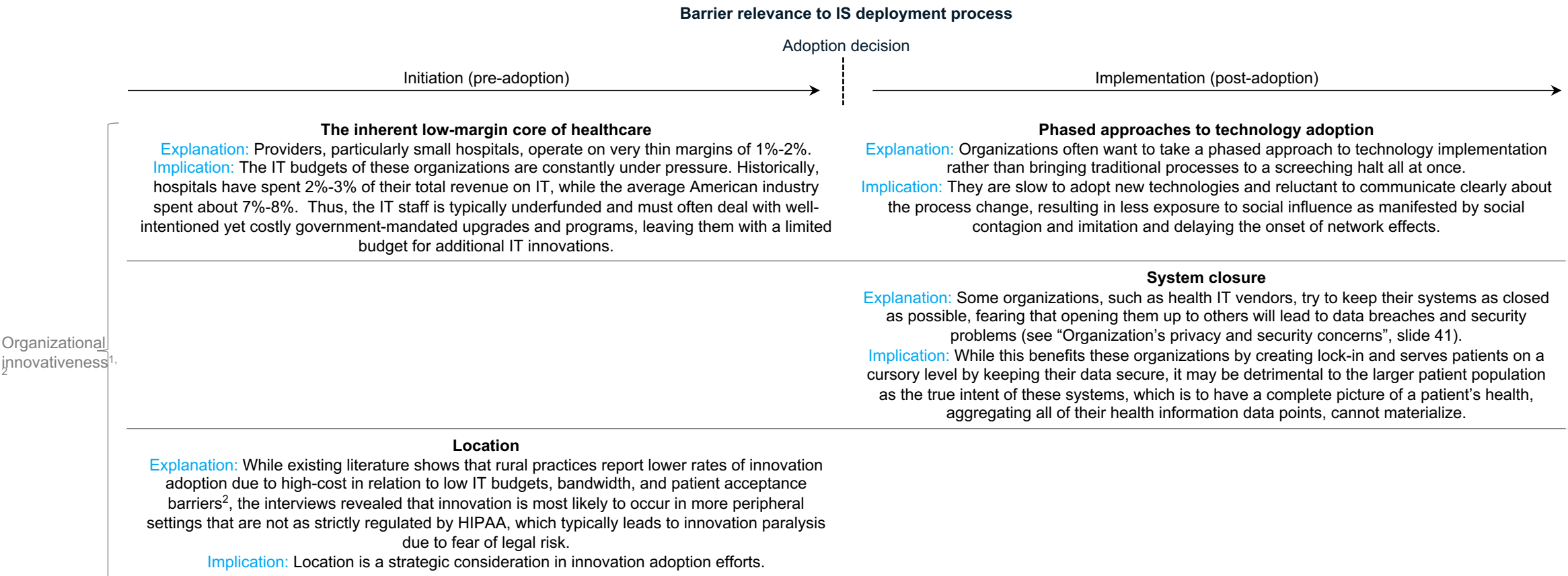


Sources: ¹Zhu et al. (2006), ²Flessa and Huebner (2021), ³Teckert (2020), ⁴Kruse et al. (2016a)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (7/15)

Owner of deployment barriers: Organization

Theoretical foundation



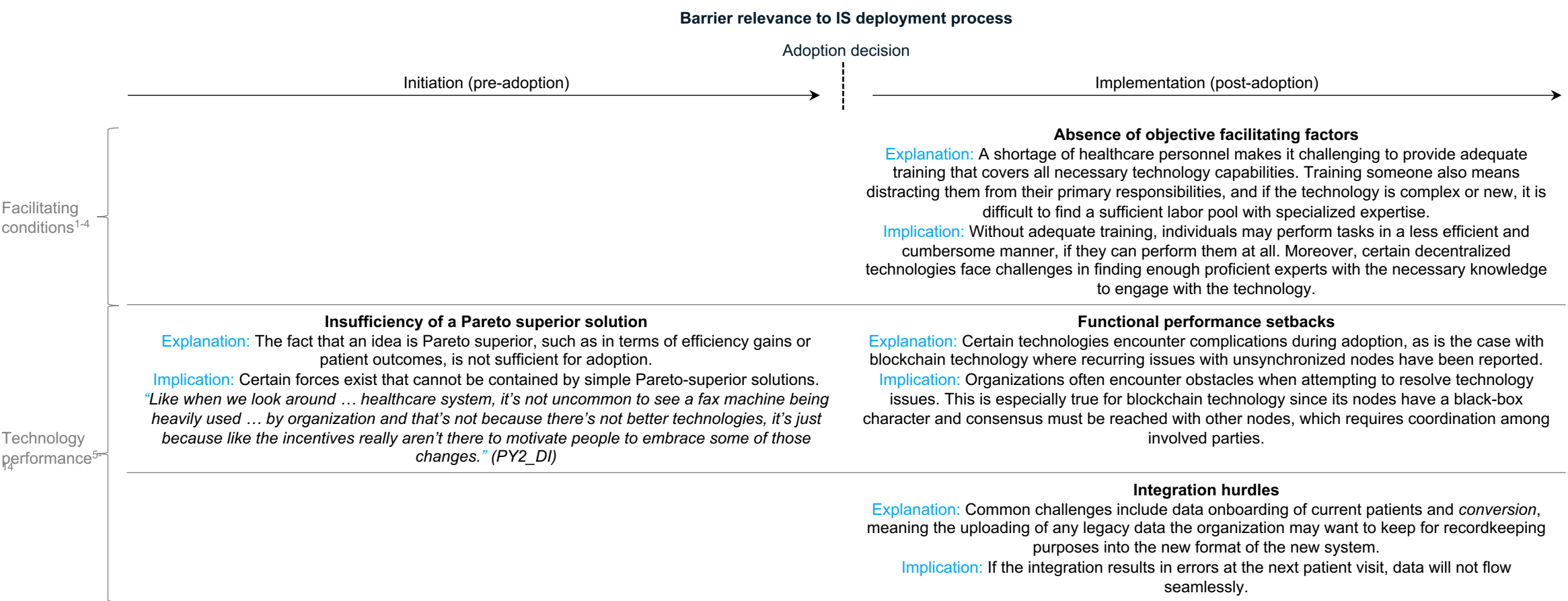
Organizational innovativeness^{1, 2}

Sources: ¹Rogers (2005), ²Kruse et al. (2016a, 2016b)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (8/15)

Owner of deployment barriers: Organization

Theoretical foundation

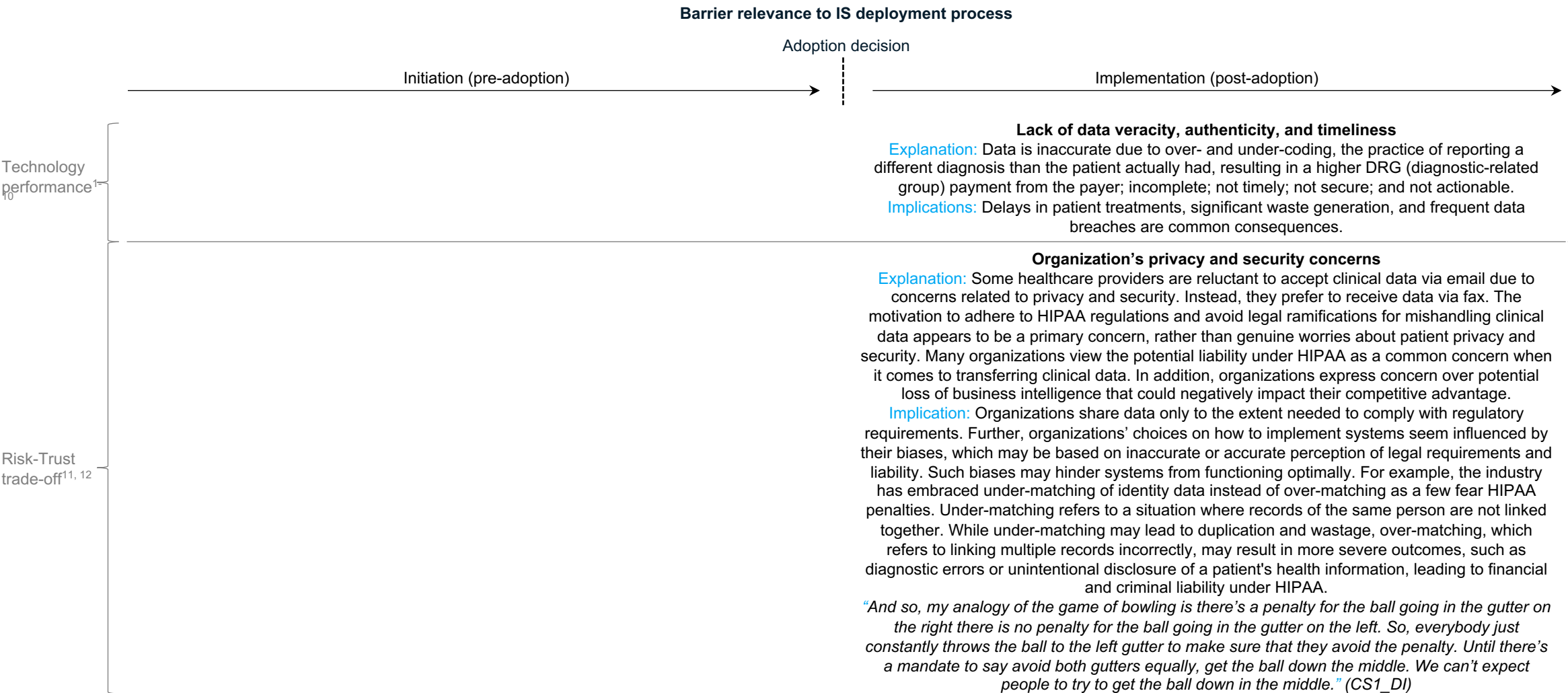


Sources: ¹Venkatesh et al., (2003), ²Teckert (2020), ³Dauwed (2019), ⁴Kruse et al. (2016a), ⁵Zhu et al. (2006), ⁶Thompson and Graetz (2019), ⁷Rathert et al. (2017), ⁸Adler-Milstein et al. (2015), ⁹Scarborough and Kyratsis (2022), ¹⁰Martínez et al. (2023), ¹¹Sahi et al. (2018), ¹²Teckert (2020), ¹³Kruse et al. (2016a), ¹⁴Kruse et al. (2016b)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (9/15)

Owner of deployment barriers: Organization

Theoretical foundation

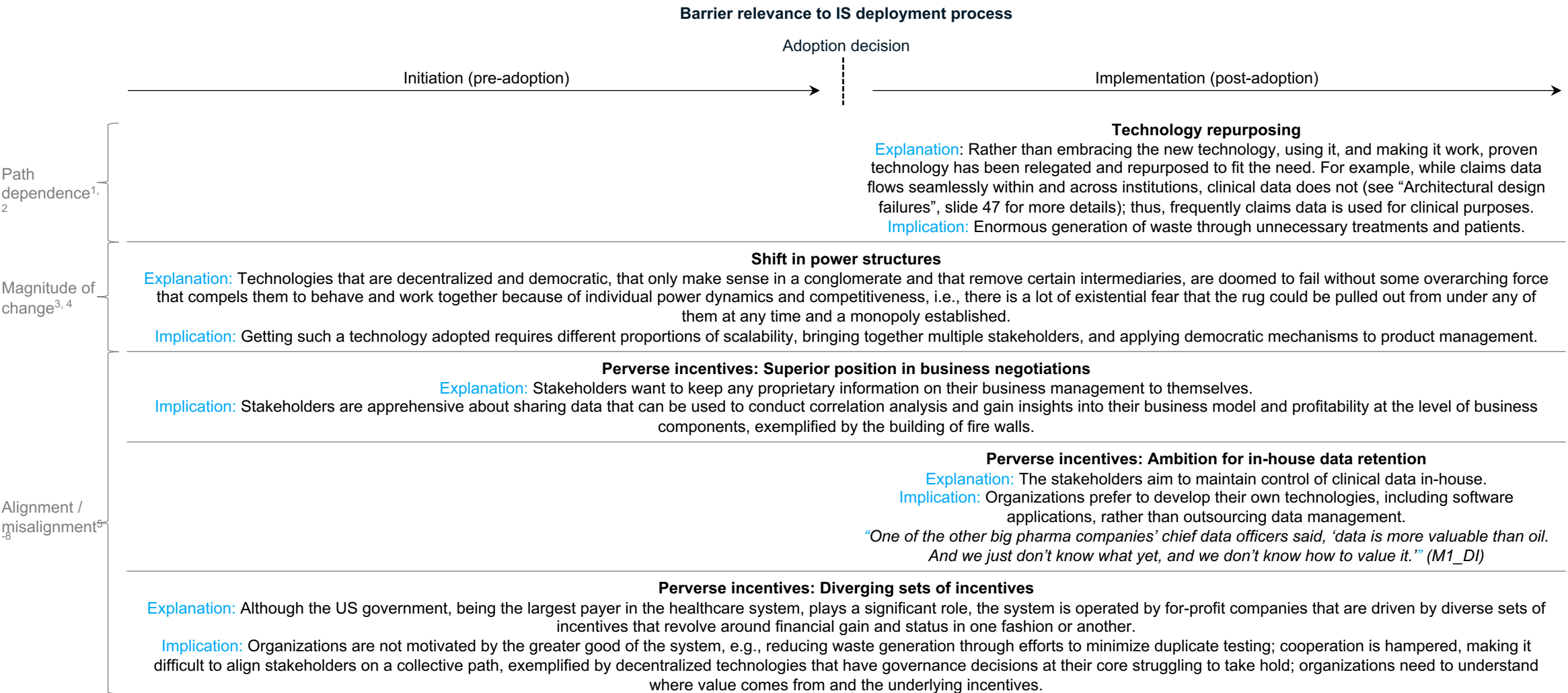


Sources: ¹Zhu et al. (2006), ²Thompson and Graetz (2019), ³Rathert et al. (2017), ⁴Adler-Milstein et al. (2015), ⁵Scarborough and Kyratsis (2022), ⁶Martínez et al. (2023), ⁷Sahi et al. (2018), ⁸Teckert (2020), ⁹Kruse et al. (2016a), ¹⁰Kruse et al. (2016b), ¹¹Anderson and Agarwal (2011), ¹²Mauwed et al. (2019)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (10/15)

Owner of deployment barriers: System

Theoretical foundation

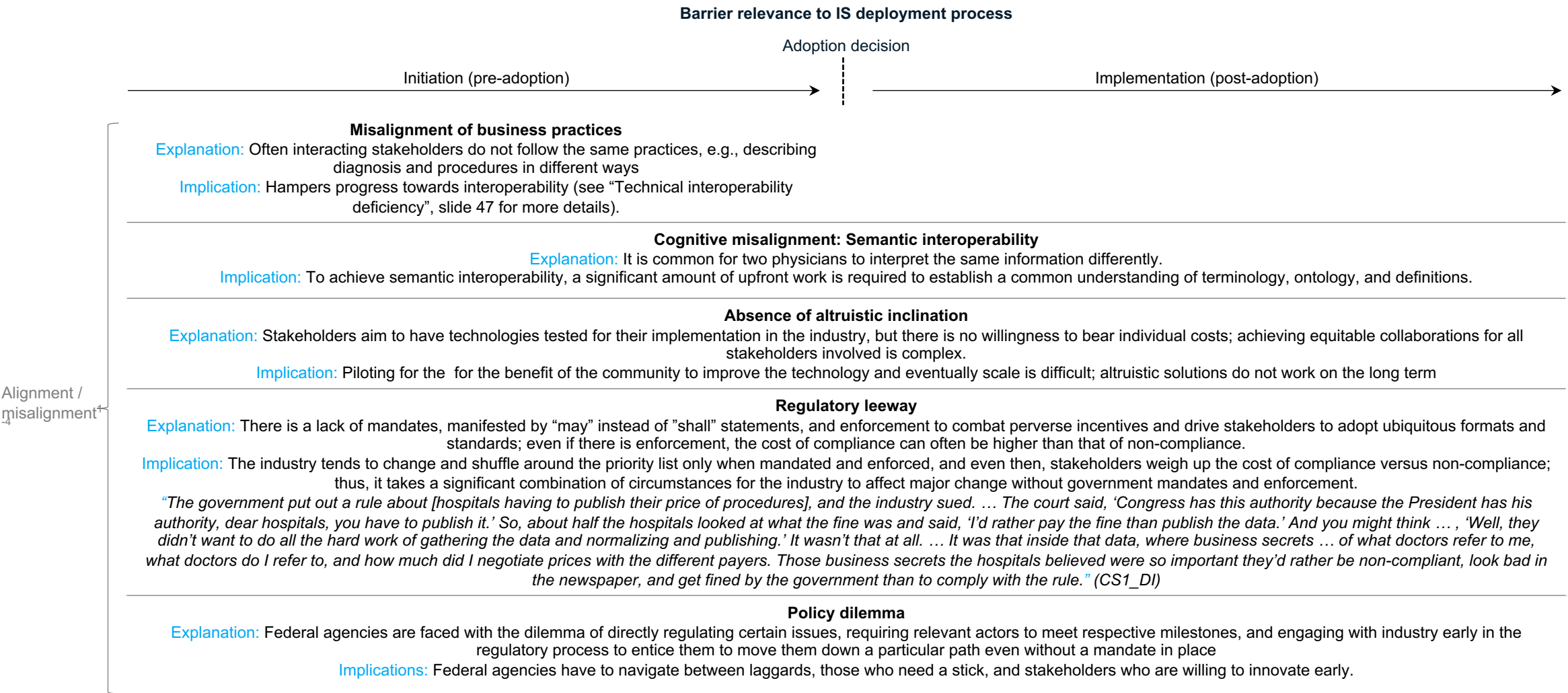


Sources:¹DiMaggio (1988), ²Cohen and Levinthal (1990), ³Kruse et al. (2016a), ⁴Kruse et al. (2016b), ⁵Holmgren & Adler-Milstein (2016), ⁶Corsaro and Snehota (2011), ⁷Kahn (1969), ⁸Hansen and Baroody (2020)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (11/15)

Owner of deployment barriers: System

Theoretical foundation

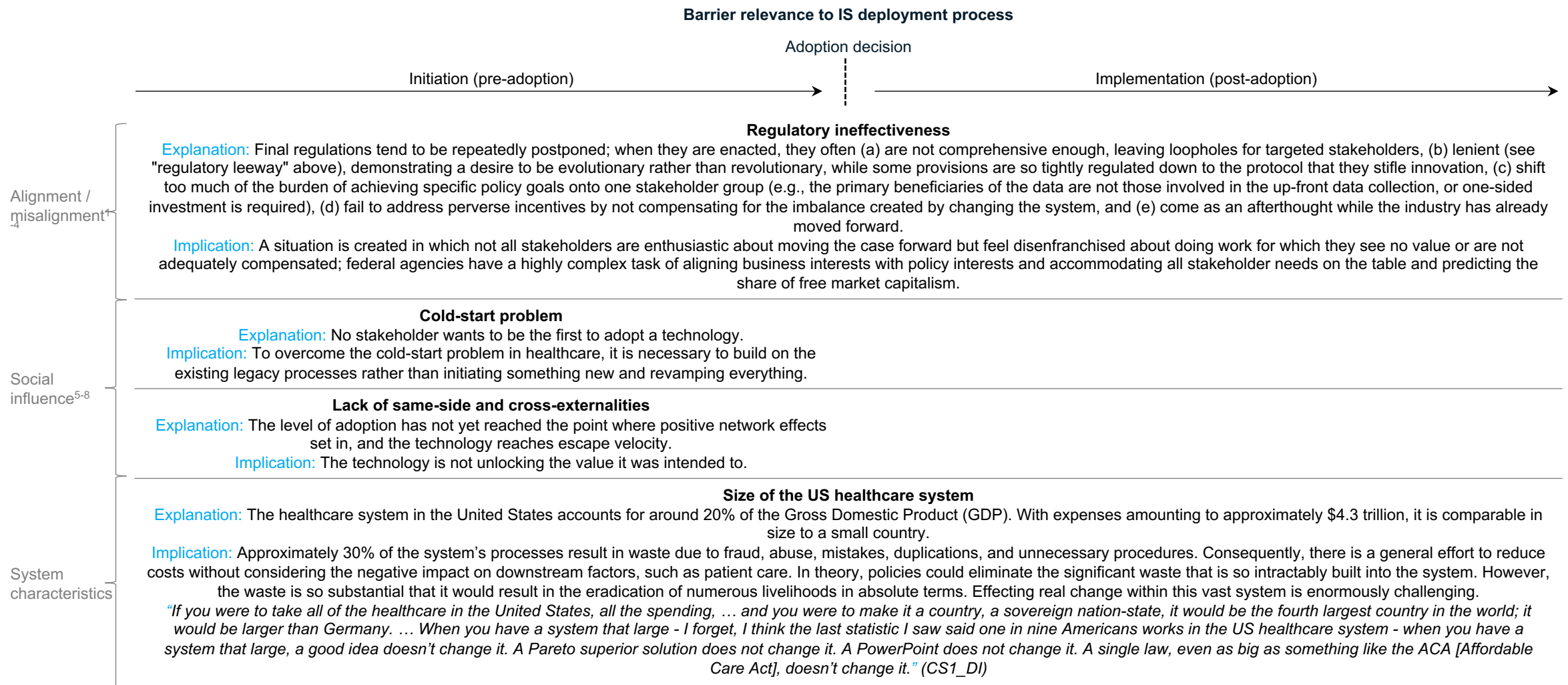


Sources: ¹Holmgren & Adler-Milstein (2016), ²Corsaro and Snehota (2011), ³Kahn (1969), ⁴Hansen and Baroody (2020)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (12/15)

Owner of deployment barriers: System

Theoretical foundation



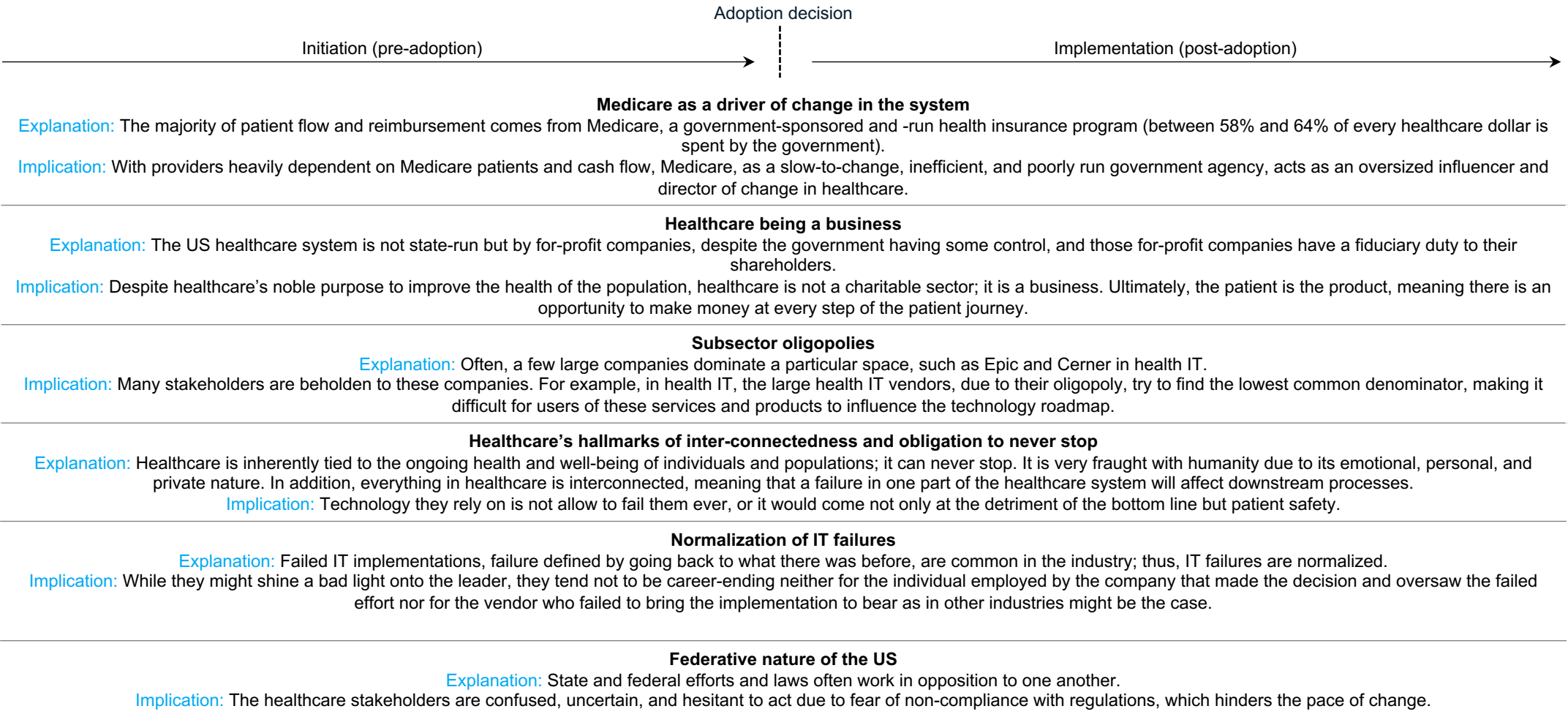
Sources: ¹Holmgren & Adler-Milstein (2016), ²Corsaro and Snehota (2011), ³Kahn (1969), ⁴Hansen and Baroody (2020), ⁵Venkatesh et al., (2003), ⁶Rogers (2005), ⁷Kraut et al. (1998), ⁸Hao et al. (2018)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (13/15)

Owner of deployment barriers: System

Theoretical foundation

Barrier relevance to IS deployment process

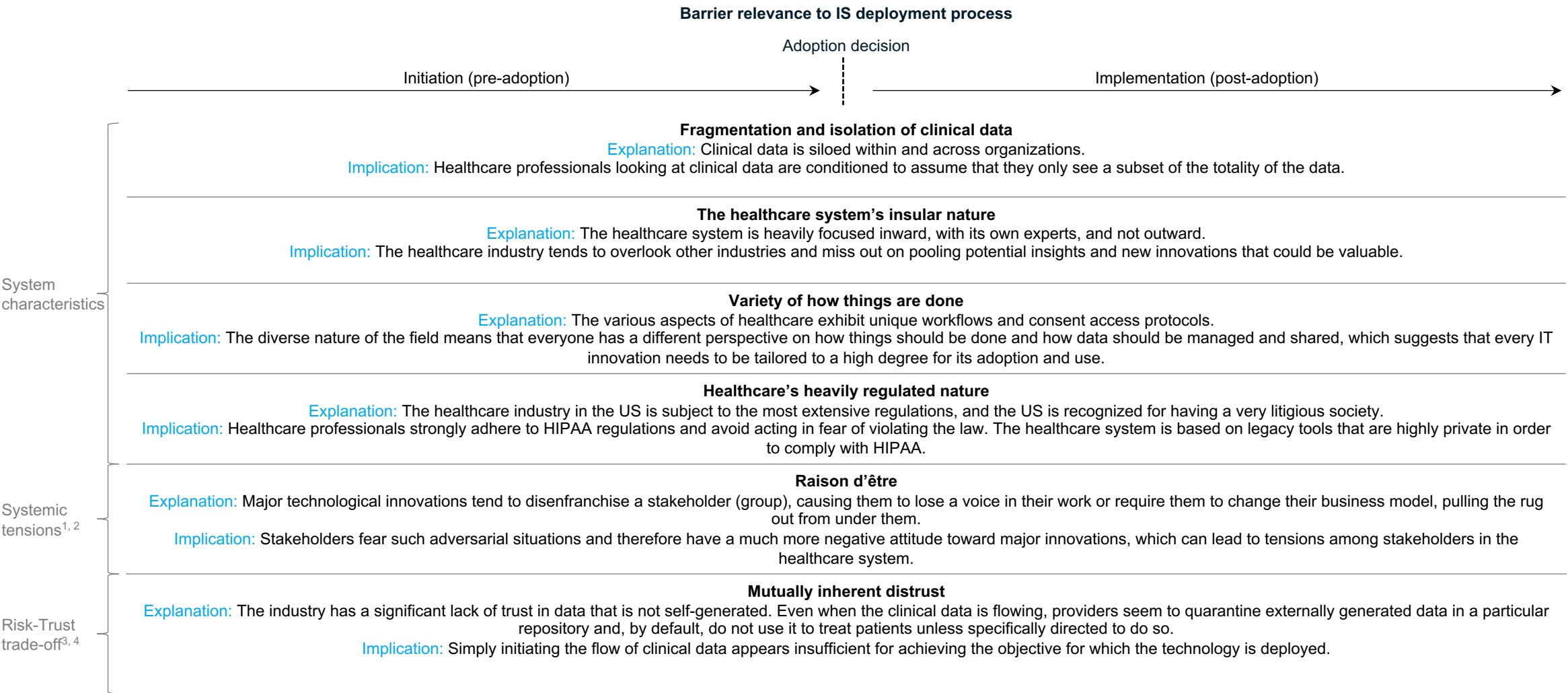


System characteristics

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (14/15)

Owner of deployment barriers: System

Theoretical foundation

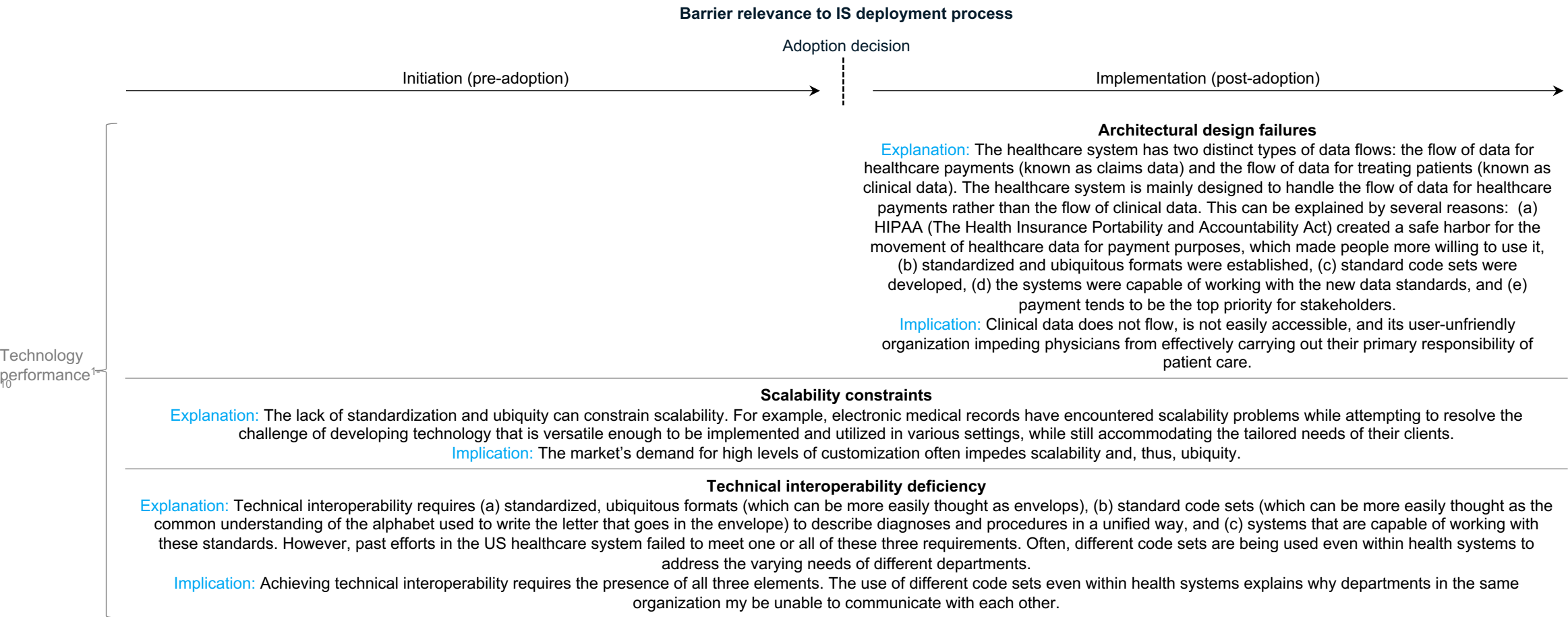


Sources: ¹Talcott Parsons (1951), ²Functionalism and social change – Parsons, ³Anderson and Agarwal (2011), ⁴Mauwed et al. (2019)

Barriers to successful deployment of technologies that share +1 characteristics with blockchain-enabled SSI (15/15)

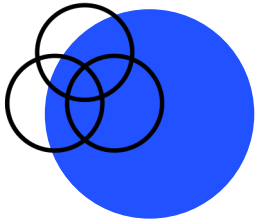
Owner of deployment barriers: System

Theoretical foundation



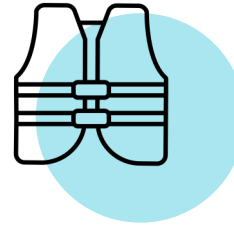
Sources: ¹Zhu et al. (2006), ²Thompson and Graetz (2019), ³Rathert et al. (2017), ⁴Adler-Milstein et al. (2015), ⁵Scarbrough and Kyratsis (2022), ⁶Martínez et al. (2023), ⁷Sahi et al. (2018), ⁸Teckert (2020), ⁹Kruse et al. (2016a), ¹⁰Kruse et al. (2016b)

Key takeaways



Depending on the administrative technology in focus they **share** different **characteristics** with blockchain-enabled self-sovereign identity:

- Power structure change
- Network effects
- Immutability
- Transparency
- Privacy



The implications of **unsuccessful technology deployment** are **detrimental** in healthcare, given that it is in the game of life.



There is a **need for an assessment framework** to determine the U.S. healthcare system's amenability to blockchain-enabled self-sovereign identity.

Additional workshop information

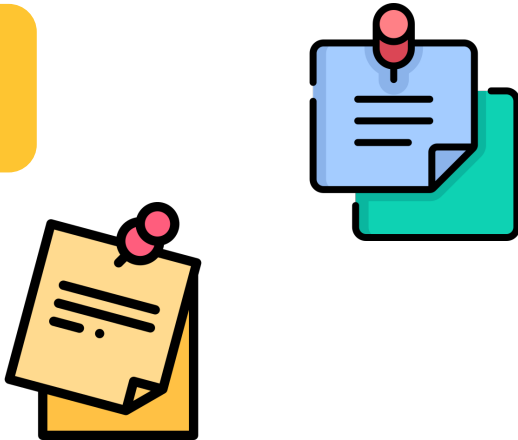
For the workshop we will be leveraging Thing.Online and Miro

Tools expected to be used during the workshop

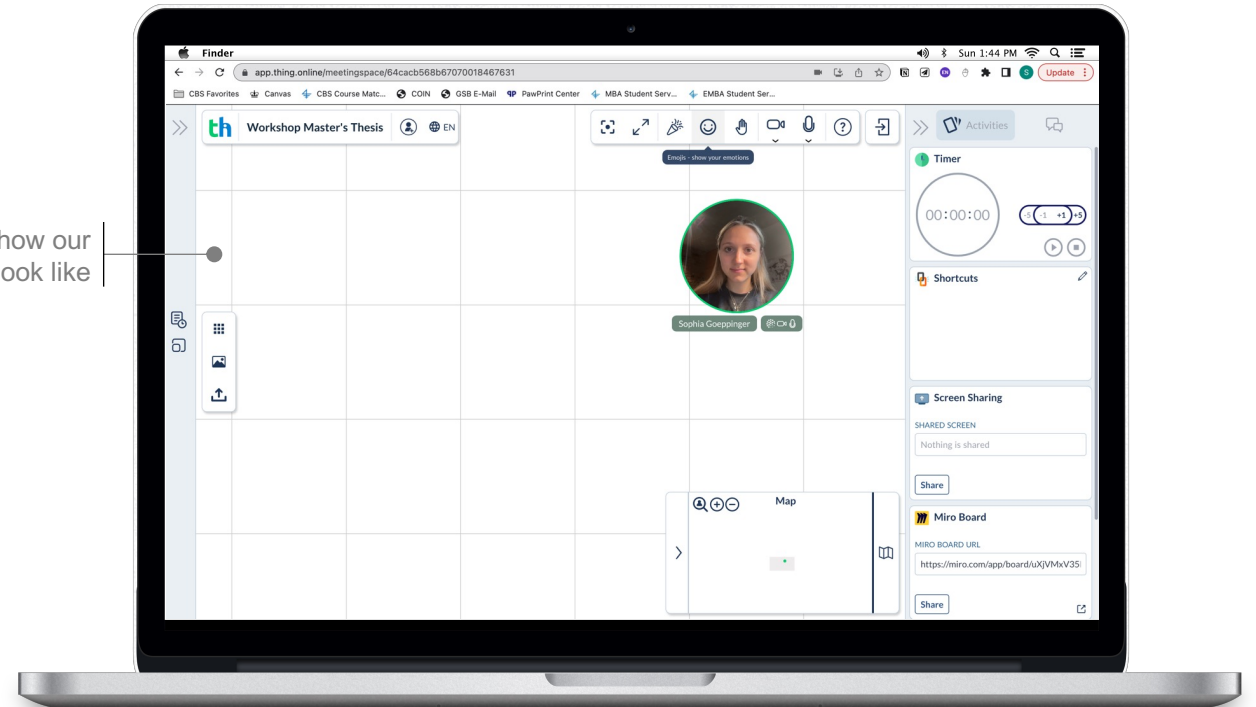
Instead of Zoom, we will be using **Thing.Online** as a virtual facilitation platform.

Just follow [this link](#), and you will be brought right to our workspace. This link will also be available in the workshop calendar invite. Please use Google Chrome as server, as the functionalities with Safari are limited.

While Thing.Online is our virtual meeting space; we will also be using **Miro** to help us with brainstorming & co.



That is how our workspace will look like



**I'm very much looking forward to the
workshop with you!**

Let me know if you have any questions.

Contact information

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