

Challenges and Cooperation in the German PropTech Market -

Evidence Based on Results from the PropTech Germany 2020/2021 Surveys

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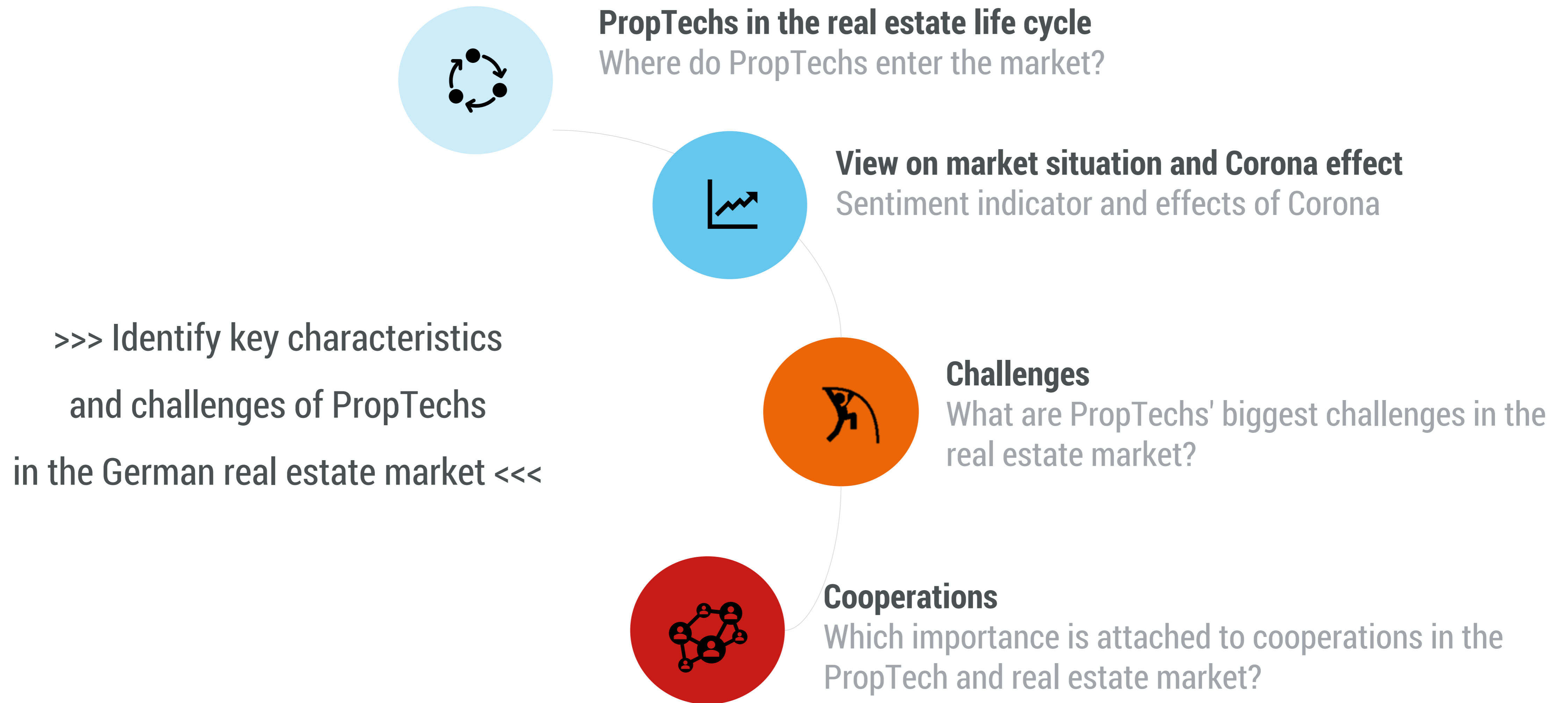
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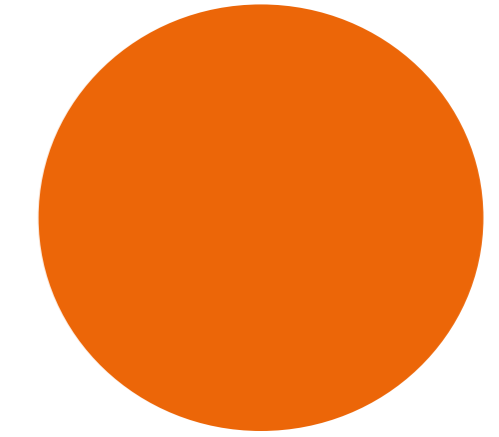
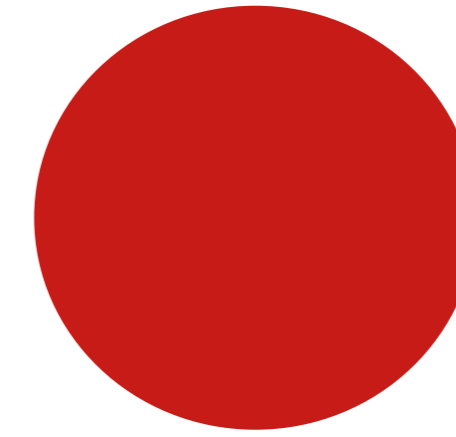
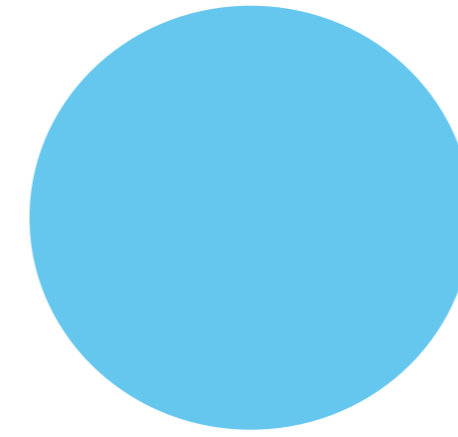
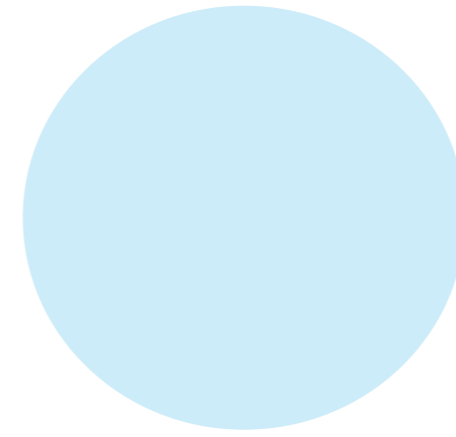
Research Problem

- German PropTech market is growing, but not booming in terms of revenues
- Lack of systematic approaches to transparency in key market characteristics and figures of the German PropTech sector
- Majority of available surveys and studies on digital transformation and digitalization analyses view of the traditional real estate sector
- Very little literature available, only from other industries
- PropTechs' perspectives and their challenges are under-represented

Aims of the Survey



Methodology



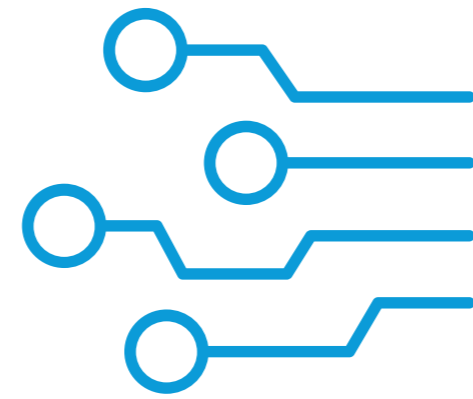
- Using two PropTech surveys from 2020 (explorative, interview-based) and 2021 (descriptive, questionnaire-based with 185 PropTech respondents), PropTechs are classified by their degree of maturity.
- Applying factor analysis, we identify major challenges for these PropTech clusters throughout their sales cycle, when faced with the real estate industry as customer.
- Further, using factor analysis, we will elaborate on drivers of horizontal and vertical cooperations between PropTechs and traditional real estate companies.

Key Facts



4 years

Average maturity
of PropTechs



Platforms

Pre-dominant
PropTech-
Technology Pattern



4,3

No. of asset classes
PropTechs deal with



72%

Intensity of
cooperations in
PropTech market



Operating department
...the "Establishment's"
influencer



CEO

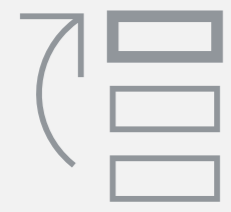
The "Establishment's"
decision maker



185

No. of participating
PropTechs

Cluster Overview



Grown Ups

Founding year 2017 or older

Founding year 2018 or 2019 + product status "in operation" or launch before 2020

107



Early Stager

Founding year 2020 or younger

Founding year 2018 or 2019 + product status development, MVP or launch from 2020+

36

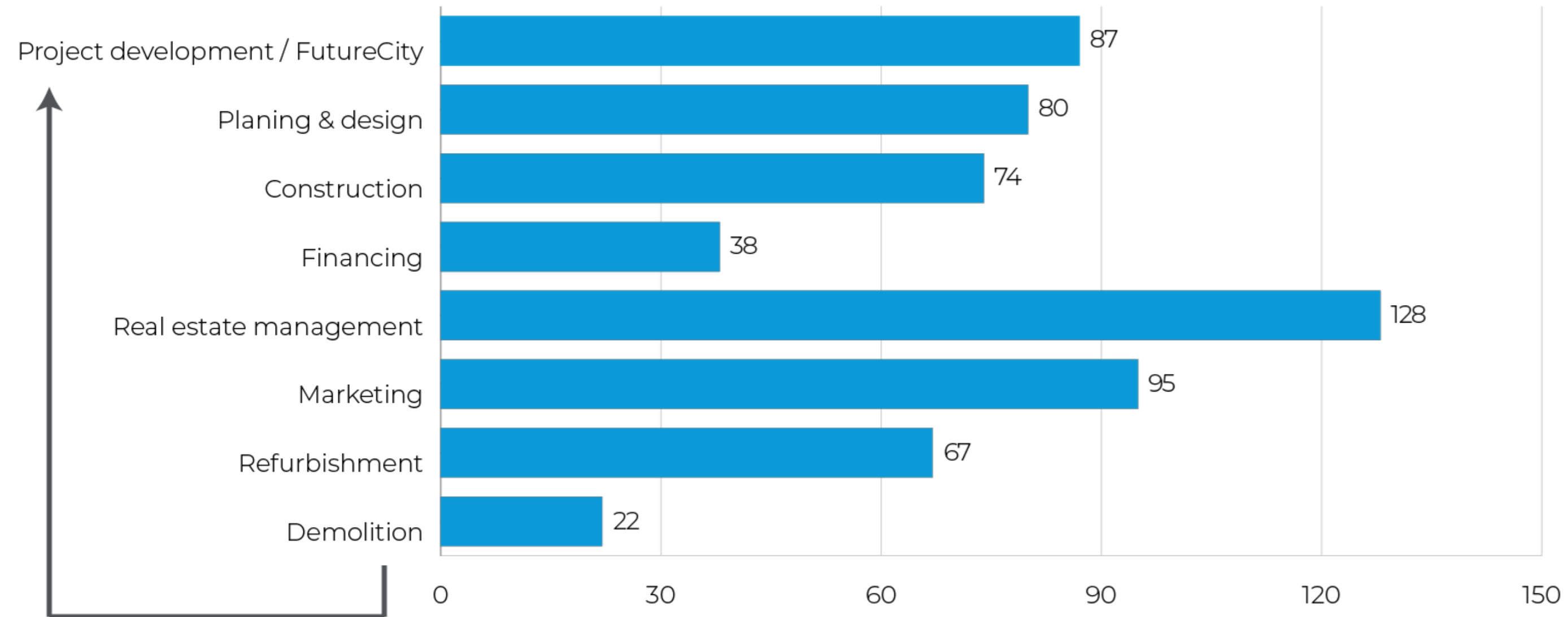


Conquerer

PropTech with foreign headquarter

42

PropTechs in the Real Estate Life Cycle



Ca. 70% are in “real estate management”

This phase consists of Asset-, Property- und Facility-Management as well as Smart Building and Service-Apps



Financing achieves highest PropTech turnover

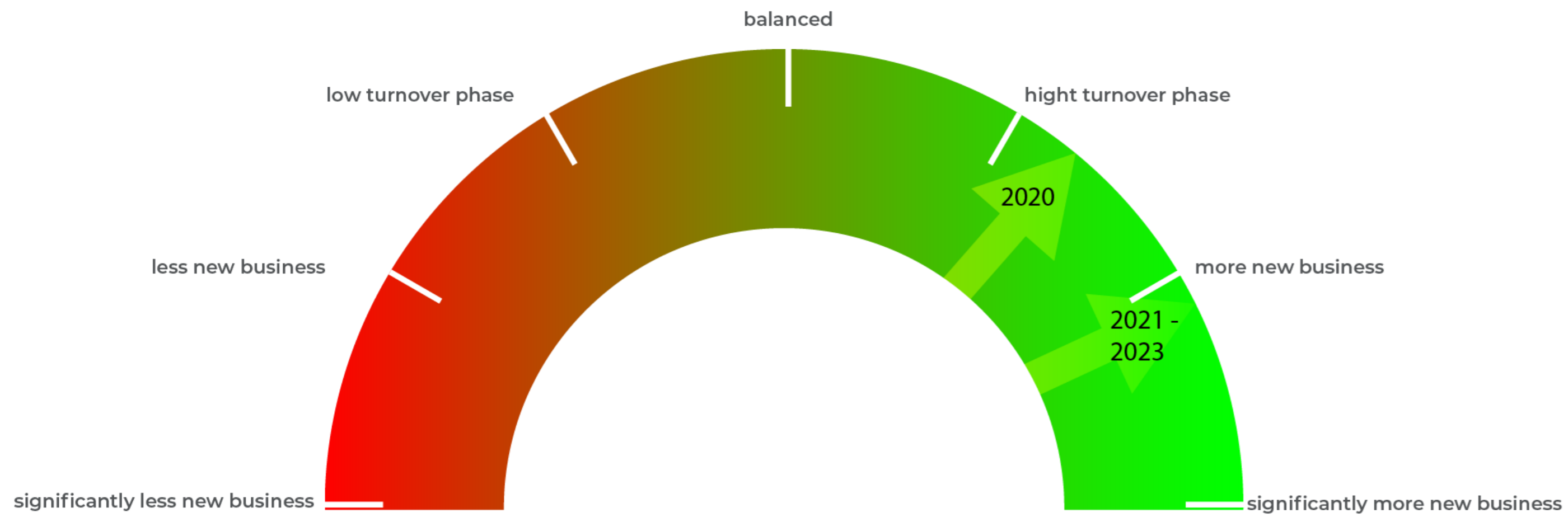
15,8% of PropTechs in Financing have achieved turnover of 2 Mio. € + in 2020



Strong focus on residential

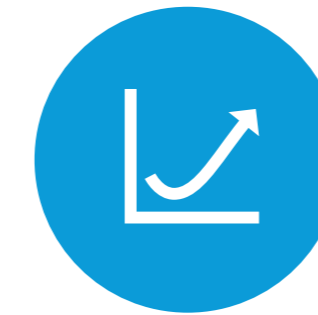
More than 76% of all PropTechs offer solutions for residential property

Sentiment indicator and Corona effect



2020 was a successful PropTech business year

Majority of 71% have reported "more new business" in 2020



PropTechs with optimism for their future

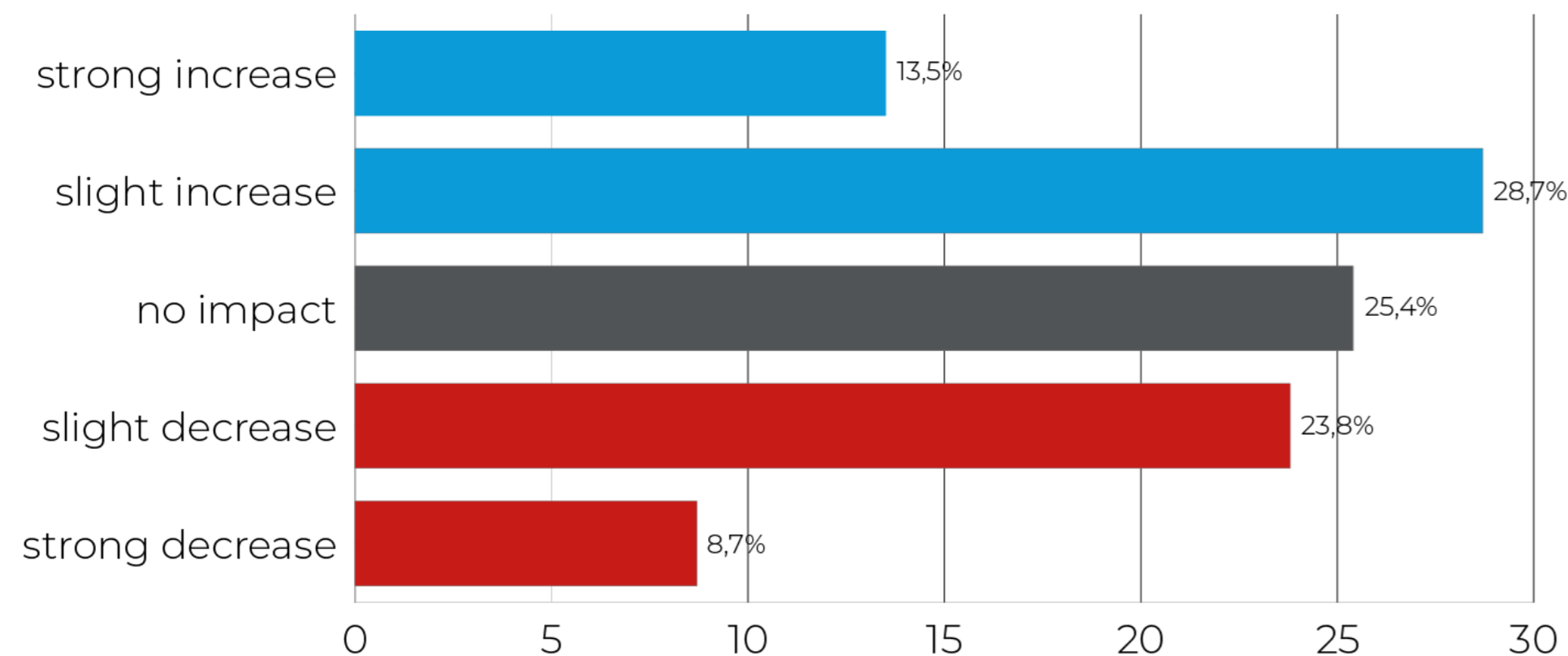
More than 91% of PropTechs expect more new business – also through Corona effect



Effect of Corona mainly positive

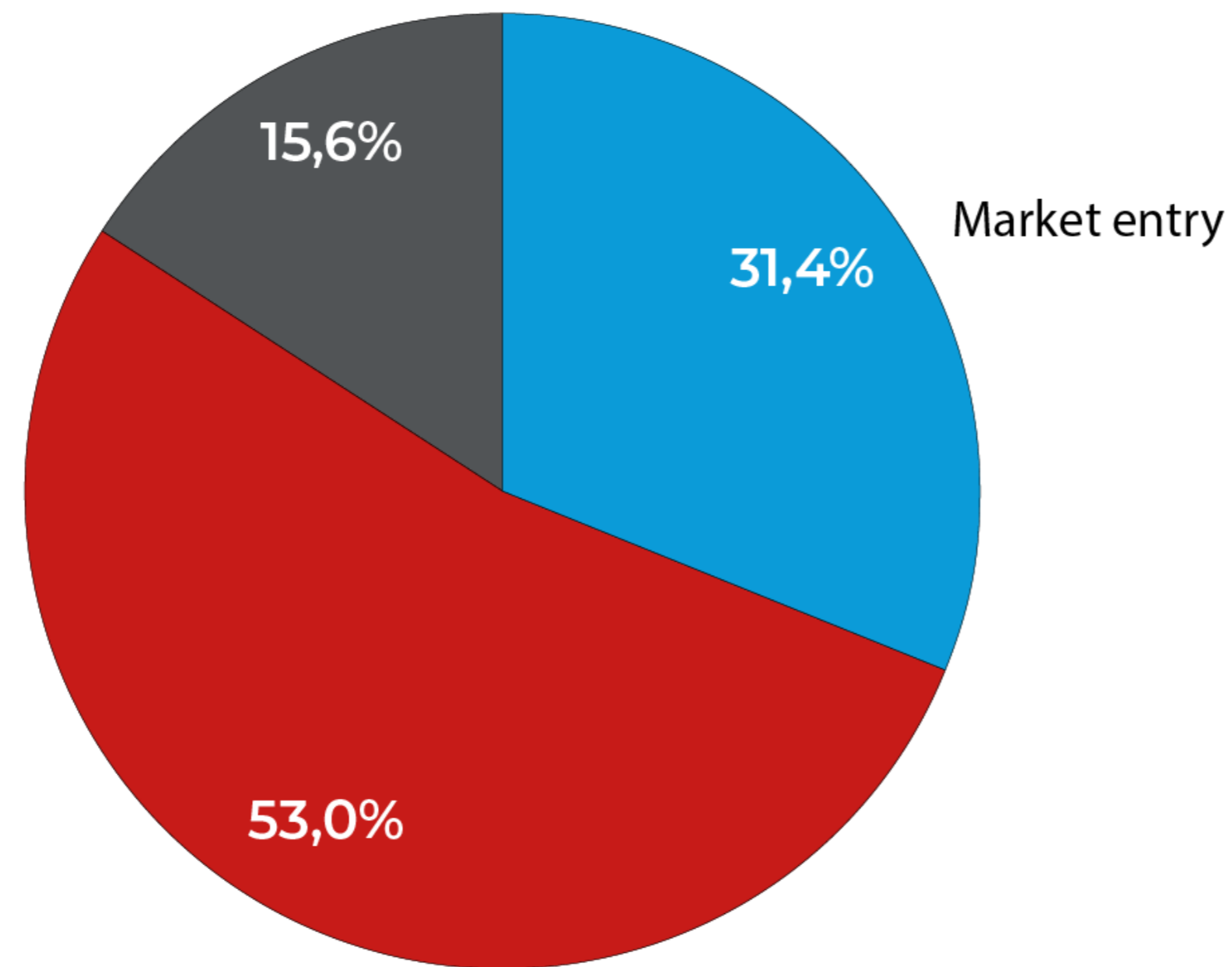
1/4 reports "no effect" to their own business, 1/3 reports a decline, more than 42% report an increase

Impact of Corona



Challenges for PropTechs

Implementation



Product sales



Market entry

Biggest challenge (83,8%): decision making structures in real estate companies



Product sales is most challenging phase

Biggest challenge: Establishment's low risk tolerance

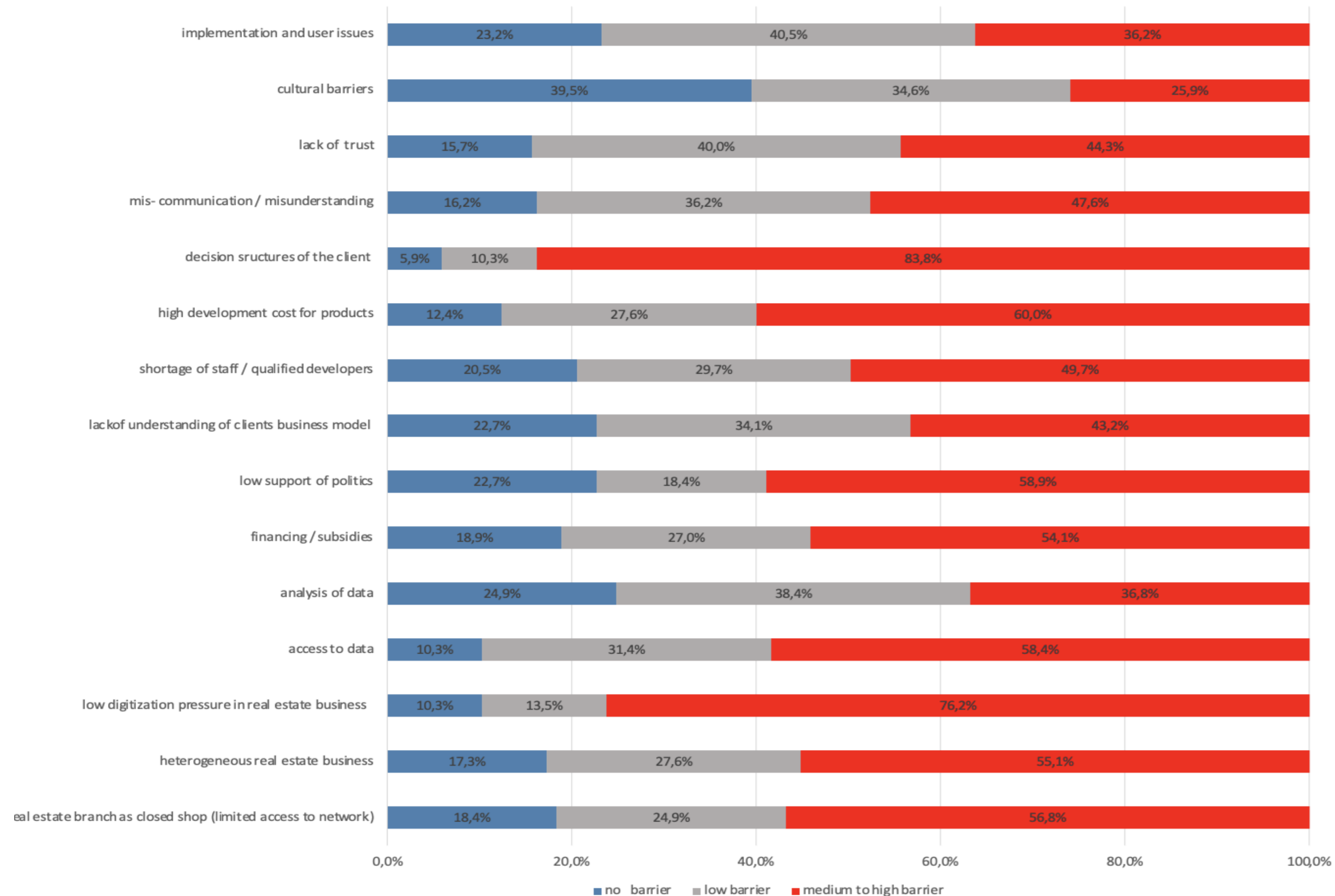


Implementation without any surprise

Biggest problem: no business priority

Sales challenges for PropTechs

Barriers in building up the business model



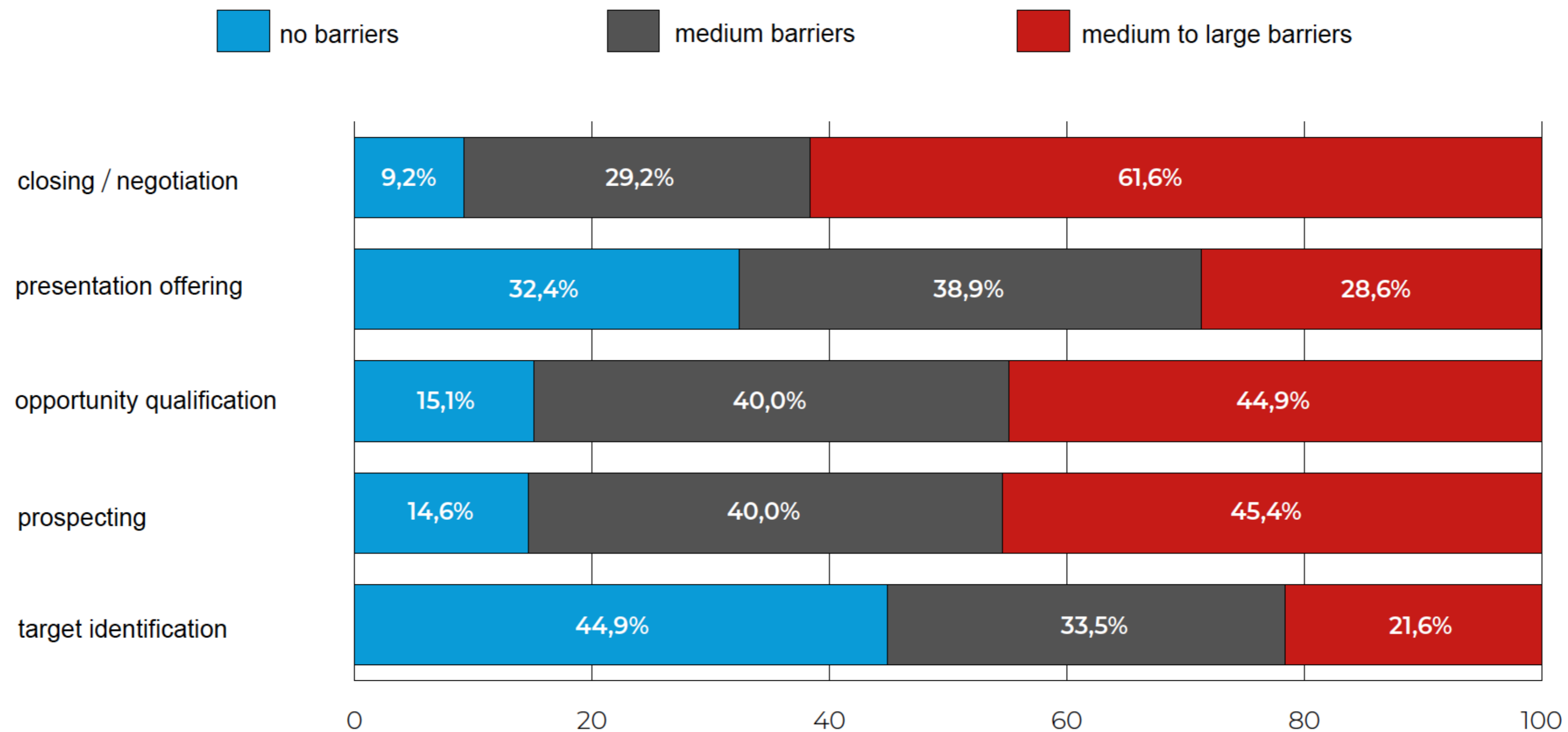
Sales challenges for PropTechs

Barriers in selling PropTech solutions

barriers in the sales process of proptechs per cluster	Ranking			
	all	Early Stager	Grown Ups	Conquerer
low risk awareness of the establishment	1	1	1	2
insufficient awareness of the company / solution	3	2	2	3
difficult access to the right contact person	2	3	4	1
lack of technical understanding of the establishment	4	4	3	5
missing network	7	5	7	3
lack of trust in proptech solutions of the establishment	5	6	5	4
data privacy concerns of the establishment	11	6	10	10
insufficient knowledge of the benefits occurring after a successful implementation	6	7	6	6
missing knowledge of the proptechs regarding the value chain and business processes of the establishment	8	8	8	8
too high / unrealistic expectations of the establishment	10	9	7	9
missing trust of the establishment into proptech solutions	9	10	9	7

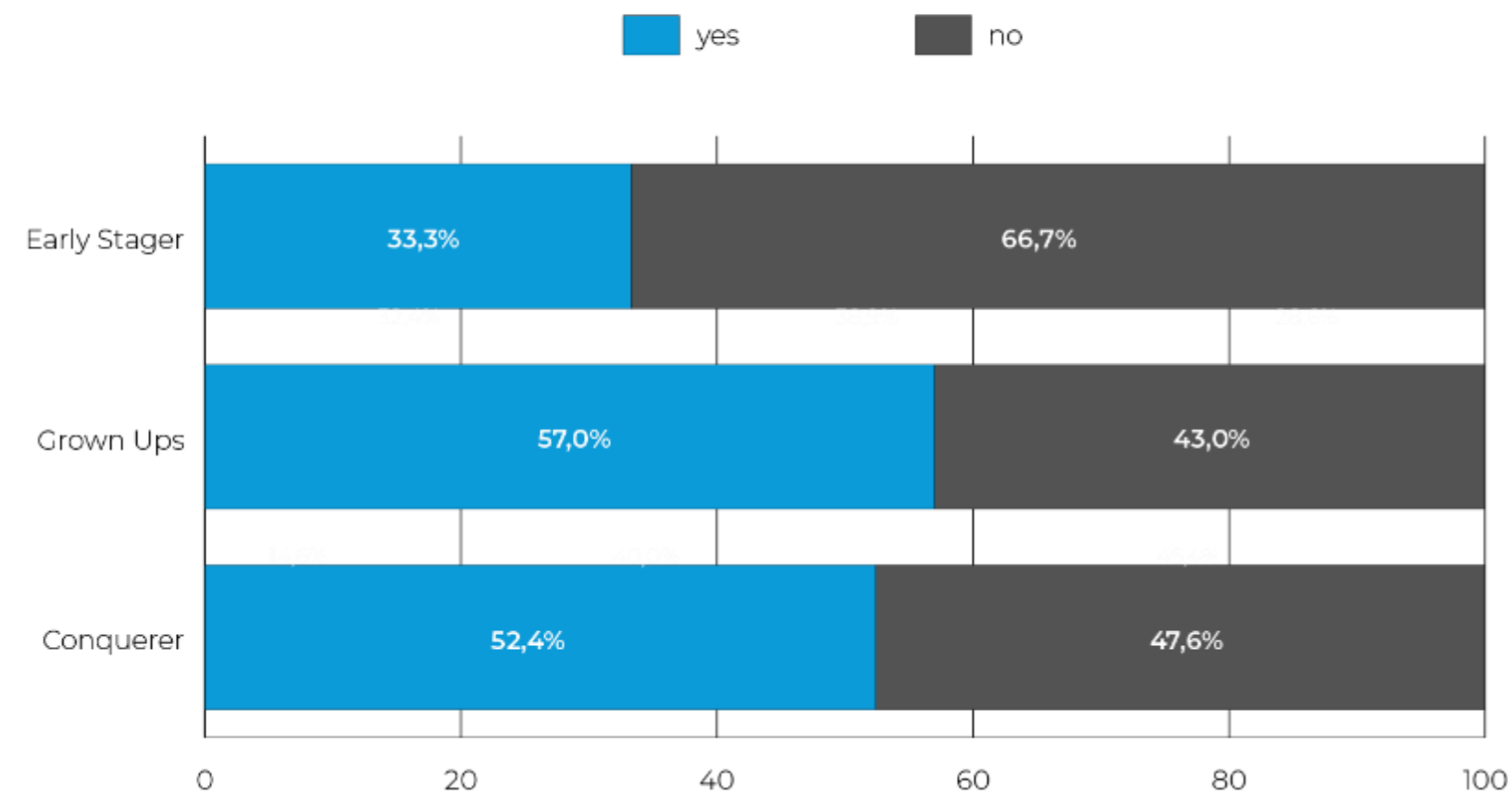
Sales challenges for PropTechs

Barriers in the sales process



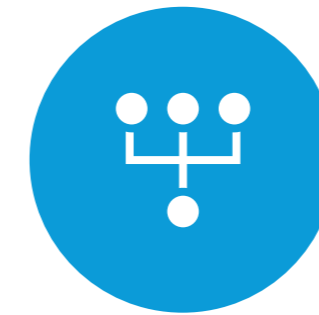
Cooperation among PropTechs

Current cooperations between PropTechs



Cooperation playing a decisive role

roughly 80% of all PropTechs do have cooperations in place



Most cooperation is of technical origin

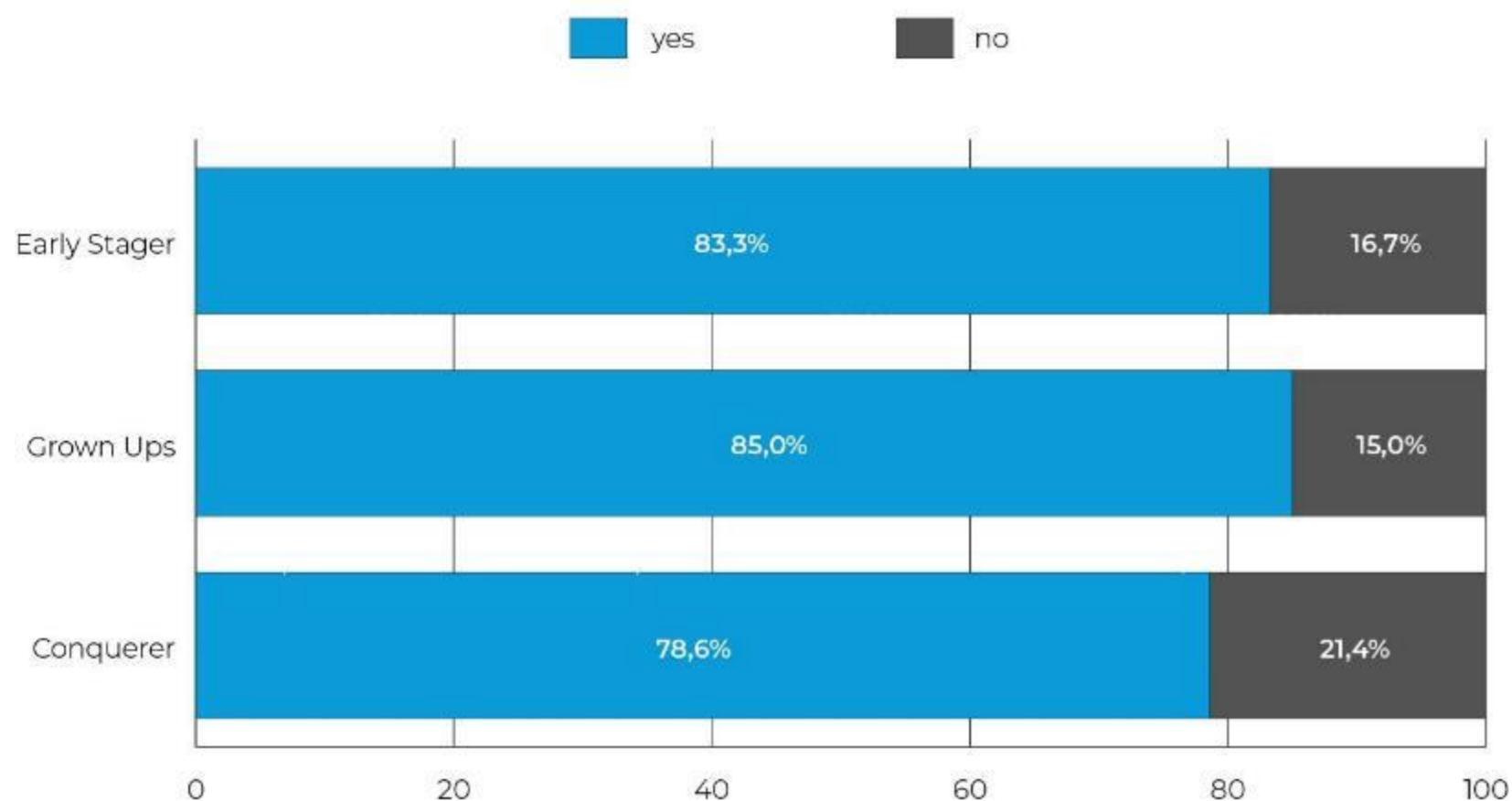
PropTechs mainly cooperate on a technical or process-oriented level



Cooperation with Establishment planned

More than 81% of all PropTechs wish to cooperate with the establishment

Planned future cooperations between PropTechs



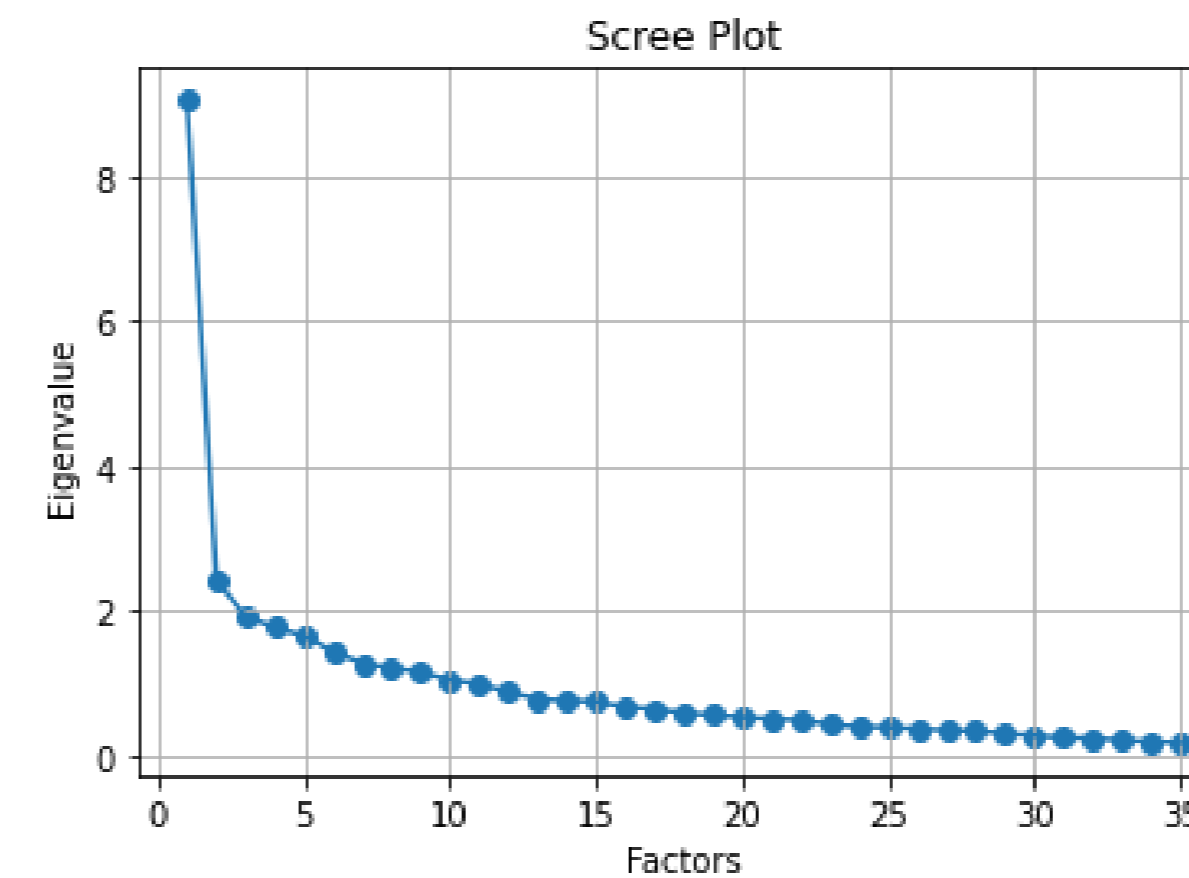
Exploratory Factor Analysis of PropTech Challenges and Cooperation

Fit of Data for Analysis

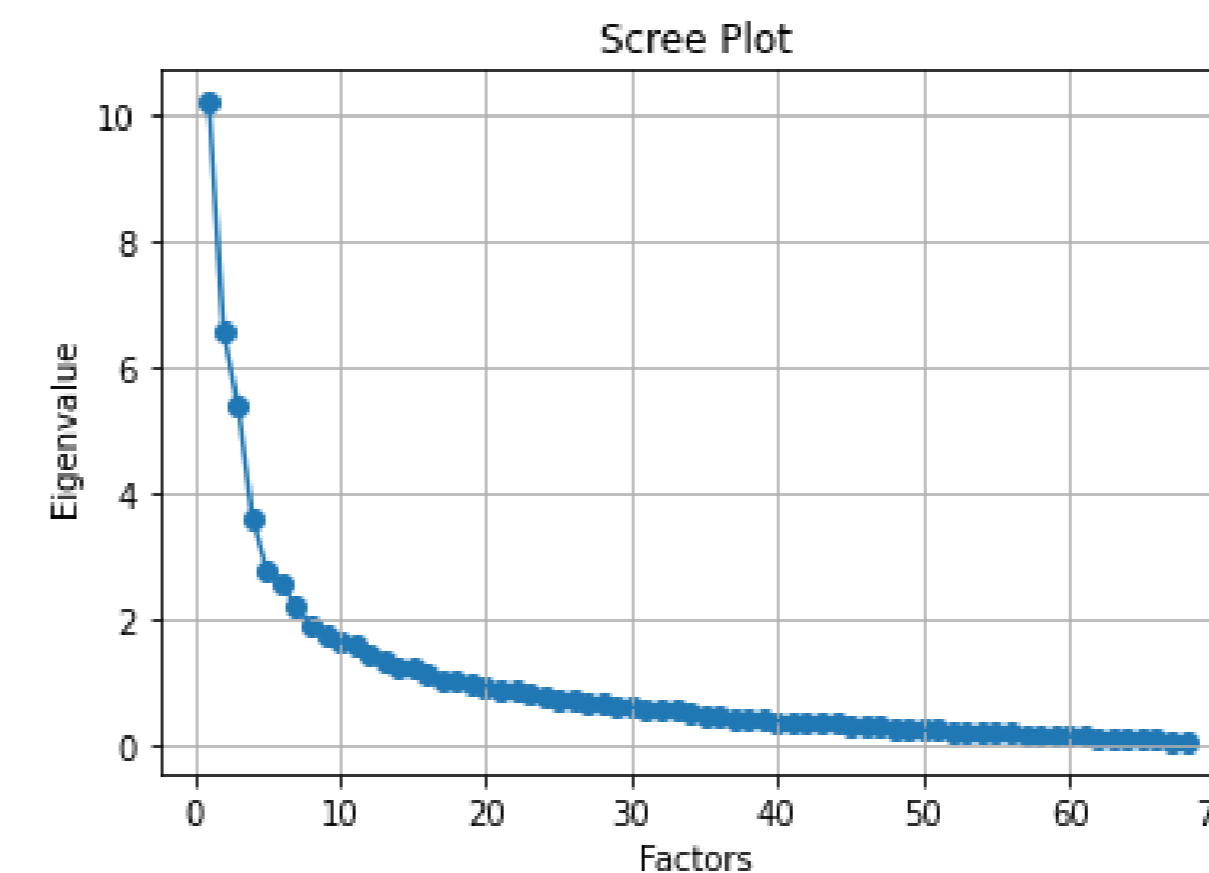
- Bartlett Sphericity Test and Kaiser-Meyer-Olkin (KMO) Test to determine if the data could be analyzed for factors
- Dataset passed these tests >> exploratory factor analysis
- Two separate factor analysis on **challenges** and **cooperation** answers

Number of Factors

- Using scree plots of the Factors to determine the number of factors for each set of answers.
- Challenges: 10 factors
- Cooperations: 8 factors



challenges



cooperations

Exploratory Factor Analysis of PropTech Challenges and Cooperation

Factor Analysis

We applied minimal residual factor analysis with verimax-rotation.

Factor Loading Matrices

We analysed the resulting factor loading matrices from both datasets and came up with the possible estimate what these factors might be.

Factor1	0.86	0.89	0.91	0.64	0.84	0.89	0.76	0.64	0.88	0.19	0.22	0.39	0.11	0.31	-0.08	0.00	0.04	0.07	-0.04	-0.03	-0.01	-0.01	0.04	0.03	-0.01	0.02	-0.03	-0.02
Factor2	-0.01	-0.01	0.00	0.05	-0.01	-0.02	0.02	0.02	-0.09	0.04	-0.06	-0.04	0.01	0.04	0.42	0.28	0.39	0.49	0.69	0.72	0.83	0.71	0.59	0.67	0.62	0.64	0.71	0.66
Factor3	-0.09	0.14	0.15	0.03	0.07	0.11	0.07	-0.01	0.16	0.05	0.15	0.24	-0.08	0.11	-0.05	-0.02	-0.11	-0.04	0.07	-0.06	-0.02	-0.06	0.11	-0.05	0.06	-0.01	-0.05	-0.06
Factor4	-0.01	0.05	0.10	-0.10	0.09	0.11	-0.05	0.09	0.03	-0.11	0.09	0.07	-0.04	0.00	0.16	0.16	-0.05	-0.02	-0.03	0.05	0.05	-0.01	0.06	0.08	0.07	0.01	-0.05	-0.15
Factor5	-0.05	-0.01	0.00	0.08	-0.07	-0.07	-0.10	0.06	-0.02	0.00	0.20	0.16	-0.00	-0.07	0.58	0.63	0.60	0.19	-0.01	0.00	0.08	0.15	0.11	0.33	-0.11	0.07	-0.09	-0.04
Factor6	0.04	0.00	0.01	0.18	0.02	0.03	0.18	0.04	-0.04	0.01	0.13	0.04	0.26	0.12	0.04	0.05	0.12	0.05	-0.01	0.09	0.07	0.09	-0.05	0.07	-0.10	0.03	-0.10	0.09
Factor7	0.08	0.03	-0.02	-0.03	0.04	-0.00	-0.03	0.08	0.05	0.11	-0.17	0.10	-0.11	-0.09	0.16	0.10	0.06	-0.17	0.01	0.04	-0.10	-0.13	-0.12	-0.04	0.09	0.07	0.05	0.13
Factor8	-0.10	-0.02	-0.01	0.05	0.03	0.02	0.20	0.03	0.11	0.20	0.22	0.39	0.44	0.53	0.08	0.08	0.06	-0.05	-0.08	-0.04	-0.05	-0.09	0.21	0.16	0.12	0.21	-0.04	-0.03
	Was sind die Gründe für eine Kooperation? (a. Bessere Skalierbarkeit)	Was sind die Gründe für eine Kooperation? (b. Breitere Kundengruppe wird erreicht)	Was sind die Gründe für eine Kooperation? (c. Höhere Anzahl Aufträge/ mehr Umsatz)	Was sind die Gründe für eine Kooperation? (d. Interne Kosteneinsparungen)	Was sind die Gründe für eine Kooperation? (e. Steigerung der eigenen Reputation)	Was sind die Gründe für eine Kooperation? (f. Breiteres Netzwerk)	Was sind die Gründe für eine Kooperation? (g. Knowhow-Transfer)	Was sind die Gründe für eine Kooperation? (h. Ausschaltung von anderen Wettbewerbern)	Was sind die Gründe für eine Kooperation? (i. Trifft den Bedarf bei Kunden nach ganzheitlichen Lösungen)	Wie wird an? (a. Technische Kooperationen über Schnittstellen / API verschiedene Lösungen verbinden)	Wie wird an? (b. Vertriebskooperationen)	Wie wird an? (c. Kundenorientierte Kooperation (prozessorientiert/ größeren Teil der WSK gemeinsam abdecken))	Wie wird an? (d. Datenaustausch)	Wie wird an? (e. Gemeinsames Ökosystem aufbauen)	Wie wird an? (f. Trittbrettfahrerproblematik)	Wie wird an? (g. Probleme treten Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (a. Ideenkauf)	Wie wird an? (h. Zu starker Wissenstransfer in Richtung Wettbewerb)	Wie wird an? (i. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (d. Gegenseitige Abhängigkeit)	Wie wird an? (j. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (e. Unklare Kundenansprüche)	Wie wird an? (k. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (f. Unklare Verantwortlichkeiten)	Wie wird an? (l. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (g. Intransparenz hinsichtlich Entscheidungungen)	Wie wird an? (m. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (h. Intransparenz hinsichtlich Entwicklung/Programmierung)	Wie wird an? (n. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (i. Unterschiedliche Unternehmenskultur)	Wie wird an? (o. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (j. Fehlendes Vertrauen)	Wie wird an? (p. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (k. Ergebnis der Zusammenarbeit nicht quantifizierbar)	Wie wird an? (q. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (l. Rechtliche Unsicherheit in Bezug auf gemeinsames IP)	Wie wird an? (r. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (m. Lösungen werden noch komplexer)	Wie wird an? (s. Eurer Meinung nach bei Kooperationen mit anderen PropTechs auf? (n. Kunden sehen den Vorteil von Kooperationen nicht)

Exploratory Factor Analysis of PropTech challenges and cooperation

Challenges for PropTechs

Phase	Factor	Description
building of the business model	5	lack of trust / cultural barriers (communication problems)
building of the business model	6	finance & regulations
building of the business model/ sales approach	7	missing understanding of the client
building of the business model	8	insufficient data
building of the business model	9	wrong priorities / underestimation of digitization needs of real estate branch or sector?
building of the business model	10	no access into real estate branch
sales approach	2	missing network
sales approach	3	risk awareness of real estate branch / lack of trust
implementation phase	1	bad organization / lack of skills
implementation phase	10	problems in the project

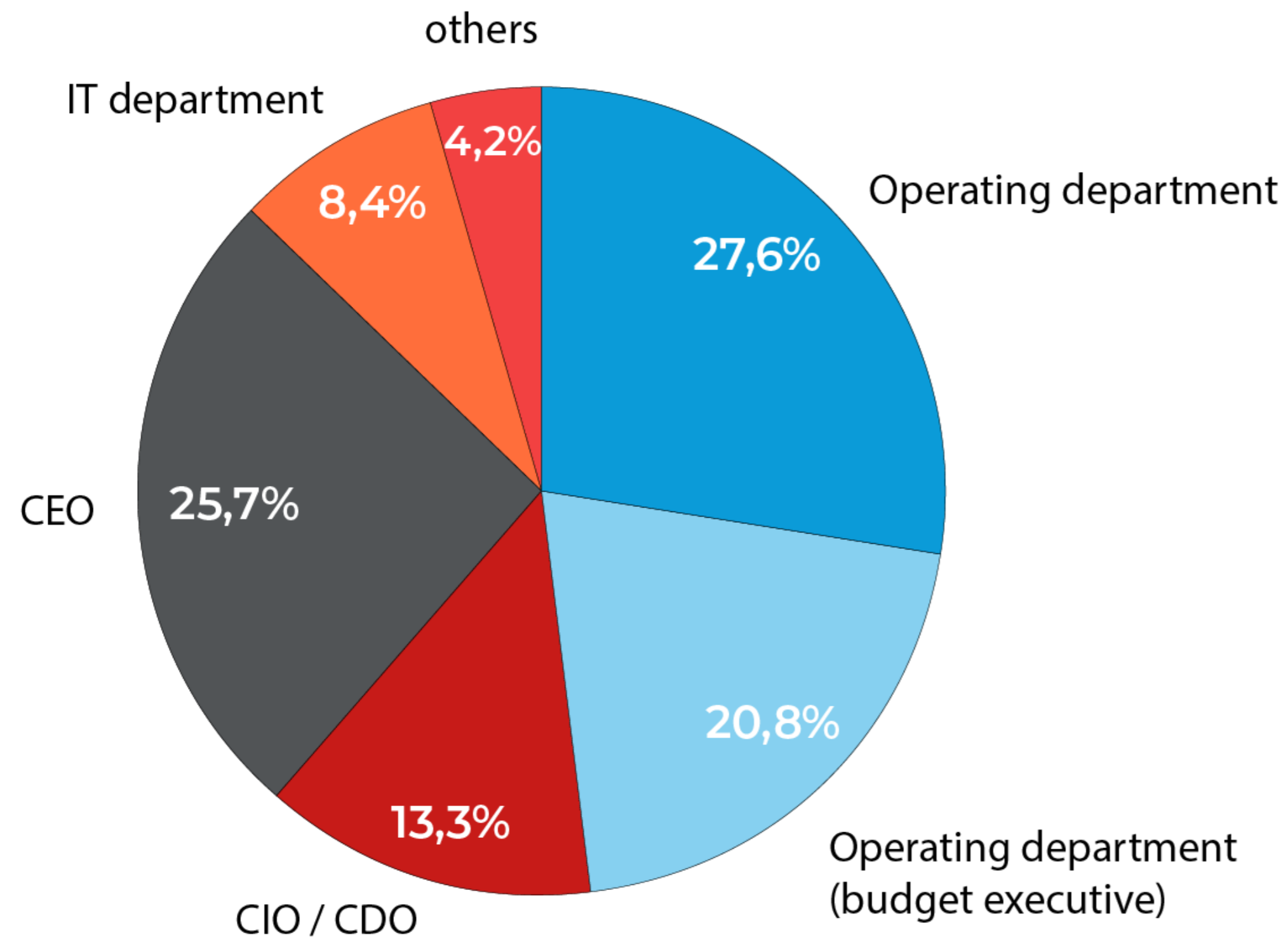
Exploratory Factor Analysis of PropTech challenges and cooperation

Cooperation of PropTechs

Phase	Factor	Description
reasons for cooperation	1	growth aspirations with holistic solutions
reasons for cooperation with other proptechs	8	Ecosystem
present benefits in cooperation between proptechs and establishment	3	access to new markets & customers
future benefits in cooperation between proptechs and establishment	4	access to new channels, customers & revenue growth
future benefits in cooperation between proptechs and establishment	6	synergies regarding R&D
problems in cooperation among proptechs	5	lack of trust regarding IP
problems in cooperation among proptechs	2	Accountability issues

Influencers and Decision Makers

Influencers



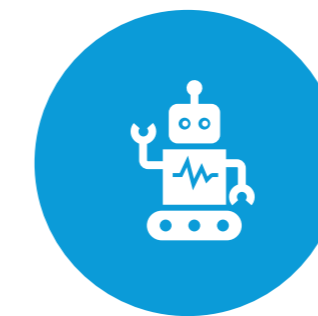
Operating department as Top Influencer

Team leaders of operating departments are biggest influencers



CEO as main decision maker

.....enabling PropTech to be contracted . For conquerers, CDO plays a major role



IT department without any impact

IT departments seem to be irrelevant as influencers and decision makers

Summary



PropTechs in the German real estate market are in different stages of their business maturity



Overall, Corona seems to reinforce the positive development of the PropTech market



Main challenges are decision-making structures, business priorities and risk-trust considerations



Main market entry pathway for PropTechs is via vertical and horizontal cooperations



Positive momentum in terms of sentiment in the German PropTech market



Expecting CDO to gain more decision-making power to reach dissemination of PropTech decision from strategic to operating level

Outlook



Establishment and VC survey

Clustered survey in Q2
2021



Annual recurrence of PropTech Survey

Identifying trends and patterns, time
series



Q+A